



O R I G Y M

Level 2 Certificate In Fitness Instructing Online

MODULE 6:

**GYM ENVIRONMENTS, HEALTH & SAFETY, RESISTANCE TRAINING,
CONTRAINDICATIONS AND ADAPTATIONS**

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Personal Training Environments And Resources (including Health and Safety)

MODULE 6:

GYM ENVIRONMENTS, HEALTH & SAFETY, RESISTANCE TRAINING, CONTRAINDICATIONS AND ADAPTATIONS

Personal Training Environments and Resources

Personal Trainers may find employment in a variety of locations. Some of the environments in which personal trainers will work in include: health and fitness clubs, recreation centres and gyms, country clubs, yoga and Pilates studios, universities, resorts, the homes of clients, hospitals and in corporate organizations.

Hours & Timings

A personal trainer's hours and working conditions must be adaptable and flexible; to include work in several different settings alongside their clientele. Depending on where a trainer is working, different skills may be required of them.

For example, if the trainer is working in a hospital environment, they may need to be able to deal with people with emotionally and physically challenging health problems/situations.



Environment: What Venues?

Most personal trainer's hours and working conditions include work inside, in a gym, a fitness club, or home environment that is open or available to accommodate the client schedules. These public or private facilities are likely to contain different types of training equipment.

The trainer will either work in one or more facilities in which clients are coming to them in order to obtain professional training, or the trainer will go to meet the clients at their homes or other places that are convenient for the client. Some trainers will split up their schedules during the day in order to reach a larger number of clients. They may travel to multiple locations in one day and offer their services from morning to evening, with breaks in between. Trainers will have most of their training sessions scheduled in the evenings and on the weekends, and occasionally during holiday times. During different times of the year, a trainer may find that their schedule is busier than at other times, especially after the Christmas season. Trainers who work both in public facilities and as well as private settings are likely to be affected by busy seasons and changing schedules. A personal trainer's hours and working conditions must have a flexible in order to work with clients wherever and whenever they have time to receive their training sessions.

There is a wide range of equipment that can be used within the environment, these could be fixed or portable:

- **Cardio fitness equipment**
- **Core stability equipment**
- **Functional equipment**
- **Strength and resistance training equipment**

When working in environments that are not specifically designed for exercise/physical activity (such as outside or in a person's home), the area must be risk assessed, cleared of any hazards and ensured that there is enough room to safely complete the exercises for the workout. There should be access to a first aid kit, a safe fire escape, adequate heating/ ventilation and access to clean drinking water.

Looking After Your Body

The work environment and duties of the personal trainer are such that they are vulnerable to sustaining injuries when they are training clients/patients and during any other training-related physical activity. This risk is evident across the various levels of professional personal trainers in the industry. A personal trainer is not only responsible for the safety of themselves during the training session, but also that of their clients/patients. As the nature of the job is very physically demanding, the trainer must also seek to maintain a high level of fitness. The work environment of the personal trainer is fairly flexible. The trainer has the freedom to create the training programs for their clients/patients, and implement them in the way that they see fit. This aspect of the job can lead to feelings of satisfaction, and it can be very rewarding as they witness the results of their planning and training in the lives of their clients/patients.

The development of training programs can be challenging as the trainer must continually monitor the progress of the client/patient and change the fitness training plan as needed. The work environment may be busy or quieter depending on where the trainer is working and how many clients/patients use the same area of training space. The environment must be risk assessed to be aware of any potential hazards and to ensure these are taken into account and minimised or eliminated where possible.

Exercise and Physical Activity in Difficult Environments

Difficult Environments



- **Limited Space:** Best suited to static exercises and inappropriate for travelling moves. Always consider your range of motion and whether you can provide more space by moving obstructions, such as light furniture.
- **High temperatures:** Require you to keep the intensity low and stay hydrated. Try to change the temperature wherever possible, by turning off the heating, opening windows and using a fan.
- **Hard Floors:** Rule the prospect of impact work and jumps; they will also require you to use a mat for floor exercises. Impact work may not be appropriate for some referred clients/patients, regardless of the floor situation.
- **Other people:** Within viewing distance or directly outside can be kept out of sight by using blinds to cover the windows. What's more, you should always try to reduce external distractions e.g. by using an answer machine for the telephone.

Health and Safety Employer Duties and Employee Responsibilities

Health and safety is of primary importance in the health and fitness industry. Instructors must be legally aware of their organisation's health and safety and duty of care policies and procedures to uphold the health, safety and welfare of their colleagues and those participating in physical activity.

Health And Safety At Work Act 1974

This is a fundamental piece of health and safety legislation. It places general duties on employers, employees, manufacturers and people in control of premises. These general duties form the framework for all health and safety regulations.

Employer Duties

The employer has a duty of care to ensure that, as far as possible, the health, safety and welfare of employees is protected. Employers must:

- **Provide a Health and Safety Policy Statement for five or more employees**
- **Provide equipment, machinery and an environment that is safe to use**
- **Control use and exposure of substances that may damage health**
- **Provide information, instruction, training and supervision where needed**
- **Take precautions against potential risks**
- **Ensure that visitors and members of the public are not put at unnecessary risk**
- **Report accidents, injuries, diseases and dangerous occurrences**
- **Provide adequate first aid facilities**

EMPLOYEE RESPONSIBILITIES:

- **Take care of their own health and safety and that of others**
- **Cooperate with the employer to help comply with health and safety legislation**
- **Inform the employer about any work situations that present a serious risk**

Health and Safety Regulations



THE MANAGEMENT OF HEALTH AND SAFETY AT WORK REGULATIONS 1999

Identifies in detail what is required from employers to manage health and safety in the workplace.

Risk Assessment:

- A hazard is anything that can cause harm
- A risk is a chance, whether high or low, that somebody will be harmed
- Each employer must make a suitable and sufficient assessment of risk. How to control risks in a fitness environment will be addressed in more detail later in this section.

RISK ASSESSMENT CONTROL OF SUBSTANCES HAZARDOUS TO HEALTH (COSHH):

- Requires employers to control substances which are hazardous to health.
- Can be a substance, mixture of products or a process to create substances

REPORTING OF INJURIES, DISEASES AND DANGEROUS OCCURRENCES REGULATIONS (RIDDOR):

- Includes responsibility of employers and people in control of premises
- Involves the reporting of injuries, diseases and dangerous occurrences
- Requires the reporting of certain incidents to the enforcing authority

PERSONAL PROTECTIVE EQUIPMENT (PPE):

- Must be appropriate for the task and the risks involved
- Must be maintained and stored correctly
- Must meet European legislation and carry the CE kitemark
- Should fit the wearer correctly
- Must be used in accordance with instructions and training

Noise At Work

- Ensures that workers' hearing is protected from excessive noise in the workplace
- Hearing protection must be provided in hearing protection zones

Manual Handling:

- Involves the use of the body to lift, lower, carry, push or pull a workload
- Consideration of the ability of the employee must be considered
- Avoid manual handling where practicable if there is a possibility of injury
- Provision of mechanical equipment where necessary

First Aid:

- A first-aid needs assessment should be carried out
- Should have a first aid box which holds contents that reflect first aid needs
- People appointed to take charge of first-aid arrangements
- Trained first aider(s)



Health and Safety Policy Considerations for the Instructor

Instructors must become familiar with health and safety policy and in particular the regulations most relevant to the job.

General

A fitness environment will generally promote health and safety and can be the responsibility of the health and safety manager, or even a duty manager who may be responsible on an operational level.

As the duty of care filters throughout the employees, it will be the job of the fitness instructor to carry out a number of health and safety checks during their hours of work. It will be the duty of the instructor to conduct all safety checks in accordance with company policies and procedure and any failure to do so may result in liability for any incidents or accidents that occur.

Working practices are designed to ensure a high level of health and safety practice and compliance which may include the following considerations:

Emergency Action Plan (EAP)

The purpose of an EAP is to facilitate and organise employer and employee actions during workplace emergencies. For smaller organisations the plan may be communicated verbally and not necessarily written but essentially must demonstrate:

- **What to do in the event of a specified emergency**
- **What to do during the emergency**
- **What to do after the emergency**

Qualifications

Fitness professionals must hold valid and current qualifications for the tasks they are required to perform. These qualifications may differ between regions.

Register Of Exercise Professionals (Reps)

This is a regulating organisation for fitness professionals. It was developed to protect the public from those who do not hold appropriate qualifications and to recognise the skills and qualifications of exercise professionals. Those who hold a qualification which meets REPs approval can apply for membership for which there is an annual fee. REPs levels can vary depending on region and globally there are six levels in total.



Public Liability Insurance

An essential cover for most types of business and will cover the fitness professional working in a place of employment. Work carried out elsewhere must be covered by an additional policy.



Competency

Any qualification or job description will describe the tasks which can be performed by the instructor. Any other duties which are not outlined are outside the areas of competency of the fitness professional.

Health Screening

A common role of the instructor is to carry out a physical activity readiness questionnaire (PAR-Q) with clients before participating in physical activity. This screening process must be carried out by all those wishing to participate in the exercise environment. Any doubts as to the suitability of the client to embark on an exercise programme should be referred to a GP before exercise can begin.

Risks Of Pre-Exercise Testing And Exercise

Exercise and fitness testing carries the risk of injury and the possible exacerbation of existing conditions brought on by performance. The client should be informed of these risks before deciding whether to undertake such tests or exercise.

Physical Activity Readiness Questionnaire

- **Informs the instructor of the suitability of the client to begin exercise participation**
- **Raises the awareness of the client to the risks involved in exercise**

Delivery of PAR-Q

A busy fitness environment will present difficulties in trying to deliver a PAR-Q with clients from time to time. It is not always possible to present a written document or forward the detail of such a document to the instructor before a session is due to start. However, it is a necessary procedure and there are options available to the instructor:

- A written PAR-Q is the preferred format, which gives both the instructor and the client the ideal opportunity to determine activity readiness.
- Verbal questions will present the opportunity for participants to give any information which may prevent them from taking part in an exercise session. This method can be used regularly to determine if there is any change in the wellbeing of clients between sessions and is frequently used in group exercise environments.
- Passive signage such as a PAR-Q poster in the exercise environment will inform participants of their duty to inform the instructor of any health related reason why they may not be able to participate. The instructor should reinforce this with verbal questions before the start of each session.
- Each fitness environment will have their own health screening system and this must be communicated to the instructor(s).

Additional Information

Instructors may not be responsible for screening of every participant but must be aware of where this information is stored in case of emergency, follow up or changes which need to be made to documents.

Health Commitment Statement

The health commitment statement will set out the standards that users can reasonably expect from the organisation, facility, staff and each other. It should be drawn to the attention of the user and may be incorporated into membership or screening documents. The purpose of the HCS is to:

- Develop the current PAR-Q to simplify access to activity facilities for users
- Assist the health, medical and fitness industries to work in harmony while supporting initiatives to encourage the nation to be more active
- Bring health and fitness clubs inline with virtually all other sports and active leisure in relation to health matters
- Demonstrate respect for members by placing responsibility where it belongs, with the individual member
- Be consistent with current government policies in encouraging every individual to take responsibility for his or her own health
- Offer the opportunity to clubs to maximise their membership
- Be in keeping with current trends in legislation and case law
- Be consistent with a more modern approach to individual responsibility in medicine and the law
- Provide the opportunity for a uniform approach across the health and fitness industry, producing greater clarity and reducing costs
- Offer a simple solution in plain English, which is accessible to fitness instructors, staff and members
- Remove stress and anxiety from staff in relation to health of members

The hcs has been designed for users in a gym environment and with all operators in mind, allowing flexibility with its usage, example on learning platform.



Duty Of Care

In tort law, a duty of care is a legal obligation to provide and adhere to a reasonable standard of care while performing any acts that could foreseeably harm others. It must be the first element to be established with an action in negligence. A negligent act may be unintentional but nevertheless may still breach a duty of care.

Instructors will have a different and sometimes greater duty of care for the range of clients under their supervision. This can include but not be limited to young people, older adults, pre and post-natal women and vulnerable adults. The acquisition of knowledge without qualification relating to such special populations may allow the instructor to present greater opportunity for access to the exercise environment, however, this does not permit the instructor to provide specialist advice or instruction. Where instructors find themselves frequently working with special population clients, they should seek to obtain the appropriate qualification, otherwise, they could find themselves in breach of their duty of care. It is also important to have the appropriate insurance policy which covers the instruction of such clients.

Personal Safety

Personal safety depends on your own awareness of any potential risks or threats in the workplace. You can ensure your safety on the job by familiarising yourself with and always following the employers safety policies and procedures.



The following responsibilities are crucial to your personal safety:

- Holding appropriate qualifications for any sessions delivered
- Only working with people or groups for which you are qualified to do so
- Holding public liability insurance and employer liability insurance
- Maintaining continuing professional development (CPD)
- Being a member of appropriate regulatory bodies (e.g. Register of Exercise Professionals)
- Adhering to industry codes of conduct
- Following organisational procedures
- Holding a first aid or CPR qualification if working with certain groups (e.g. Exercise Referral)
- Being aware of health and safety policies and responsible behaviour i.e. reporting hazards to the appropriate staff member
- Knowing the duty first aider, the location of the nearest contact phone and first aid kit and the procedure for reporting accidents

Client Safety

As a fitness instructor, you also have a responsibility to prevent clients/patients putting themselves or being put in danger whilst in your care. You can do this by:

- Screening clients/patients before exercise, using appropriate methods such as the PAR-Q and verbal screening checks
- Referring clients/patients to the GP when necessary i.e. in the case of medical conditions
- Ensuring clients/patients are dressed in appropriate attire (e.g. they are wearing acceptable footwear and are without jewellery)
- Ensuring clients/patients are not chewing gum
- Observing and correcting clients'/patients' technique where necessary to ensure the safe use of equipment

Environment Safety

Another factor that will affect the safety of yourself and others is the environment around you. To minimise risk and help ensure environmental safety, the following responsibilities fall under your job role as a fitness instructor:

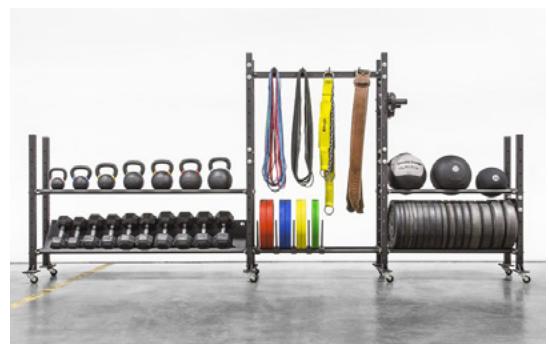
- Ensuring there is enough space for participants to execute exercises i.e. no overcrowding or risk of collision
- Ensuring there are no trailing wires that may increase risk of trips
- Ensuring floors are dry or signs are positioned to identify wet floors
- Ensuring the environment is prepared for exercise (e.g. making sure equipment is set up correctly and nothing is causing an obstruction)
- Ensuring all equipment is put away in the correct place after use and the environment is left clean and tidy
- Keeping floors clean and swept



Equipment Safety

Maintenance and correct storage of equipment is extremely important to ensuring a safe gym environment. It will be your responsibility as a gym instructor to:

- Ensure equipment is stored correctly and safely (e.g. steps stacked to an appropriate height, weights put away on the racks, pool equipment stored in baskets)
- Make sure equipment is clean by doing things such as wiping down CV machines and mats after use
- Place 'out of order' signs on any broken or damaged equipment
- Report broken equipment to maintenance personnel



Vulnerable Groups

There are certain groups to whom you have a particular duty of care, these groups include:

- Children and young people aged 14-16 years old
- Older adults
- Pre- and post-natal clients
- Disabled clients
- Clients with medical conditions
- Vulnerable adults

If you do not possess the pre-requisite qualification and training in the adaptation of exercise for these specific groups of people, the client should be informed and given the choice to stay in the session and follow basic recommended guidelines or seek further guidance from an appropriately qualified instructor e.g an exercise referral instructor.

Before taking on any client that falls into a vulnerable group, check that the employer's and your personal insurance policy covers work with special populations.

Negligence

Duty of care is the obligation to exercise a reasonable level of care towards an individual to avoid injury or damage to property;

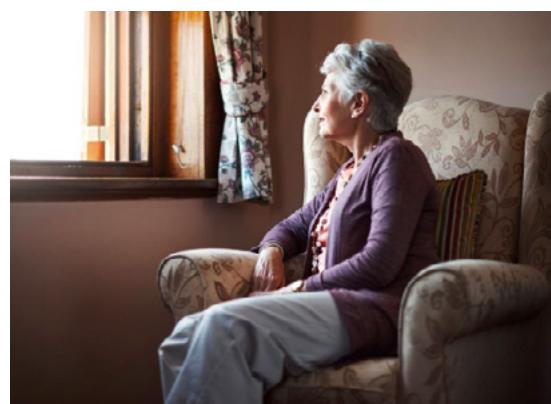
One essential priority is screening clients; all clients must be screened using appropriate forms before they can exercise. Clients who answer 'no' to PAR-Q questions can engage in exercise, as long as activities are suitably and personally modified by the instructor.

If planning to work with a vulnerable client group on a long-term basis, additional specialist training and qualifications are required. Clients should be referred to an appropriately qualified instructor should they wish to start a long-term programme.

Negligence is failing to follow responsibilities. Although a negligent act may be unintentional, it shows carelessness and can have serious consequences and reprimands.

Level 2 gym instructors are not qualified to do the following and would constitute negligence and breach their duty of care:

- Act as a specialist instructor
- Advertise as a specialist instructor
- Instruct clients from specialist groups (one-to-one or in groups) on a regular basis
- Plan progressive, long-term programmes for clients with specialist groups



Security Procedures

There are a number of security measures which are designed to protect both indoor and outdoor facilities. Security can help to protect staff, users, possessions and the facility itself.

External Security

A fitness environment may be incorporated within another facility and may not be directly responsible for outdoor security. Those who are will be responsible for the safety of users who drive, park and walk to and from the facility. Security depends not only on the installation of equipment but also the ability to operate it effectively.

Video Monitoring System

CCTV can be used to monitor access and egress from the facility and the land upon which the facility is placed. Car parks, entrances and emergency exits should have camera equipment which is capable of recording and storing this information.

Lighting

Outdoor security lighting can be permanently lit or operated with motion detectors.

Security Staff

The presence of employees often acts as a deterrent to crime. Staff may be issued with secure two-way radios for effective communication in the event of a security breach.

Employment of dedicated security staff from an external organisation may be required for a larger facility.

Signage

The use of signs, posters and stickers in potentially vulnerable areas, windows and doors can also deter criminal behaviour.



Internal Security

When users enter the facility it is the role of internal security measures to help provide a safe environment.

Controlled Access

Staffed receptions, barriers, swipe cards and coded entry locks provide secure modes of entry. The facility itself will usually determine which combination of methods is most suitable.



Electrical Communication

Radios, pagers and mobile phones allow effective communication between staff, users and emergency services.

Alarms

Intruder alarms are fitted in buildings to protect against unlawful entry. Panic alarms can be installed in areas where one-to-one contact is frequently encountered. These can provide peace of mind for both staff and users in environments such as offices and consultation rooms. Personal alarms may be worn by individuals to attract attention when necessary.



Training

Staff training will inform employees of new equipment, regulation, legislation and changes in industry standards. Specialist agencies such as the police force can provide information on newly identified risks and any community issues which may become relevant.

Confidentiality

A secure workplace will maintain confidentiality regarding all users of the facility. Secure storage and restricted access to confidential information should follow procedures which are communicated to all staff.

Prevention

Criminal and antisocial behaviour can be deterred through effective work methods. Cash handling procedures, transportation of valuable possessions/ information and staff shift rotation can be organised in a manner which eliminates opportunist and organised crime.

The fitness professional has a duty of care to all aspects of the fitness environment in which they work. They must be aware of their responsibilities and encouraged to act accordingly, in the knowledge that the employer will support them in providing a safe and healthy environment.

How To Control Risks In A Fitness Environment

Essentially a risk assessment is a formal examination of the workplace to find anything that could cause harm to people. It is the aim to make sure that nobody gets hurt or becomes ill at work and this process will determine whether enough precautions have been made or whether more needs to be done.

How To Assess Risk

An individual does not have to be a health and safety expert to carry out a risk assessment. There are five steps to follow:

1. Identify the hazards: Slips, trips, falls, chemicals, machinery, electricity, manual handling, noise, lighting, temperature

2. Decide who might be harmed: Gym/office staff, members, cleaners, contractors, visitors, people with disabilities. A shared building will have to take others into account

3. Evaluate the risks:

- Decide how likely it is that harm will occur
- Balance the risk against the measures needed to control the risk

4. Record your significant findings:

- Record the hazards, how people might be harmed and what is in place to control the risks
- Risks are calculated using a risk assessment severity scale of 1-5 where 1 is low risk
- A 5x5 risk matrix can be used for assessment

5. Regularly review your risk assessment:

- Environments and work methods change so it makes sense to review what you are doing and on an ongoing basis

		Likelihood (probability)					Risk rating: Low Medium High
		1	2	3	4	5	
Consequences	1	1	2	3	4	5	
	2	2	4	6	8	10	
	3	3	6	9	12	15	
	4	4	8	12	16	20	
	5	5	10	15	20	25	

Likelihood (probability)	Consequences
1. Rare	1. Minor injury - no 1st aid required
2. Possible (unfortunate)	2. Minor injury - 1st aid required
3. Possible	3. Injury requires doctor or hospital
4. Probable	4. Major injury resulting in disability
5. Almost certain	5. Fatality

Manual Handling

Any job that requires manual handling will carry an associated risk. Lifting an object may seem straightforward but if you add the risk of carrying, climbing, turning or lowering then the risk will increase. Repetitive movements and holding positions can compound the risk further and this series of events can cause damage to all tissues of the body either by trauma (sudden injury) or wear and tear over a period of time.

Correct Handling Techniques

Lifting

Keep loads close to the body and near to persons' centre of gravity, using diagonal foot positions to provide greater stability. Move loads from waist height where possible and when lifting from the floor, maintain a neutral spine while using the power of the legs.

Pushing and pulling

Pushing is generally easier than pulling. Lean forward when pushing and lean backwards when pulling. It is important to use the arms and legs in unison and avoid twisting where possible.

Pivoting

Handlers are safer when pivoting their shoulders, hips and feet with the load in front of the body. Try to avoid excessive and repetitive twisting actions.

Climbing

When climbing with a load it is important to try and maintain contact with the ladder or stairs at three points (two feet and one hand or two hands and one foot).

In all situations of manual handling large heavy loads, the assistance from another person or mechanical lifting device would be recommended.

Exercise Risk Assessment

This process will start with the PAR-Q which will highlight the risks of participating in any form of exercise. Once it is established that the client may undertake exercise, it is the job of the instructor to decide which forms of exercise will be appropriate. All exercises involve an element of risk and the instructor must consider these factors when programming for the individual. There is no combination that suits all clients so considering the following factors will serve as a guide to making safe exercise choices:

Medical Status

Avoid any exercise which may aggravate a current condition. Clients may present test results which place them in a special attention category. Previous or present injuries may require the avoidance of exercise for certain muscle groups and past injuries and conditions may reduce performance during exercise.

Occupation

The physical requirements of a persons' job may identify risks in prescribing certain exercises. In addition, the time of day most suited to exercise will need to be considered. Stress levels, hours of work, length of working day and motivation to exercise before or after work can present a challenge in exercise programming.

Lifestyle

The way in which individuals choose to live their lives can be vastly different. Sleep patterns, social choices, sedentary or active habits are only a few of many lifestyle choices. The effect on energy levels and time available to exercise can affect the exercise diary, levels of intensity and duration of sessions.

Nutrition

Dietary choices can influence our ability to exercise. Calorific intake, eating patterns and choice of food groups can influence how we feel and determine our performance during exercise.

- **Type of exercise**
- **Resistance and intensity**
- **Speed**
- **Balance and proprioception**

The Exercise Risk Continuum



The risk associated with an exercise can be evaluated by using the following diagram. It is important to understand that there is no right or wrong exercise. An exercise may be

suitable for one client but inappropriate for another. All health factors, fitness levels, client goals, equipment and environment should be considered by the instructor in the decision-making process. The risks of performing an exercise must be weighed up against the benefits when deciding if an exercise is appropriate.

Emergency Procedures In A Fitness Environment

The fitness environment can be a dangerous one. Such facilities are generally stocked with machines and equipment that has the potential to cause injury. Even when used correctly a gym relies on the vigilance and spacial awareness of all gym users. Often there is a gym etiquette which is difficult to understand for a beginner client or inexperienced member of staff, but in time this often unwritten code of conduct is learned and implemented.

When faced with an emergency, whether caused by equipment which affects an individual, or on a larger scale where the whole facility is at risk, the instructor must become familiar with emergency operating procedures.

Types Of Emergency

There are various threats to the workplace when an unforeseen situation can threaten employees, customers or the public. Emergencies may be natural or manmade and can cause physical and environmental damage.

THESE CAN INCLUDE:

- **Fire (electrical, chemical)**
- **Floods**
- **Hurricanes/storms (outside environments)**
- **Chemical spills (Cleaning products)**
- **Toxic gas release**
- **Explosions**
- **Civil disturbance**
- **Workplace violence**

Accidents And Sudden Illness

From time to time a gym user can suffer an accident or illness which may be caused by exercise. Alternatively, it can be an unfortunate coincidence which occurs while on the premises. The instructor has a role to perform in such a situation.

The emergency services should be called when there is a medical emergency whereby someone is seriously ill or injured and their life is at risk.

When contacting the emergency services the following key information should be given:

In the event of an accident that can be dealt with by an appointed first aider on the premises, the contents of a first aid box may be required. The contents should reflect the findings of the first aid needs assessment.

A minimum stock of first aid items may include:

- **1 general guidance leaflet on first aid**
- **20 individually wrapped sterile plasters of assorted sizes**
- **2 sterile eye pads**
- **6 safety pins**
- **2 individually wrapped triangular bandages**
- **2 large sterile individually wrapped unmedicated wound dressings**
- **6 medium-sized sterile individually wrapped unmedicated wound dressings**
- **3 pairs of disposable gloves**

Other emergencies

It is important for the instructor to follow emergency operating procedures calmly and correctly, as provided by the employer. This is more likely to ensure the safety of everybody on the premises than performing an alternative procedure. Any deviation from the procedures implemented, trained and practised by the employer may result in liability on the part of the instructor as a result of any harm caused during the emergency.

An emergency situation may require the assistance of one or more of the external emergency services, each with a separate role to perform:

- **Police provide community safety and act to reduce crime against persons and property**
- **The fire department provides fire-fighters to deal with fire and rescue operations**
- **Emergency medical service provides ambulances and staff for medical emergencies**

Calm yourself
Assess situation
Locate assistance
Make area safe

Location - postcode, telephone number, general area or landmarks
Incident - describe what has happened
Other services required - e.g. fire brigade, police
Number of casualties - number, sex, age
Extent of injuries - describe what you see
Location - repeat description of location



Safety of Persons in an Emergency Situation

Organisations providing services to the public must take responsibility for all people who enter its premises, otherwise, it may be viewed as discriminatory. The procedures implemented by each facility should account for the safety of all groups and provide full training to the relevant staff. Children, older people and those with disabilities may be particularly vulnerable in an emergency situation.

GUIDELINES FOR ASSISTING SPECIAL POPULATIONS:

Children

In an emergency, children have special needs and become more dependent on adult guidance and support. Where possible, rehearsal of emergency procedures will prepare them for a potentially frightening experience and assure them that there is a plan to overcome such a situation. In the event of an emergency, the instructor should explain what is happening, listen to any fears a child may express and give concise answers where appropriate. The instructor should remain calm and positive as their behaviour will be interpreted and may be reflected in the actions of a child. Physical contact such as "holding hands" or "guiding direction" may also be appropriate.

Older people

An older adult may have developed impairment in movement, vision, hearing or mental agility and control. This deterioration in physiological and psychological function may result in a loss of independence in an emergency situation. A member of staff can offer physical assistance in evacuation by acting as a "buddy" to ensure their safety.

People with disability

Procedures will vary depending on the needs of a disabled person. Physical assistance may be necessary to aid speed of movement or to overcome obstacles. The maintenance of any specialist equipment, surfaces and wheelchair routes on the premises should be up to date and recorded to avoid failure in the event of an emergency. Staff can attend "assisting disabled people" training courses which will prepare their attitude, communication and assistance skills in order to act appropriately in the event of an emergency.

Safeguarding children and vulnerable adults

It is the duty of all professions to safeguard the welfare of children and vulnerable adults. The vigilance of professionals will help in recognising signs of abuse and the reporting of such findings will maintain and improve the safety of these groups.

THE FOLLOWING KEY PRINCIPLES SHOULD BE INCLUDED IN ANY ORGANISATIONAL POLICY STATEMENT:

- **Adults must demonstrate proper conduct and personal behaviour at all times**
- **Adults must always respect and champion the rights of every individual who participates in leisure activities**
- **Adults must develop a relationship with children, vulnerable adults and staff based on openness, honesty, mutual trust and respect**

Adults working in the active leisure sector must maintain a high level of competence by attaining qualifications and through a commitment to ongoing training in order to ensure safe and correct practice.

Policy Content

THE POLICY OF AN ORGANISATION SHOULD ALSO INCLUDE:

- **A checklist for the recruitment, employment and deployment of staff and volunteers**
- **Procedures to respond to breaches of codes of conduct**
- **Specific codes of conduct for different groups**

Resistance Training

MODULE 6:

GYM ENVIRONMENTS, HEALTH & SAFETY, RESISTANCE TRAINING, CONTRAINDICATIONS AND ADAPTATIONS

Resistance Training



There are many forms of resistance training, also known as strength training and weight training. Some clients approach resistance training with a degree of caution because they incorrectly confuse resistance training with bodybuilding or weight lifting. While there are some similarities between all activities that involve lifting weights, resistance training should be an essential part of all client's exercise programs irrespective of training goal, age or gender because it is incredibly beneficial.

Benefits of Resistance Training

Morphological factors

Muscle hypertrophy due to increases in number and size of myofibrils, size of type 2 muscle fibres, increased fluid retention around muscle fibres and increased glycogen and water storage within muscle cells

- Increased size and strength of ligaments and tendons
- Increased bone density and bone strength

Neural factors

- Increased motor unit activation, recruitment and synchronisation leading to increased force production
- Increase in discharge frequency of motor neurons
- Decreased neural inhibition leading to improved force production

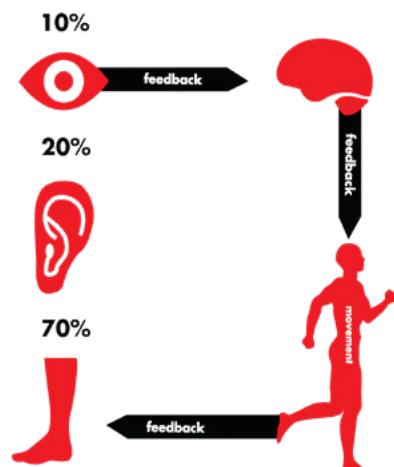
Biochemical Factors

- Small but meaningful increases in ATP and CP levels
- Increased testosterone and growth hormone production during and immediately after resistance training
- Increase in insulin sensitivity after resistance training

A PROGRAM OF RESISTANCE TRAINING MAY ALSO:

- Increase, decrease or maintain body mass depending on exercise and dietary status
- Increase muscle mass
- Decrease fat mass and body fat percentage
- Improve bone and joint health
- Increase strength, power and endurance
- Improve self-image
- Improve posture
- Improve proprioception
- Increase metabolic rate
- Increase mobility, flexibility and range movement
- Improve immune system function
- Improve sports performance

= Proprioception



Resistance Training Terminology

Resistance training, like so many things associated with fitness and exercise, has a language all its own. It is essential that all instructors are not only familiar but are fluent in this language so they can effectively communicate with other instructors and trainers and also with their clients and while exercise names may vary region by region, the terminology that used to describe aspects of resistance training are all but universal.

Repetitions

A repetition, or rep for short, is one complete movement of an exercise normally consisting of a lifting phase and a lowering phase. Repetitions are usually prescribed in ranges i.e. 1 to 5, 6 to 12 or 13 to 20. When added into a programme they are given a much smaller range (margin of error) e.g. Hypertrophy aim (6 - 12) would be seen as either: 6-8, 8-10 or 10-12. See the Power Grid below for additional appropriate rep ranges.

Sets

A group of repetitions performed continuously is called a set. Sets are broken up with periods of recovery lasting from 30-seconds or less to five minutes or more.

Repetition Maximum

Repetition maximum, RM for short, the maximum number of repetitions that can be performed in a single set before failure occurs. A 1RM means the most weight that can be lifted for a single repetition whereas a 10RM is the most weight that can be lifted 10-times. RM is usually given as an indicator of how much weight is to be used e.g. 75% of 1RM for three sets of five repetitions.

Intensity

Intensity has two meanings; it can refer to how hard and/or painful an exercise or workout is or can relate directly to the percentage of the 1RM being used – the higher the percentage the more intense a workout is deemed to be. Unlike aerobic training, resistance training intensity has no correlation with heart rate as performing a 1RM of, say, bench press, while very intense, would not affect the heart or breathing rate significantly.



Volume

Volume is the amount of work done in a training session, a week, a month or other training period. Volume can be measured in terms of the number of sets performed or the total amount of weight lifted in a given timeframe. Many systems of training, especially bodybuilding and weightlifting, use a high volume approach.

Compound Exercises

Exercises that involve two or more joints simultaneously are deemed to be compound exercises. Compound exercises are, in most cases, more productive and functional. Examples of compound exercises include press-ups, squats, leg presses, lunges, lat pull-downs, dumbbell rows and deadlifts.

Isolation Exercises

Contrary to the name, isolation exercises do not work single muscles in isolation but, instead, isolate joints. Isolation exercises include leg extensions, leg curls, calf raises, biceps curls, pec deck flies and abdominal crunches. Isolation exercises are not as effective as compound exercises as they are less functional but they are still useful.

Hypertrophy

Developing bigger muscles is a process called hypertrophy. Hypertrophy is the result of an increase in the cross-sectional size of the muscle fibres actin and myosin and an accumulation of sarcoplasmic fluid inside the muscles. Moderate loads and a high volume of training with short to moderate rests are key features of hypertrophy training, as are multiple exercises per muscle group.

Anabolism

The process of building structures in the body is called anabolism. Hypertrophy, discussed above, is an anabolic process. The primary anabolic hormones, the chemical messengers responsible for anabolism, are testosterone and growth hormone. Anabolic steroids are artificial anabolic hormones – usually testosterone.

Catabolism

The process of breaking down structures (think catastrophe) in the body is called catabolism and is the opposite of anabolism. Exercise is catabolic because it causes the breakdown of muscle tissue. However, after rest and recovery, the muscle tissue grows back bigger and stronger in the anabolic process.



Power Grid Download

	REPS	SETS	%1RM	REST	
POWER	1-2	6	95-100	5MIN	GENERAL STRENGTH
STRENGTH	2-3	5	90-95	4-5MIN	
HYPERTROPHY	3-5	5	85-90	3-4MIN	
	5-6	4	80-85	2-3MIN	
	6-8	4	75-80	2MIN	
ENDURANCE	8-10	3	70-75	90SEC -2MIN	
	10-12	3	65-70	60-90 SECS	
	12-15	3	60-65	60SECS	
	15-18	2	55-60	45-60 SECS	
STABILITY	18-20	2	50-55	30-45 SECS	
	20-25	1	<50	0-30 SECS	



Types of Resistance



To achieve results from resistance training, muscles must be overloaded. That is to say they must be asked to do a little more work than usual. Overload can come from a number of different types of resistance:

- **Free weights** e.g. barbells, dumbbells, medicine balls, kettlebells
- **Resistance machines** e.g. cable or fixed-path
- **Bodyweight** e.g. exercises like press-ups and pull-ups
- **Manual resistance** e.g. force applied by a partner or opposing limb
- **Isometrics** e.g. contracting a muscle against an immovable object like a wall
- **Resistance bands**
- **Water** e.g. hydrotherapy, swimming wearing fins and/or hand paddles

While there are lots of ways to apply overload to your muscles, methods should be selected on merit and based on the needs of the client and, while an instructor may prefer one particular method for their own training, they should be sufficiently familiar with all methods for their client's usage.

Roles Muscles Play During Exercise

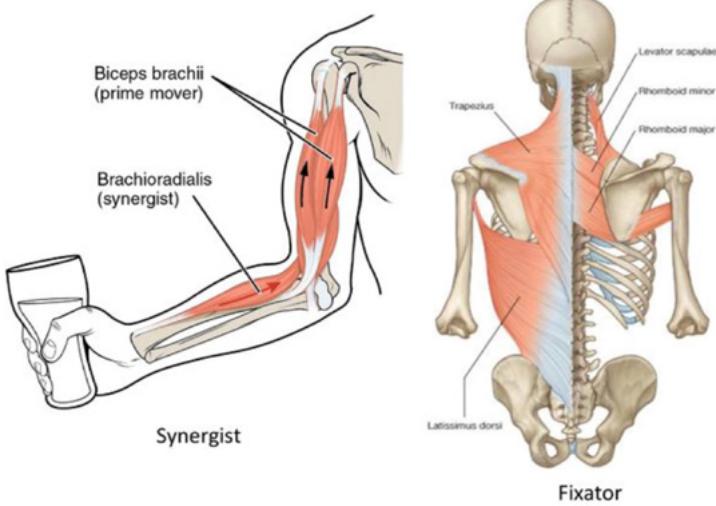
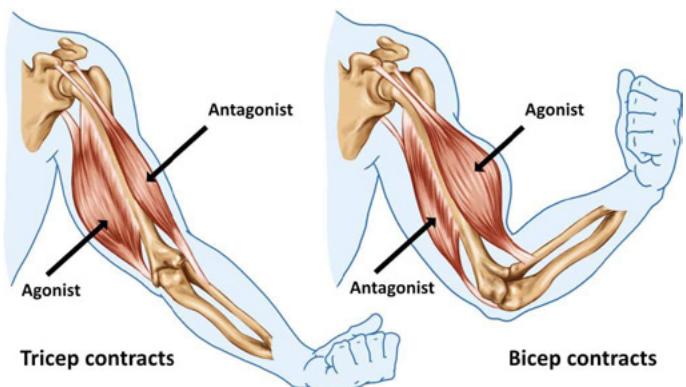
Resistance exercises are normally chosen because they work a particular muscle group i.e. the bench press to work the chest. However, in any movement, a whole lot more is going on than the work done by the target muscle. Knowing the role of muscles in an exercise is important for several reasons including program design and avoiding overlapping exercises.

Agonists

Also known as the prime mover the agonist is the muscle that contracts to produce force and control the movement and is also the target muscle of the exercise (think the muscle in 'agony')

Antagonists

The opposing muscle and the one that relaxes to allow movement to occur is called the antagonist. This muscle is only usually responsible for the opposite joint action.



Synergists

Muscles never work in isolation and synergists assist the agonist by modifying the desired movement e.g. in the bench press, the pectoralis major is the agonist but the anterior deltoids and triceps are also involved to a lesser extent. Synergists can be thought of as secondary muscles.

Fixators

Fixators fix joints in place so that they remain stable and the agonist can work efficiently. In the press-up, the core muscles fixate the spine to prevent the hips dropping. Fixators are also known as stabilisers.

The image below is showing elbow flexion. The synergists for elbow flexion on the left and the fixator muscles on the right.

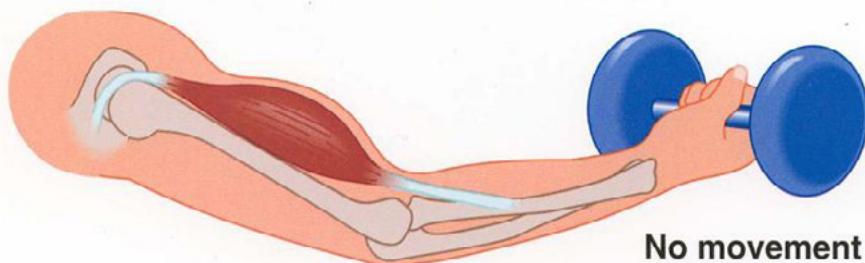
Muscle Contraction Types

Muscles can perform different kinds of contractions. They can lengthen, shorten and remain stationary as well as generating forces to move at differing speeds:

- **Concentric:** Muscle shortens under contraction
- **Eccentric:** Muscle lengthens under contraction
- **Isometric:** Muscle stays the same length under contraction
- **Isotonic:** Movements involving both concentric and eccentric contractions
- **Isokinetic:** Muscle moves at a constant speed during contraction

Isometric contraction

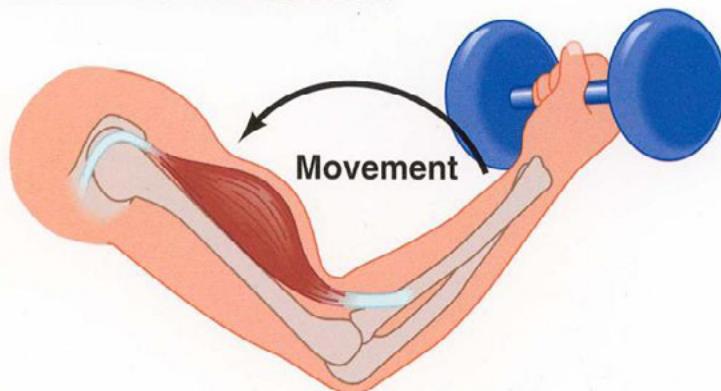
Muscle contracts
but does not shorten



No movement

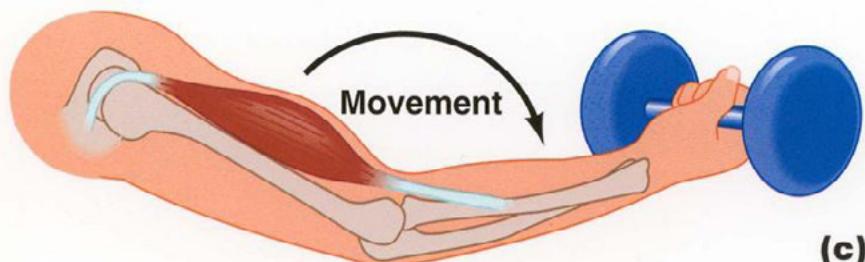
(a)

Concentric contraction



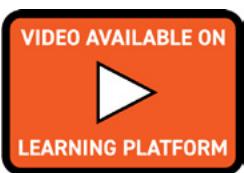
(b)

Eccentric contraction

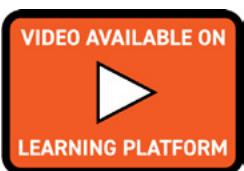


(c)

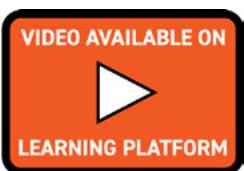
Exercise Example: Isometric



Exercise Example: Concentric



Exercise Example: Eccentric



Exercise Teaching Points

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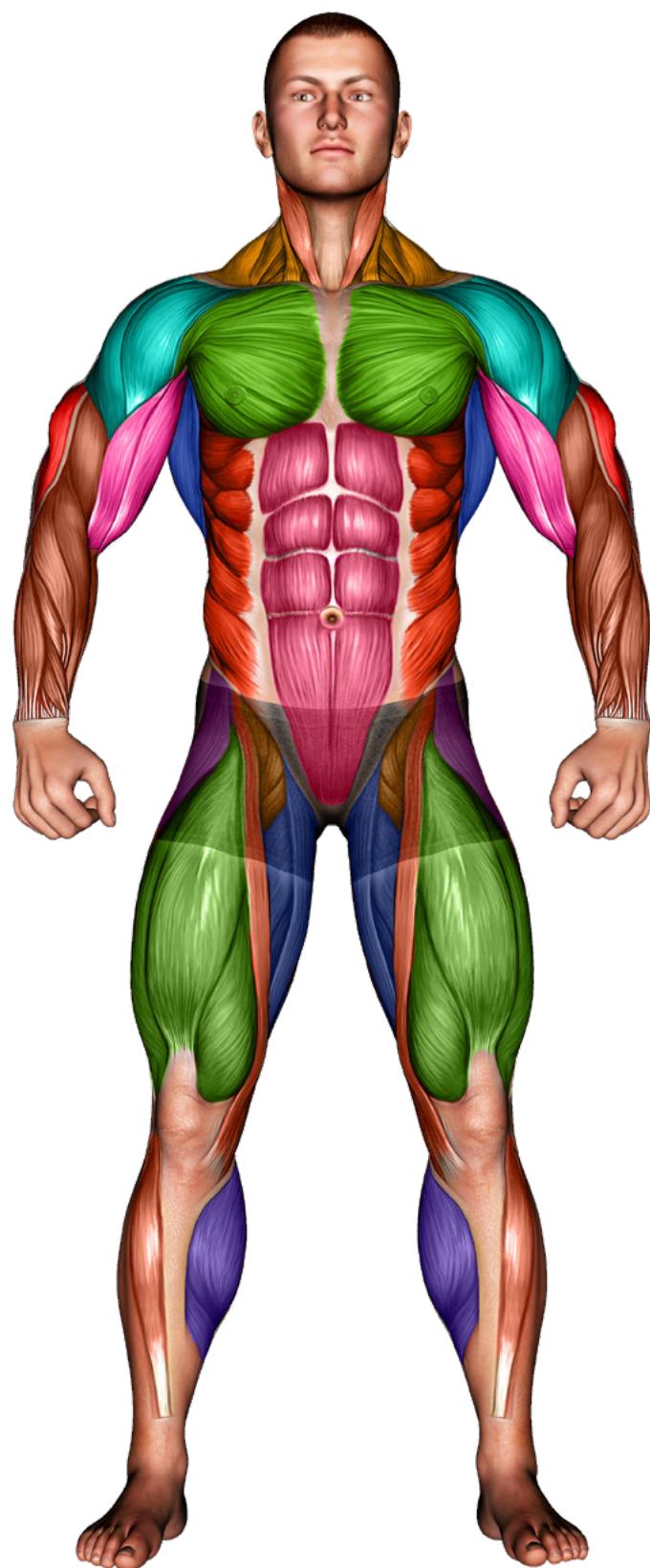
THE LIFT LIST

O R I G Y M

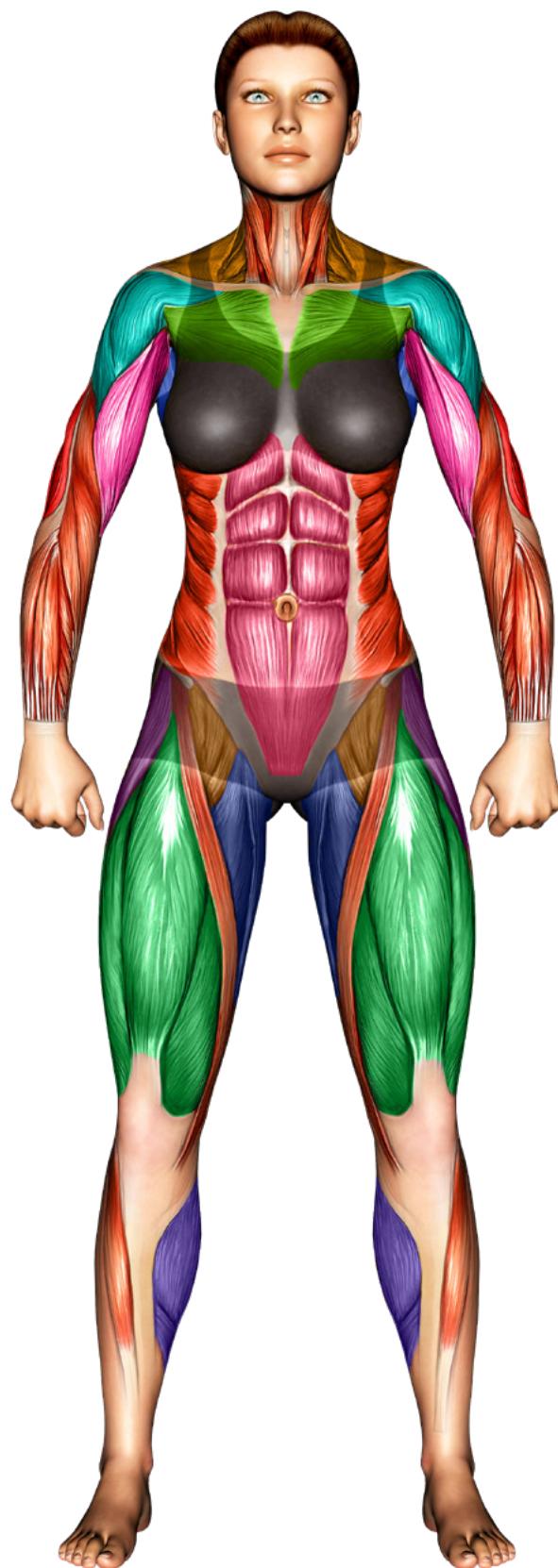
MUSCLE	EXERCISE	FX	FW	BW	ISO	COM
BICEPS	EZ Bar Bicep Curl	✖	✖		①	
	Cable Bicep Curl	✖			①	
	Dumbbell Bicep Curl		✖		①	
	Bicep Body Row			✖		②
	Machine Bicep Curl	✖			①	
TRICEPS	Tricep Dips	✖		✖		②
	Lying Tricep Extensions	✖	✖		①	
	Close Grip Tricep Press		✖			②
	Seated Tricep Push Down	✖				②
	Triceps Push Down	✖			①	
DELTOIDS	Frontal Raise	✖	✖		①	
	Lateral Raise	✖	✖		①	
	Upright Row		✖			②
	Seated Shoulder Press	✖	✖			②
	Standing Overhead Press		✖			②
	Read Deltoid Fly	✖	✖		①	
PECTORALS	Dumbbell Bench Press		✖			②
	Seated Chest Press	✖				②
	Chest Fly	✖	✖		①	
	Pec Deck Fly	✖			①	
	Press Ups			✖		②
TRAPEZIUS	Barbell Bent Over Row		✖			②
	Machine Seated Row - Pronated	✖				②
	Dumbbell Single Arm Row		✖			②
	Machine Seated Row - Neutral	✖				②
	Inverted Body Row			✖		②
	Cable Seated Row - Supinated	✖				②
RHOMBOID	Seated Machine Rear Fly	✖			①	
	Standing Cable Rear Crossover	✖			①	
	Dumbbell Reverse Fly		✖		①	
LATISSIMUS DORSI	Dumbbell Pull Over		✖			②
	Lat Pull Down	✖				②
	Chin Ups	✖		✖		②
	Pull Up	✖		✖		②
	Cable Pushdown	✖			①	

MUSCLE	EXERCISE	FX	FW	BW	ISO	COM
OBLIQUES & HIP FLEXORS 	Flutter Kicks			⚡	①	
	Plank			⚡	①	
	Bicycle Crunch			⚡		②
	Cable Wood Chop	✖				②
RECTUS ABDOMINUS & ERECTOR SPINAE 	Back Extension			⚡		②
	Abdominal Curl			⚡		②
	Seated Abdominal Crunch	✖				②
	Seated Back Extension		✖		①	
GLUTEALS 	Rear Lunge		✖	⚡		②
	Glute Kickbacks			⚡	①	
	Glute-Ham Raise	✖		⚡	①	
	Glute Bridge			⚡	①	
	Squat		✖	⚡		②
	Deadlift		✖			②
	Lunge		✖	⚡		②
HAMSTRINGS 	45° Leg Press	✖				②
	Seated Leg Curl	✖			①	
	Lunge		✖	⚡		②
	Deadlift		✖			②
	Lying Leg Curl	✖			①	
	45° Leg Press	✖				②
	Squat		✖	⚡		②
QUADRICEPS 	Rear Lunge		✖	⚡		②
	Squat		✖	⚡		②
	Rear Lunge		✖	⚡		②
	Lunge		✖	⚡		②
	Back Squat		✖			②
	Leg Press	✖				②
ABDUCTORS & ADDUCTORS 	Leg Extension	✖			①	
	Glute Bridge Hip Abduction			⚡		②
	Total Hip Machine	✖			①	
	Seated Hip Abduction	✖			①	
	Seated Hip Adduction	✖			①	
GASTROCNEMIUS & SOLEUS 	Sumo Squat		✖	⚡		②
	45° Calf Press	✖			①	
	Seated Calf Raise	✖	✖			②
	Standing Calf Raise (Supported)			⚡	①	
	Standing Calf Raise	✖	✖	⚡	①	

Anterior Muscles (Male)



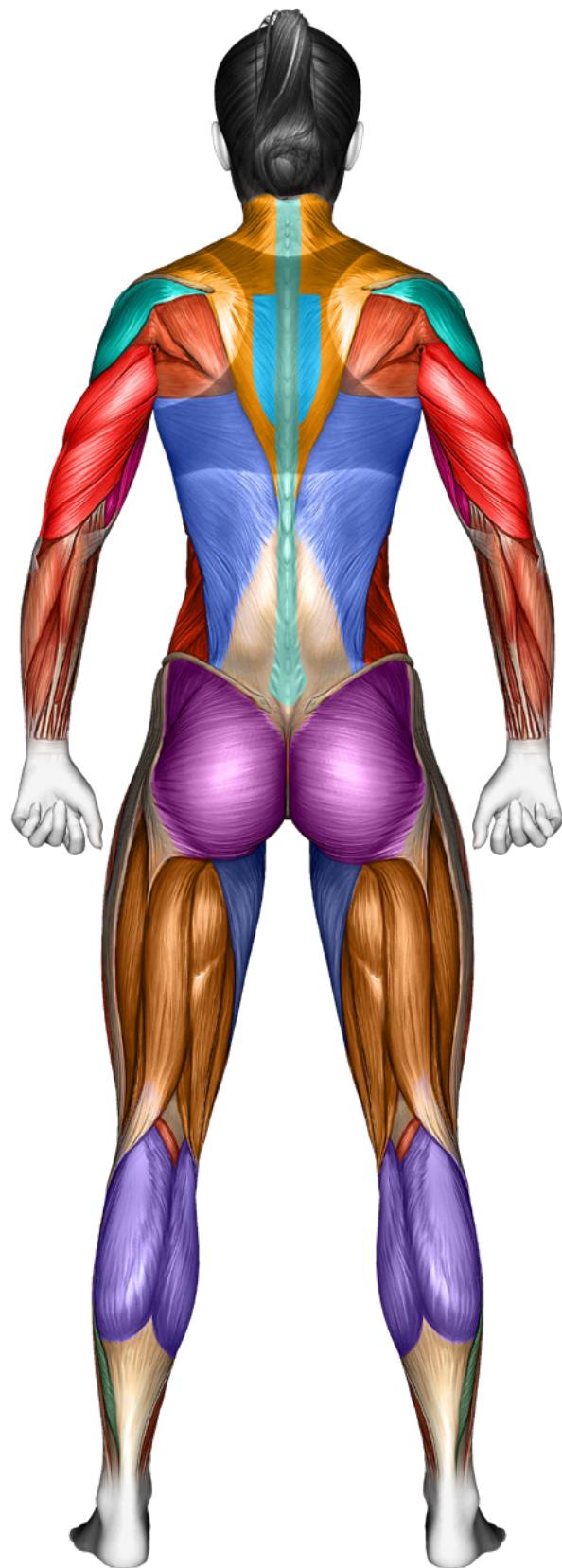
Anterior Muscles (Female)



Posterior Muscles (Male)



Posterior Muscles (Female)



Biceps

Barbell Bicep Curl



- **Isolated**
 - **Free Weight**
- Hold a BB/EZ Bar in an underhand grip either, just inside shoulder width or just outside shoulder width, keeping elbows tucked into the ribs, brace abs, keep the chest up and shoulders down and back.
 - Curl up by flexing the elbow joint, while keeping your head up and wrists straight.
 - Return to the " starting position under control.

Cable Bicep Curl



- **Isolated**
 - **Fixed Resistance**
- Grasp bar with an underhand grip, keeping elbows tucked into the ribs, brace abs, keep the chest up and shoulders down and back.
 - Curl up by flexing the elbow joint, while keeping your head up and wrists straight. "
 - Return to the starting position under control.

Cable Single Arm Bicep Curl



- **Isolated**
 - **Fixed Resistance**
- Grasp bar with an underhand grip, keeping elbows tucked into the ribs, brace abs, keep the chest up and shoulders down and back. Keep one arm behind the back.
 - Curl up by flexing the elbow joint, while keeping your head up and wrists straight.
 - Return to the starting position under control.

Dumbbell Bicep Curl



- **Isolated**
 - **Free Weight**
-
- Grasp dumbbells with an underhand or neutral grip, keeping elbows tucked into the ribs, brace abs, keep the chest up and shoulders down and back.
 - Curl up by flexing the elbow joint, while keeping your head up and wrists straight.
 - Return to the “starting position under control.

Alternating Dumbbell Bicep Curl



- **Isolated**
 - **Free Weight**
-
- Grasp dumbbells with an underhand or neutral grip, keeping elbows tucked into the ribs, brace abs, keep the chest up and shoulders down and back.
 - Curl up one weight at a time by flexing the elbow joint, while keeping your head up and wrists straight.
 - Return to the starting position under control.

Bicep Body Row



- **Compound**
 - **Body Weight**
-
- Grasp the bar with an underhand grip at shoulder level and lower yourself so that you are hanging underneath it with feet extended out.
 - Now, with your core braced and your spine neutral, pull yourself up so that your chest touches the bar.
 - Lower to full extension under control and repeat.

Machine Bicep Curl



- **Isolated**
- **Fixed Resistance**
- From the seated position, grasp the handles with an underhand grip while placing triceps flat against the support pad.
- Curl up by flexing the elbow joint, while keeping your head up and wrists straight.
- Return to the starting position under control.



BICEP WORKOUT

KEY:

- FX
- FW
- BW
- ISO (1)
- COM (2)

EZ BAR BICEP CURL

- Hold an EZ-bar in an underhand grip either, just inside shoulder width or just outside shoulder width, keeping elbows tucked into the ribs, brace abs, keep chest up and shoulders down and back
- Curl up by flexing the elbow joint, while keeping your head up and wrists straight
- Return to the starting position under control

CABLE BICEP CURL

- Grasp bar with an underhand grip, keeping elbows tucked into the ribs, brace abs, keep chest up and shoulders down and back
- Curl up by flexing the elbow joint, while keeping your head up and wrists straight
- Return to starting position under control

DUMBBELL BICEP CURL

- Grasp dumbbells with an underhand or neutral grip, keeping elbows tucked into the ribs, brace abs, keep chest up and shoulders down and back
- Curl up by flexing the elbow joint, while keeping your head up and wrists straight
- Return to starting position under control

BICEP BODY ROW

- Grasp the bar with an underhand grip at shoulder level and lower yourself so that you are hanging underneath it, with feet extended out
- Now, with your core braced and your spine neutral, pull yourself up so that your chin and chest touch the bar
- Lower to full extension under control and repeat

MACHINE BICEP CURL

- From the seated position, grasp the handles with an underhand grip while placing triceps flat against the support pad
- Curl up by flexing the elbow joint, while keeping your head up and wrists straight
- Return to the starting position under control

Triceps

Tricep Dips



- **Compound**
 - **Body Weight**
-
- Place your hands on the grips of the parallel bars and lift yourself up into position so that your arms are fully extended and your torso is straight up and down.
 - Keeping your elbows from flaring out, and your body upright, lower down to fully bend the elbows.
 - From the bottom position, focus on pushing through the triceps to push back to the start position. Remember to keep your elbows in as close to your body throughout.

Assisted Tricep Dips



- **Compound**
 - **Fixed Resistance**
-
- Adjust the weight by inserting the pin into the weight stack. Selecting the weight you wish to use to counterbalance your bodyweight.
 - Place your hands on the grips of the parallel bars and lift yourself up into position so that your arms are fully extended and your torso is straight up and down.
 - Keeping your elbows from flaring out, and your body upright, lower down to fully bend the elbows.
 - From the bottom position, focus on pushing through the triceps to push back to the start position. Remember to keep your elbows in as close to your body throughout.

Tricep Dips on Bench



- **Compound**
 - **Body Weight**
-
- Place your hands on the side of the bench and lift yourself up into position so that your arms are fully extended and your torso is straight up and down.
 - Keeping your elbows from flaring out, and your body upright, lower down to fully bend the elbows.
 - From the bottom position, focus on pushing through the triceps to push back to the start position. Remember to keep your elbows in as close to your body throughout.

Lying Tricep Extension



- **Isolated**
 - **Free Weight**
- Whilst lying supine on a bench, hold dumbbells directly in line with shoulders.
 - With arms vertical and palms facing each other, lower dumbbells to the forehead by only bending at the elbow.
 - Extend arms fully but do not lock out elbows, use a spotter if performing this exercise with heavy weights or close to failure.

Seated Tricep Extension



- **Isolated**
 - **Fixed Resistance**
- Adjust seat height so handles are in line with the shoulders.
 - With arms vertical and palms facing each other, pull handles down by only bending at the elbow.
 - Extend arms fully but do not lock out elbows.

Close Grip Tricep Press



- **Compound**
 - **Free Weight**
- Whilst lying supine on a bench, grasp the barbell with a shoulder width grip.
 - Lower the barbell under control while keeping elbows narrow and tucked to your sides.
 - Barbell should gently touch low on the chest before pressing back up.

Seated Tricep Push Down

- **Compound**
- **Fixed Resistance**

- From the seated position, grasp the handles with wrists straight and elbows tucked to the rib cage.
- Press down by extending the at the elbow joint and maintained elbow tuck.
- Return to the starting position under control.



Tricep Push Down

- **Isolated**
- **Fixed Resistance**

- Grasp bar/rope with an overhand grip, keeping elbows tucked into the ribs, brace abs, keep chest up and shoulders down and back.
- Press straight down by fully extending the elbow joint, while keeping your head up and wrists straight.
- Return to the starting position under control.

TRICEP WORKOUT



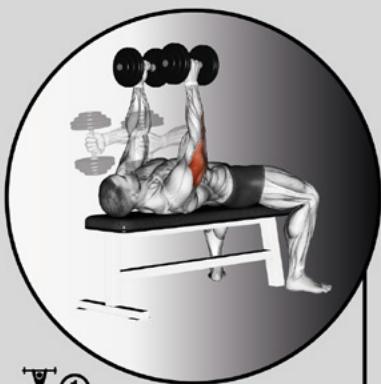
O R I G Y M

KEY:
FX 
FW 
BW 
ISO ① 
COM ② 



② TRICEP DIPS

- Place your hands on the side of the bench and lift yourself up into position so that your arms are fully extended and your torso is straight up and down
- Keeping your elbows from flaring out, and your body upright, lower down to fully bend the elbows
- From the bottom position, focus on pushing through the triceps to push back to the start position. Remember to keep your elbows as close to your body throughout



① LYING TRICEP EXTENSIONS

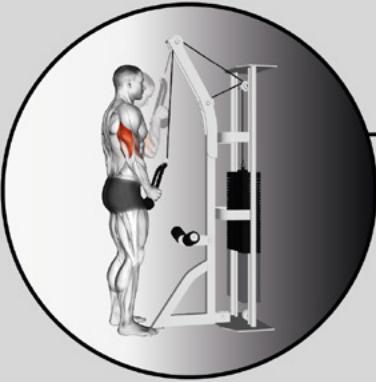
- Whilst lying supine on a bench, hold dumbbells directly in line with shoulders
- With arms vertical and palms facing each other, lower dumbbells to the forehead by only bending at the elbow
- Extend arms fully but do not lock out elbows, use a spotter if you are performing this exercise with heavy weights or you are close to failure



② CLOSE GRIP TRICEP PRESS

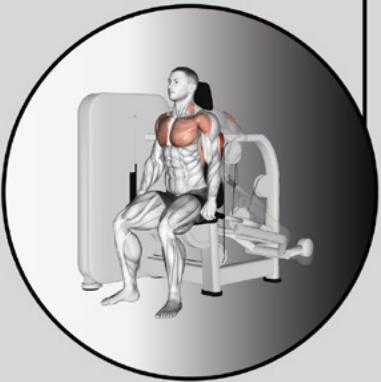
- Whilst lying supine on a bench, grasp the barbell with a shoulder width grip
- Lower the barbell under control while keeping elbows narrow and tucked to your sides
- Barbell should gently touch low on the chest before pressing back up

- From the seated position, grasp the handles with wrists straight and elbows tucked to the rib cage
- Press down by extending the elbows and keep elbow tucked
- Return to the start position under control



① TRICEPS PUSHDOWN

- Grasp bar/rope with an overhand grip, keeping elbows tucked into the ribs, brace abs, keep chest up and shoulders down and back
- Press straight down by fully extending the elbow joint, while keeping your head up and wrists straight
- Return to the start position under control



Deltoids

Barbell Frontal Raise



- **Isolated**
- **Free Weight**
- Standing with feet shoulder width, slight bend in the knees, brace core and pull shoulder blades down and back.
- Raise the barbell straight up in front of body to shoulder height, while maintaining a slight bend in the elbow and palms in a prone or neutral position.
- Return to the starting position under control while maintaining good posture throughout.

Dumbbell Frontal Raise



- **Isolated**
- **Free Weight**
- Standing with feet shoulder width, slight bend in the knees, brace core and pull shoulder blades down and back.
- Raise dumbbells straight up in front of body to shoulder height, while maintaining a slight bend in the elbow and palms in a prone or neutral position.
- Return to the starting position under control while maintaining good posture throughout.

Cable Frontal Raise



- **Isolated**
- **Fixed Resistance**
- Standing with feet shoulder width, slight bend in the knees, brace core and pull shoulder blades down and back.
- Grasp the cable stirrup with an overhand grip and raise straight up in front of body to shoulder height, while maintaining a slight bend in the elbow and palms in a prone position.
- Return to the starting position under control while maintaining good posture throughout.

Dumbbell Lateral Raise



- **Isolated**
 - **Free Weight**
-
- Standing with feet shoulder width, slight bend in the knees, brace core and pull shoulder blades down and back.
 - Raise dumbbells out to the side up to shoulder height to form a T-shape with the upper body, while maintaining a slight bend and ensuring elbows do not go above shoulder height.
 - Return to the starting position under control while maintaining good posture throughout.

Cable Lateral Raise



- **Isolated**
 - **Fixed Resistance**
-
- Standing with feet shoulder width, slight bend in the knees, brace core and pull shoulder blades down and back.
 - Grasp the cable stirrups with an overhand grip (right hand left stirrup) out to the side up to shoulder height to form a T-shape with the upper body, while maintaining a slight bend and ensuring elbows do not go above shoulder height.
 - Return to the starting position under control while maintaining good posture throughout.

Barbell Upright Row



- **Compound**
 - **Free weight**
-
- From the standing position, grasp the barbells with an overhand grip and keep core braced and shoulder blades down and back.
 - Row the bar/dumbbells up in a straight line to chest level, ensure that the elbows do not go above shoulder height.

Dumbbell Upright Row



- **Compound**
 - **Free Weight**
-
- From the standing position, grasp the dumbbells with an overhand grip and keep core braced and shoulder blades down and back.
 - Row the bar/dumbbells up in a straight line to chest level, ensure that the elbows do not go above shoulder height.

Seated Shoulder Press



- **Compound**
 - **Fixed Resistance**
-
- From the seated position, grasp the grips at shoulder height with wrists and elbows directly under the grip in a vertical position.
 - From this position, press the weight up in a straight line without flaring elbows out or overarching the back.
 - Return to the starting position of shoulder height under control and ensure elbows and wrists stay in vertical position throughout.

Seated Dumbbell Shoulder Press



- **Compound**
 - **Free weight**
-
- From the seated position, grasp the dumbbells at shoulder height with wrists and elbows directly under the weight in a vertical position.
 - From this position, press the weight up in a straight line without flaring elbows out or overarching the back.
 - Return to the starting position of shoulder height under control and ensure elbows and wrists stay in vertical position throughout.

Standing Overhead Dumbbell Press



- **Compound**
 - **Free Weight**
-
- From the standing position, grasp the dumbbells at shoulder height with wrists and elbows directly under the weight in a vertical position for support.
 - From this position, press the weight up in a straight line without flaring elbows out or overarching the back.
 - Return to the starting position of shoulder height under control and ensure elbows and wrists stay in vertical position throughout.

Standing Overhead Barbell Press



- **Compound**
 - **Free Weight**
-
- From the standing position, grasp the barbells at shoulder height with wrists and elbows directly under the weight in a vertical position for support.
 - From this position, press the weight up in a straight line without flaring elbows out or overarching the back.
 - Return to the starting position of shoulder height under control and ensure elbows and wrists stay in vertical position throughout.

Machine Rear Deltoid Fly



- **Compound**
 - **Fixed Resistance**
-
- Grab the horizontal grips with a pronated grip and push the chest into the padding on the seat, feet firmly on the floor.
 - With your elbows slightly bent, retract the shoulder blades and pull the arms of the machine backwards and in-line with the body.
 - Return under control to the start position.

Dumbbell Rear Deltoid Fly

VIDEO AVAILABLE ON



LEARNING PLATFORM

- Isolated
- Free Weight

- In a seated and bent over position grasp the dumbbells with a neutral grip
- With your elbows slightly bent, retract the shoulder blades and lift the dumbbells upwards and in-line with the body.
- Return under control to the start position.

DOWNLOADABLE
RESOURCE AVAILABLE



ON LEARNING PLATFORM

DELTOIDS WORKOUT

O R I G Y M

KEY:

FX

FW

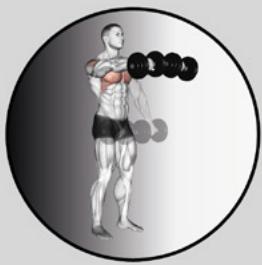
BW

ISO

COM



FRONTAL RAISE



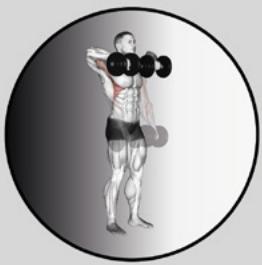
- Standing with feet shoulder width apart, slight bend in the knees, brace core & pull shoulder blades down & back
- Raise dumbbells straight up in front of body to shoulder height, while maintaining a slight bend in the elbow and palms in a prone or neutral position
- Return to the starting position under control while maintaining good posture throughout

LATERAL RAISE



- Standing with feet shoulder width apart, slight bend in the knees, brace core & pull shoulder blades down & back
- Raise dumbbells out to the side up to shoulder height to form a T-shape with the upper body, while keeping a slight bend and ensuring elbows do not go above shoulder height
- Return to the starting position under control while maintaining good posture

UPRIGHT ROW



- From the standing position, grasp the bar/dumbbells with an overhand grip and keep core braced and shoulder blades down and back
- Row the bar/dumbbells up in a straight line to chest level ensuring that the elbows do not go above shoulder height

SEATED SHOULDER PRESS



- From the seated position, grasp the grips at shoulder height with wrists and elbows directly under the grip in a vertical position
- From this position, press the weight up in a straight line without flaring elbows out or overarching the back
- Return to the starting position of shoulder height under control and ensure elbows and wrists stay in vertical position throughout

STANDING OVERHEAD PRESS



- From the standing position, grasp the bar/dumbbells at shoulder height with wrists and elbows directly under the weight in a vertical position for support
- From this position, press the weight up in a straight line without flaring elbows out or overarching the back
- Return to the starting position of shoulder height

REAR DELTOID FLY



- Grab the horizontal grips with a pronated grip and push the chest into the padding on the seat, feet firmly on the floor
- With your elbows slightly bent, retract the shoulder blades and pull the arms of the machine backwards and in-line with the body
- Return under control to the start position

Pectorals

Dumbbell Bench Press



- **Compound**
 - **Free Weight**
- Whilst lying supine on a bench, grasp the dumbbell/barbell with a slightly wider than shoulder width grip, shoulders down and back.
 - Lower the barbell under control while keeping elbows tucked at approx 30 degree angle and supporting the wrists.
 - Barbell should gently touch low on the chest before pressing back up.

Barbell Bench Press



- **Compound**
 - **Free Weight**
- Whilst lying supine on a bench, grasp the barbell with a slightly wider than shoulder width grip, shoulders down and back.
 - Lift the bar off the rack and over the chest, stopping in line with the midline of the chest.
 - Lower the barbell under control while keeping elbows tucked at approx 30 degree angle and supporting the wrists.
 - Barbell should gently touch low on the chest before pressing back up

Seated Chest Press



- **Compound**
 - **Fixed Resistance**
- Adjust the seat so the middle of the chest is level with handles, keep the chest up and slight arch in lower back.
 - While keeping wrists straight, extend arms fully but do not lock elbows, look straight ahead.
 - Return to starting position while keeping shoulder blades retracted and chest muscles engaged.

Lying Chest Press



- **Compound**
 - **Fixed Resistance**
-
- Lie on the bench so the middle of the chest is level with handles, keep the chest up and slight arch in lower back.
 - While keeping wrists straight, extend arms fully but do not lock elbows, look straight ahead.
 - Return to starting position while keeping shoulder blades retracted and chest muscles engaged.

Dumbbell Chest Fly



- **Isolated**
 - **Free Weight**
-
- Whilst lying supine on a bench set up between 30-45 degrees or flat, hold dumbbells with a neutral grip and arms extended straight out with a slight bend in the elbow.
 - With shoulder blades down and back, arms out in front at shoulder height and a slight bend in the elbow, control the dumbbells down to form a T-shape with the upper body.
 - Return to starting position while keeping shoulder blades retracted and chest muscles engaged

Cable Chest Fly



- **Isolated**
 - **Fixed Resistance**
-
- Grab the handles of the stirrups so that your palms are facing forward.
 - Press your arms together in front of your chest with a slow, controlled movement. Keep a slight, soft bend in the elbows with wrists relaxed.
 - Pause for one second once your arms are fully "closed" in front of your chest.
 - Bring your arms slowly back to the starting position, opening your chest and keeping posture strong and upright.

Pec Deck Fly



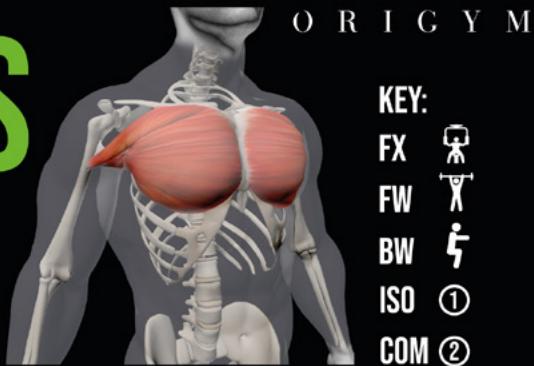
- **Isolated**
 - **Fixed Resistance**
-
- Adjust seat height so that when you grasp the handles with a neutral grip, wrists and elbows are in line with the centre of your chest.
 - With shoulder blades down and back, arms out to the sides in a T-shape / Y-shape and a slight bend in the elbow, bring your arms together in front of the body.
 - Return to starting position while keeping shoulder blades retracted and upright torso.

Press up

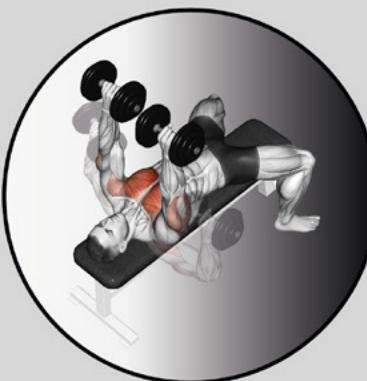


- **Compound**
 - **Body Weight**
-
- In a prone position with the hands flat on the floor, at shoulder width.
 - Brace abs, lower chest to within an inch of the floor.
 - Push back up, extending arms but not locking elbows.

PECTORALS WORKOUT



KEY:
 FX 
 FW 
 BW 
 ISO ① 
 COM ② 



 ②
DUMBBELL BENCH PRESS

- Whilst lying supine on a bench, grasp the barbell with a slightly wider than shoulder width grip, shoulders down and back
- Lower the barbell under control while keeping elbows tucked at approx 30 degree angle and supporting the wrists
- Barbell should gently touch low on the chest before pressing back up



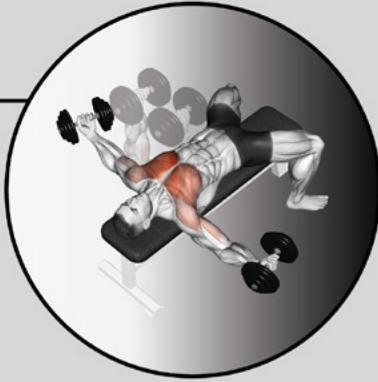
 ②
SEATED CHEST PRESS

- Adjust the seat so the middle of the chest is level with handles, keep the chest up and slight arch in lower back
- While keeping wrists straight, extend arms fully but do not lock elbows, look straight ahead
- Return to start position keeping shoulder blades retracted & chest muscles engaged



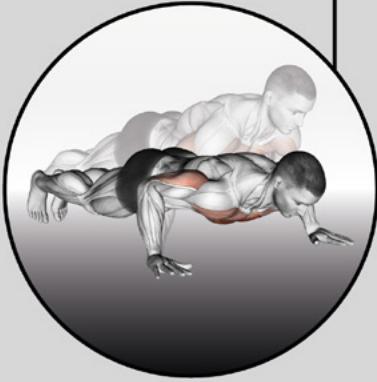
 ①
CHEST FLY

- Whilst lying supine on a bench set up between 30-45 degrees or flat, hold dumbbells with a neutral grip and arms extended straight out with a slight bend in the elbow
- With shoulder blades down and back, arms out in front at shoulder height, control the dumbbells down to form a T-shape with the upper body
- Return to starting position while keeping shoulder blades retracted and chest muscles engaged



 ①
PEC DECK FLY

- Adjust seat height so that when you grasp the handles with a neutral grip, wrists and elbows are in line with the centre of your chest
- With shoulder blades down and back, arms out to the sides in a T-shape and a slight bend in the elbow, bring your arms together in front of the body
- Return to starting position while keeping shoulder blades retracted and upright torso



 ②
PRESS UPS

- In a prone position with the hands flat on the floor, at shoulder width
- Brace abs, lower chest to within an inch of the floor
- Push back up, extending arms but not locking elbows

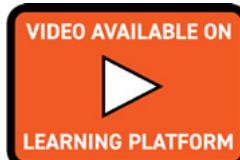
Trapezius

Barbell Overhand Bent Over Row



- **Compound**
 - **Free Weight**
-
- Grab a barbell with an overhand grip, hands slightly wider than shoulder-width apart, chest should be almost parallel to the floor.
 - With your slightly knees bent, hamstrings, glutes, core and lats all engaged, row the weight upwards into the lower part of your chest.
 - Return under control to the start position.

Barbell Underhand Bent Over Row



- **Compound**
 - **Free Weight**
-
- Grab a barbell with an underhand grip, hands slightly wider than shoulder-width apart, chest should be almost parallel to the floor.
 - With your slightly knees bent, hamstrings, glutes, core and lats all engaged, row the weight upwards into the lower part of your chest.
 - Return under control " to the start position.

Machine Seated Row (All Grips)

Machine Seated Underhand Row (Supinated Grip)



- **Compound**
 - **Fixed Resistance**
-
- With chest flat against support pad and torso upright, grasp handles with a supinated grip.
 - Keep your shoulders down and back, pull the handles in and towards your midriff while keeping elbows in line with your wrists.
 - Return to starting position while keeping traps engaged and upright torso.

Types of Grips



Overhand / Pronated

Parallel / Neutral

Underhand / Supinated

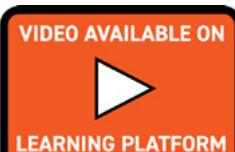
Machine Seated Overhand Row (Pronated Grip)

- **Compound**
- **Fixed Resistance**
- With chest flat against support pad and torso upright, grasp handles with a pronated grip.
- Keep your shoulders down and back, pull the handles in and towards your midriff while keeping elbows in line with your wrists.
- Return to starting position while keeping traps engaged and upright torso.



Machine Seated Parallel Row (Neutral Grip)

- **Compound**
- **Fixed Resistance**
- With chest flat against support pad and torso upright, grasp handles with a neutral grip.
- Keep your shoulders down and back, pull the handles in and towards your midriff while keeping elbows in line with your wrists.
- Return to starting position while keeping traps engaged and upright torso.



Dumbbell Single Arm Row



- **Compound**
 - **Free Weight**
-
- Place one hand and one knee of the same side on a bench with the upper body parallel to the floor and head neutral.
 - While holding the dumbbell with a neutral grip, row the dumbbell up towards the hip by contracting the latissimus dorsi and keeping the elbow tucked to the ribcage.
 - Return to starting position under control while avoiding any rotation of the torso throughout the movement.

Inverted Body Row



- **Compound**
 - **Body Weight**
-
- Grasp the bar with an overhand grip at shoulder level and lower yourself so that you are hanging underneath it with feet extended out.
 - Now, with your core braced and your spine neutral, pull yourself up so that your chest touches the bar.
 - Lower to full extension under control and repeat.

Cable Seated Underhand Row (Supinated Grip)



- **Compound**
 - **Fixed Resistance**
-
- With feet flat against support plates or firmly on the floor and torso upright (use bench support if necessary), grasp bar with an underhand grip.
 - Keep your elbows tucked, lean back slightly, pull the elbows in and towards your hips while keeping wrists straight.
 - Return to starting position while keeping traps engaged and upright torso.

Types of Grips



Overhand / Pronated

Parallel / Neutral

Underhand / Supinated

Cable Seated Overhand Row (Pronated Grip)

- **Compound**
- **Fixed Resistance**
- With feet flat against support plates or firmly on the floor and torso upright (use bench support if necessary), grasp bar with an overhand grip.
- Keep your elbows tucked, lean back slightly, pull the elbows in and towards your hips while keeping wrists straight.
- Return to starting position while keeping traps engaged and upright torso.

VIDEO AVAILABLE ON
 LEARNING PLATFORM

Cable Seated Parallel Row (Neutral Grip)

- **Compound**
- **Fixed Resistance**
- With feet flat against support plates or firmly on the floor and torso upright (use bench support if necessary), grasp bar with a neutral grip.
- Keep your elbows tucked, lean back slightly, pull the elbows in and towards your hips while keeping wrists straight.
- Return to starting position while keeping traps engaged and upright torso.

VIDEO AVAILABLE ON
 LEARNING PLATFORM

TRAPEZIUS WORKOUT



O R I G Y M

KEY:

FX 

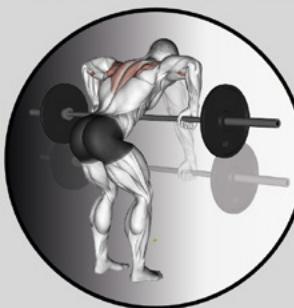
FW 

BW 

ISO  ①

COM  ②

BARBELL BENT OVER ROW



- Grab a barbell with an overhand grip, hands slightly wider than shoulder width apart, chest should be almost parallel to the floor
- With your slightly knees bent, hamstrings, glutes, core and lats all engaged, row the weight upwards into the lower part of your chest
- Return under control to the start position

MACHINE SEATED ROW



- With chest flat against the support pad and torso upright, grasp handles with a pronated grip (palms facing down)
- Keep your shoulders down and back, pull the handles in and towards your midriff while keeping elbows in line with your wrists
- Return to starting position while keeping traps engaged and upright torso

DUMBBELL SINGLE ARM ROW



- Place one and one knee of the same side on a bench with the upper body parallel to the floor and head neutral
- While holding the dumbbell with a neutral grip, row the dumbbell up towards the hip by contracting the latissimus dorsi and keeping the elbow tucked to the ribcage
- Return to starting position under control, avoiding rotation of torso throughout

MACHINE SEATED ROW



- With chest flat against support pad and torso upright, grasp handles with neutral grip (palms facing each other)
- Keep your elbows tucked, pull the handles in and towards your hips while keeping wrists straight
- Return to starting position while keeping traps engaged and upright torso

INVERTED BODY ROW



- Grasp the bar with an overhand grip at shoulder level and lower yourself so that you are hanging underneath it with feet extended out
- Now, with your core braced and your spine neutral, pull yourself up so that your chest touches the bar
- Lower to full extension under control and repeat

CABLE SEATED ROW



- With feet flat against support plates and torso upright, grasp bar with supinated grip (palms facing upwards)
- Keep your elbows tucked, lean back slightly, pull the elbows in and towards your hips while keeping wrists straight
- Return to starting position while keeping traps engaged and upright torso

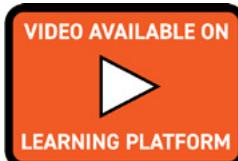
Rhomboids

Seated Machine Rear Fly



- **Isolated**
 - **Fixed Resistance**
-
- Adjust seat height so that when you grasp the vertical handles with a neutral grip, wrists and elbows are in-line with the height of the shoulder.
 - With shoulder blades down and back, arms out in front at shoulder height and a slight bend in the elbow, horizontally extend the shoulder joint to form a T-shape with the upper body.
 - Return to starting position while keeping traps engaged and upright torso.

Standing Cable Rear Cross Over



- **Isolated**
 - **Fixed Resistance**
-
- Standing with feet shoulder-width apart and a slight bend in the knees, grasp the left handle with your right hand and the right handle with your left hand so they cross over in front of you.
 - With shoulder blades down and back, arms out in front at shoulder height and a slight bend in the elbow, horizontally extend the shoulder joint to form a T-shape with the upper body.
 - Return to starting position while keeping traps engaged and upright torso.

Bent-Over Cable Rear Cross Over



- **Isolated**
 - **Fixed Resistance**
-
- Standing with feet shoulder-width apart, bending 90 degrees forward at the hip and a slight bend in the knees, grasp the left handle with your right hand and the right handle with your left hand so they cross over in front of you.
 - With shoulder blades down and back, arms out in front at shoulder height and a slight bend in the elbow, horizontally extend the shoulder joint to form a T-shape with the upper body.
 - Return to starting position while keeping traps engaged and upright torso.

Dumbbell Reverse Fly



- Isolated
- Free Weight

- Whilst lying prone on a bench set up between 30-45 degrees, hold dumbbells in with a neutral grip and arms extended straight out with a slight bend in the elbow.
- With shoulder blades down and back, arms out in front at shoulder height and a slight bend in the elbow, horizontally extend the shoulder joint to form a T-shape with the upper body.
- Return to starting position while keeping traps engaged and upright torso.



RHOMBoids WORKOUT



ORIGYM

KEY:

- FX
- FW
- BW
- ISO
- COM



SEATED MACHINE REAR FLY

- Adjust seat height so that when you grasp the vertical handles with a neutral grip, wrists and elbows are in-line with the height of the shoulder
- With shoulder blades down and back, arms out in front at shoulder height and a slight bend in the elbow, horizontally extend the shoulder joint to form a T-shape with the upper body
- Return to starting position while keeping traps engaged & upright torso



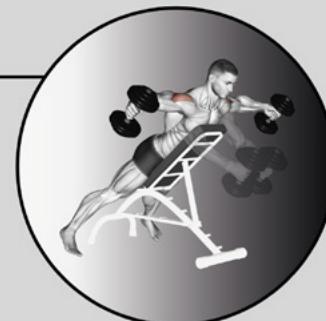
STANDING CABLE REAR CROSS OVER

- Standing with feet shoulder width apart and a slight bend in the knees, grasp the left handle with your right hand and the right handle with your left hand so they cross over in front of you
- With shoulder blades down and back, arms out in front at shoulder height and a slight bend in the elbow, horizontally extend the shoulder joint to form a T-shape with the upper body
- Return to starting position while keeping traps engaged and upright torso



DUMBBELL REVERSE FLY

- Whilst lying prone on a bench set up between 30-45 degrees, hold dumbbells in with a neutral grip and arms extended straight out with a slight bend in the elbow
- With shoulder blades down and back, arms out in front at shoulder height and a slight bend in the elbow, horizontally extend the shoulder joint to form a T-shape with the upper body
- Return to starting position while keeping traps engaged and upright torso



Latissimus Dorsi

Dumbbell Pull Over



- **Isolated**
 - **Free Weight**
-
- Whilst lying supine on a bench, hold a single dumbbell in both hands extended straight up with a slight bend in the elbow.
 - From this position, gently lower the dumbbell behind the head while maintaining a slight bend in the elbow joint and not overarch the low back.
 - Return to starting position by contracting the latissimus dorsi muscles and ensuring the elbows do not flare out.

Lat Pull Down



- **Compound**
 - **Fixed Resistance**
-
- From a seated position with feet flat on the floor and knees tucked under support pad, grasp bar with an overhand grip.
 - Keep your chest up, lean back slightly, pull the elbows down and towards your hips while keeping wrists straight.
 - The bar should gently touch the upper chest before returning to the starting position under control.

Lat Pull Down (vertical traction)



- **Compound**
 - **Fixed Resistance**
-
- From a seated position with feet flat on the floor and knees tucked under support pad, grasp bar with an overhand grip.
 - Keep your chest up, lean back slightly, pull the elbows down and towards your hips while keeping wrists straight.
 - The grips should line up with the upper chest before returning to the starting position under control.

Chin Up

- **Compound**
- **Body Weight**



- Grasp the bar with an underhand, narrower than shoulder width grip.
- Hang from the bar with the arms straight, shoulders pulled down and back. Keep the chest lifted and legs bent/crossed or straight down throughout.
- Pull the chin up to bar and then descend all the way back down.

Pull Up

- **Compound**
- **Body Weight**



- Grasp the bar with an overhand, wider than shoulder width grip.
- Hang from the bar with the arms straight, shoulders pulled down and back. Keep the chest lifted and legs bent/crossed or straight down throughout.
- Pull the chin up to bar and then descend all the way back down.

Assisted Pull Up

- **Compound**
- **Fixed Resistance**



- Set weight to counterbalance the required amount of bodyweight, mount machine carefully, grasp bar with an overhand grip.
- Keep your chest and hips lifted throughout the movement. Avoid sitting on heels.
- Pull the body up so the chin is level with the hands, descend all the way back down

Cable Push-down

- Isolated
 - Fixed Resistance
- Grasp bar/rope with an overhand grip, keeping elbows tucked into the ribs, brace abs, keep the chest up and shoulders down and back.
- Press straight down keeping the arms straight, while keeping your head up and wrists straight. Movement at the shoulder joint only.
- Return to the starting position under control.

DOWNLOADABLE RESOURCE AVAILABLE
ON LEARNING PLATFORM

LATISSIMUS DORSI WORKOUT



O R I G Y M

KEY:

- FX
- FW
- BW
- ISO ①
- COM ②

 ②

DUMBBELL PULL OVER

• Lying supine on a bench, hold dumbbell in hands extended straight up with slight bend in the elbow
• Gently lower dumbbell behind the head maintaining a slight bend in elbows and not overarching the lower back
• Return to start position by contracting the latissimus dorsi muscles and ensuring the elbows do not flare out



 ②

LAT PULL DOWN

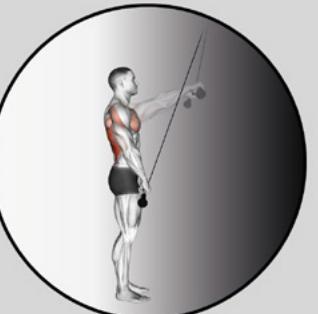
• Seated position with feet flat on floor, knees tucked under the support pad. Grasp the bar with an overhand grip
• Keep your chest up, lean back slightly, pull the elbows down and towards your hips while keeping wrists straight
• The bar should gently touch the upper chest before returning to the starting position under control



 ①

CABLE PUSHDOWN

• Grasp bar/rope with an overhand grip, keeping elbows tucked into the ribs, brace abs, keep chest up and shoulders down and back
• Press straight down by fully extending the elbow joint, while keeping your head up and wrists straight
• Return to starting position under control



 ②

CHIN UPS

• Grasp bar with an underhand, narrower than shoulder width grip
• Hang from the bar with arms straight, shoulders pulled down and back. Chest lifted, legs bent/crossed or straight
• Pull the chin up to bar and then descend all the way back down



 ②

ASSISTED PULL UP

• Set weight to counterbalance the required amount of bodyweight, mount machine carefully, grasp bar with an overhand grip
• Keep your chest and hips lifted throughout the movement. Avoid sitting on heels
• Pull the body up so the chin is level with the hands, descend all the way back down



Obliques and Hip Flexors

Flutter Kicks



- **Isolated**
 - **Body Weight**
-
- Lie on your back, legs straight and together with arms either down by your sides or placed under your hips for support.
 - Keep your legs straight and lift one leg up to about a 15- 45 degree angle while keeping the other in place.
 - Keeping core engaged throughout, alternating legs up and down in a controlled manner.

Plank



- **Isolated**
 - **Body Weight**
-
- Get in the prone position with your forearms on the ground instead of your hands, your elbows should line up directly underneath your shoulders and toes stay on the ground.
 - Squeeze your glutes and tighten your abdominals while keeping a neutral neck and spine.
 - Create a straight strong line from head to toes while holding this position, be sure to control breathing throughout.

Bicycle Crunch



- **Compound**
 - **Body Weight**
-
- Lie flat on the floor with your lower back pressed to the ground, put your hands behind your head and knees at a 90 degree angle, but be sure not to pull on your neck.
 - Straighten your right leg out to about a 45-degree angle to the ground while turning your upper body to the left, bringing your right elbow towards the left knee.
 - Now switch sides and do the same motion on the other side to complete one rep.

Cable Wood Chop (High to Low)



- **Compound**
 - **Fixed Resistance**
-
- Position your body so that the cable movement will be downward and across the body, like a tree chopping action.
 - Position the feet comfortably apart and grasp the cable handle with both hands above one shoulder."
 - Swing the clasped handle downward and across the body until it passes the opposite thigh.
 - Return to the starting position in a controlled manner.

Cable Wood Chop (Low to High)



- **Compound**
 - **Fixed Resistance**
-
- Position your body so that the cable movement will be upward and across the body.
 - Position the feet comfortably apart and grasp the cable handle with both hands above one shoulder.
 - Swing the clasped handle upward and across the body until it passes the opposite thigh.
 - Return to the starting position in a controlled manner

DOWNLOADABLE
RESOURCE AVAILABLE

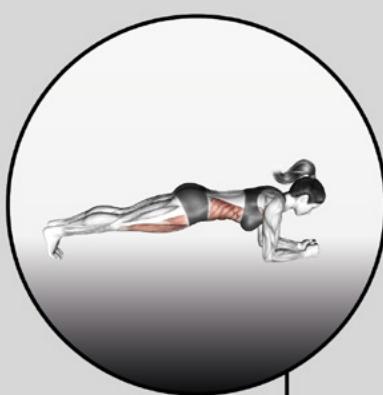
ON LEARNING PLATFORM

OBLIQUES & HIP FLEXORS



O R I G Y M

KEY:
FX 
FW 
BW 
ISO ① 
COM ② 

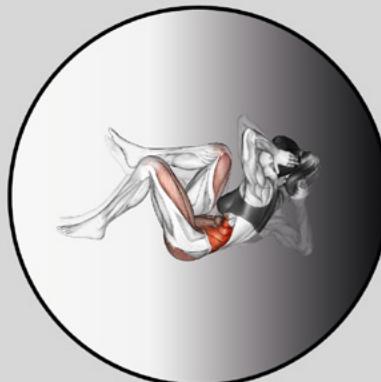
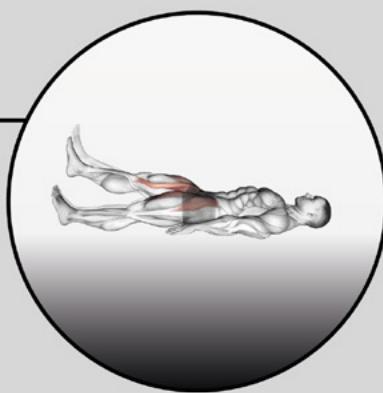


① PLANK

- Get in the prone position with your forearms on the ground instead of your hands, your elbows should line up directly underneath your shoulders and toes stay on the ground
- Squeeze your glutes and tighten your abdominals while keeping a neutral neck and spine
- Create a straight strong line from head to toes while holding this position, be sure to control breathing throughout

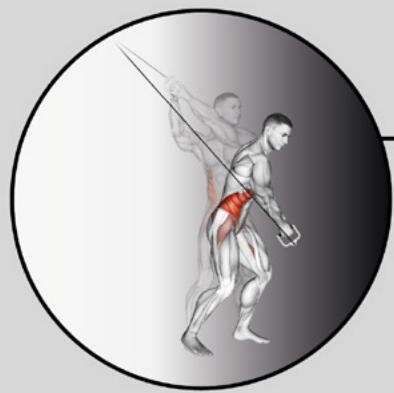
① FLUTTER KICKS

- Lie on your back, legs straight and together with arms either down by your sides or placed under your hips for support
- Keep your legs straight and lift one leg up to about a 15-45° angle while keeping the other in place
- Keep core engaged throughout, alternating legs up and down in a controlled manner



② BICYCLE CRUNCH

- Lie flat on the floor with your lower back pressed to the ground, put your hands behind your head and knees at a 90° angle, but be sure not to pull on your neck
- Straighten your right leg out to about a 45° angle to the ground while turning your upper body to the left, bringing your right elbow towards the left knee
- Now switch sides and do the same motion on the other side to complete one rep



② CABLE WOOD CHOP

- Position your body so that the cable movement will be downward and across the body, like a tree chopping action
- Position the feet comfortably apart and grasp the cable handle with both hands above one shoulder
- Swing the clasped handle downward and across the body until it passes the opposite thigh

Rectus Abdominus and Erector Spinae

Back Extension



- **Isolated**
 - **Body Weight**
-
- In a prone position on the floor, keep legs straight, feet on the floor. Raise feet also to increase the range of motion.
 - Place hands behind back, straight out overhead or at the temples.
 - Raise the upper body up until the chest clears the floor, avoiding lumbar hyper-extension.

Back Extension (Increased R.O.M)



- **Isolated**
 - **Body Weight**
-
- In a prone position over the bench, keep legs straight, feet securely under the leg pads.
 - Place hands behind back, straight out overhead, across the chest or at the temples.
 - Raise the upper body up until the upper body is at a 45-degree angle to the floor, avoiding lumbar hyper-extension.

Abdominal Curl



- **Compound**
 - **Body Weight**
-
- In a supine position, place hands on the temples, across the chest or on the thighs as preferred while keeping the core engaged and low back flat on the mat.
 - Curl up rather than sit up, there should be approximately 30-degrees of spinal flexion.
 - Keep legs bent and feet flat on the floor and maintain neutral head alignment throughout.

Seated Abdominal Crunch (push)

- **Compound**
- **Fixed Resistance**



- In a seated position, place your feet under the pads or on flat ground, grab hold of the top handles and ensure your arms are bent at 90 degrees and rest your chest on the pad.
- Begin lifting your legs up as you engage your abs and crunch your upper torso.
- Return to the starting position under control while keeping your head in a neutral position throughout.

Seated Abdominal Crunch (pull)

- **Compound**
- **Fixed Resistance**



- In a seated position, place your feet under the pads or on flat ground, grab hold of the top handles and ensure your arms are bent at 90 degrees.
- Begin lifting your legs up as you engage your abs and crunch your upper torso.
- Return to the starting position under control while keeping your head in a neutral position throughout.

Seated Back Extension

- **Isolated**
- **Fixed Resistance**

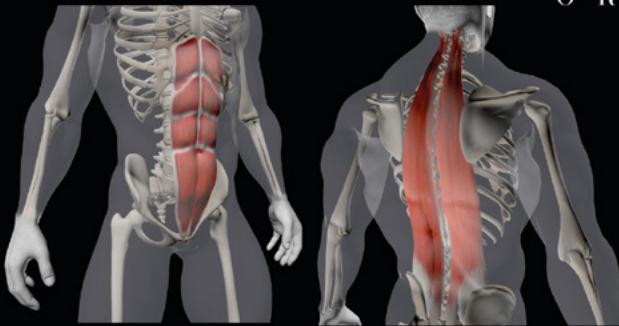


- Sit into the machine so that feet are on (or behind) foot rest, and the back pad is on your upper back (shoulder blades) while your torso is slightly pitched forward and head remains neutral.
- Keep knees above ankles, back straight, abs engaged, and arms crossed at your chest.
- Lean back against the resistance while maintaining neutral spine/posture, avoid lumbar hyper-extension.

DOWNLOADABLE
RESOURCE AVAILABLE

ON LEARNING PLATFORM

RECTUS ABDOMINUS & ERECTOR SPINAЕ



O R I G Y M

KEY:
FX 
FW 
BW 
ISO ① 
COM ② 



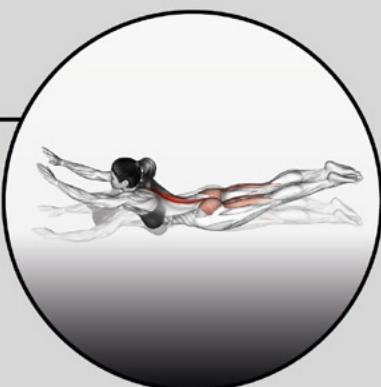
② ABDOMINAL CURL

- In a supine position, place hands on the temples, across the chest or on the thighs as preferred while keeping the core engaged and low back flat on the mat
- Curl up rather than sit up, there should be approximately 30-degrees of spinal flexion
- Keep legs bent and feet flat on the floor and maintain neutral head alignment throughout



BACK EXTENSION

- In a prone position on the floor, keep legs straight, feet on the floor
- Place hands behind back, straight out overhead or at the temples
- Raise the upper body up until the chest clears the floor, avoiding lumbar hyperextension



① SEATED BACK EXTENSION

- Sit into the machine so that feet are on (or behind) foot rest, and the back pad is on your upper back (shoulder blades) while your torso is slightly pitched forward and head remains neutral
- Keep knees above ankles, back straight, abs engaged, and arms crossed at your chest
- Lean back against the resistance while maintaining neutral spine/posture, avoid lumbar hyperextension



② SEATED ABDOMINAL CRUNCH

- In a seated position, place your feet under the pads or on flat ground, grab hold of the top handles and ensure your arms are bent at 90 degrees and rest your triceps on the pads
- Begin lifting your legs up as you engage your abs and crunch your upper torso
- Return to the starting position under control while keeping your head in a neutral position throughout



Gluteals

Dumbbell Rear Lunge



- **Compound**
 - **Free Weight**
- While holding dumbbells down by your side and keeping your torso straight, step backwards into a split stance position, the heel of your back foot should be raised.
 - Bending both knees to lower slowly until your back knee almost touches the floor, then push all the back up to the starting position through the heel of the front leg.
 - Complete all your reps on one leg, then switch to the other.

Barbell Rear Lunge



- **Compound**
 - **Free Weight**
- While holding the barbells on the upper back and keeping your torso straight, step backwards into a split stance position, the heel of your back foot should be raised.
 - Bending both knees to lower slowly until your back knee almost touches the floor, then push all the back up to the starting position through the heel of the front leg.
 - Complete all your reps on one leg, then switch to the other,

Rear Lunge



- **Compound**
 - **Body Weight**
- While arms are by your side and keeping your torso straight, step backwards into a split stance position, the heel of your back foot should be raised.
 - Bending both knees to lower slowly until your back knee almost touches the floor, then push all the back up to the starting position through the heel of the front leg.
 - Complete all your reps on one leg, then switch to the other.

Glute Kickbacks (Bent Knee)



- **Isolated**
 - **Body Weight**
-
- Start on your hands and knees with your shoulders above your hands, with one leg bent at 90 degrees and the other knee below your hip.
 - Lift the extended leg up by squeezing the glutes, be sure not to hyper-extend the back.
 - Lower your leg back to the starting position under control, complete all your reps on one leg before then switching to the other.

Glute Kickbacks (Straight Leg)



- **Isolated**
 - **Body Weight**
-
- Start on your hands and knees with your shoulders above your hands, with one leg extended straight back and the other knee below your hip.
 - Lift the extended leg up by squeezing the glutes, be sure not to hyper-extend the back.
 - Lower your leg back to the starting position under control, complete all your reps on one leg before then switching to the other.

Glute-Ham Raise



- **Isolated**
 - **Body Weight**
-
- With your feet flat on the footplate, roller on your calves/achilles, your legs straight, hips extended, and torso upright, begin to lower yourself as slowly as possible until you can no longer control the descent.
 - At this point, allow yourself to fall to the floor in a controlled fashion and catch yourself with your arms on the handles.
 - Give yourself just enough of a push off the handles to get back into a position where you can pull yourself back to the start using your hamstrings.

Reverse Glute-Ham Raise



- **Isolated**
 - **Fixed Resistance**
-
- With your feet flat on the footplate, roller on your calves/Achilles, your legs straight, hips extended, and torso pressed into the pad whilst holding the grips.
 - Lift the legs upwards, contracting the glutei and hamstrings to bring the legs level with the upper body.
 - Lower the legs together in a controlled fashion to begin once more.

Glute Bridge



- **Isolated**
 - **Body Weight**
-
- Lie face up on the floor with your knees bent and feet flat on the floor, arms placed by your sides or above the head.
 - Lift the hips off the floor by squeezing glutes until knees, hips and shoulders form a straight line.
 - Be sure not to hyper-extend the back at the top, lower under control whilst keeping glutes engaged.

Machine Glute Bridge (Hip Thrust)



- **Isolated**
 - **Fixed Resistance**
-
- Lie face up with your back resting on the pad with your knees bent and feet flat on the floor, arms placed in a T shape with the pad resting over the hips.
 - Lift the hips up by squeezing the glutes until knees, hips and shoulders form a straight line.
 - Be sure not to hyper-extend the back at the top, lower under control whilst keeping glutes engaged.

Glute Bridge on Bench (Hip Thrust)

- **Isolated**
- **Body Weight**



- Lie face up upper back on the bench with your knees bent and feet flat on the floor, arms placed out to the side.
- Lift the hips off the floor by squeezing glutes until knees, hips and shoulders form a straight line.
- Be sure not to hyper-extend the back at the top, lower under control whilst keeping glutes engaged.

Squat

- **Compound**
- **Body Weight**



- Set your feet shoulder-width apart, toes slightly turned out, keep core braced and eyes looking forward and arms held down by your sides.
- Slowly bend at the knees and drop your hips to lower your body, keep your heels flat on the floor, avoid letting the cave knees inwards.
- At the bottom of the movement and after a slight pause, strongly push back up to the starting position.

Dumbbell Squat

- **Compound**
- **Free Weight**



- Set your feet shoulder-width apart, toes slightly turned out, keep core braced and eyes looking forward and dumbbells held down by your sides.
- Slowly bend at the knees and drop your hips to lower your body, keep your heels flat on the floor, avoid letting dumbbells cave knees inwards.
- At the bottom of the movement and after a slight pause, strongly push back up to the starting position.

Barbell Squat



- **Compound**
 - **Free Weight**
- With the barbell resting on upper traps and wrists and elbows directly under the bar in a vertical position for support, set your feet shoulder-width apart, toes slightly turned out, keep core braced and eyes looking forward.
 - Slowly bend at the knees and drop your hips to lower your body, keep your heel flat on the floor and ensure wrists and elbows remain as vertical as possible.
 - At the bottom of the movement and after a slight pause, strongly push back up to the starting position.

Deadlift



- **Compound**
 - **Free Weight**
- Grip bar with an overhand or mixed grip, keep elbows tucked to rib cage and lats engaged, brace core.
 - Bend your knees and sit your hips back until you feel the hamstrings engage, keep hips weight on the heels, pull shoulders back and down, maintain a neutral spine.
 - From this position, stand up straight by extending the knees and hips simultaneously, while ensuring the back does not round and a neutral spine is maintained.

Lunge



- **Compound**
 - **Body Weight**
- Keeping your torso straight, step forward into a split stance position, the heel of your back foot should be raised.
 - Bending both knees to lower slowly until your back knee almost touches the floor, then push all the way back up to the starting position through the heel of the front leg.
 - Complete all your reps on one leg, then switch to the other.

Dumbbell Lunge

- Compound
- Free Weight



- Keeping your torso straight, step forward into a split stance position, the heel of your back foot should be raised dumbbells held either side.
- Bending both knees to lower slowly until your back knee almost touches the floor, then push all the way back up to the starting position through the heel of the front leg.
- Complete all your reps on one leg, then switch to the other.

Barbell Lunge

- Compound
- Free Weight



- Keeping your torso straight, step forward into a split stance position, the heel of your back foot should be raised ensuring the barbell is held in place on the upper back.
- Bending both knees to lower slowly until your back knee almost touches the floor, then push all the way back up to the starting position through the heel of the front leg.
- Complete all your reps on one leg, then switch to the other.

45 Degree Leg Press

- Compound
- Fixed Resistance



- While sitting at a 45 degree angle, place feet completely on footplate, slightly wider than shoulder-width apart, toes slightly turned out, keep core braced and eyes looking forward.
- Pushing through the sole and mid foot (not the toes), extend legs fully but do not lock knees.
- Lower under control and avoid rounding the lower back at the bottom of the movement.

DOWNLOADABLE
RESOURCE AVAILABLE

ON LEARNING PLATFORM

GLUTEALS WORKOUT



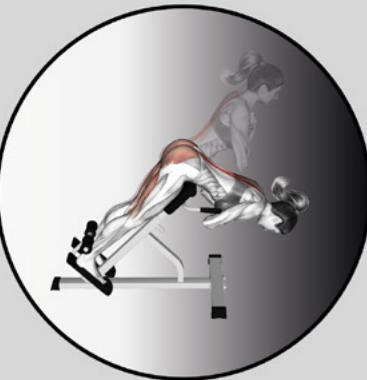
O R I G Y M

KEY:
FX 
FW 
BW 
ISO ① 
COM ② 



① GLUTE-HAM RAISE

- With your feet flat on the footplate, roller on your calves/achilles, your knees bent, hips extended, and torso upright, begin to lower yourself as slowly as possible until you can no longer control the descent
- At this point, allow yourself to fall to the floor in a controlled fashion and catch yourself with your arms on the handles
- Give yourself just enough of a push off the handles to get back into a position where you can pull yourself back to the start using your hamstrings

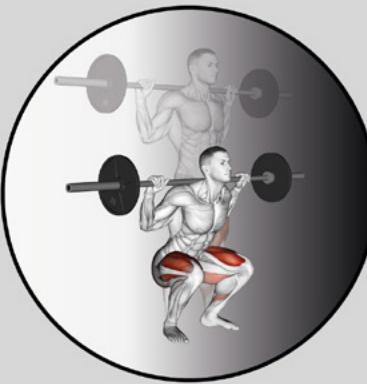


① GLUTE KICKBACKS

- Start on hands and knees with shoulders above your hands, with one leg extended straight back, the other knee below hip
- Lift extended leg up by squeezing the glutes, be sure not to hyperextend the back
- Lower leg back to the start position under control, complete all your reps on one leg before switching to the other

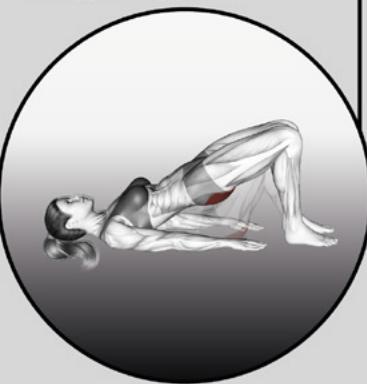
① GLUTE BRIDGE

- Lie face up on the floor with knees bent and feet flat on the floor, arms by sides
- Lift the hips off the floor by squeezing glutes until knees, hips and shoulders form a straight line
- Be sure not to hyperextend the back at the top, lower under control whilst keeping glutes engaged



② SQUAT

- Set your feet shoulder-width apart, toes slightly turned out, keep core braced and eyes looking forward and dumbbells held down by your sides
- Slowly bend at the knees and drop your hips to lower your body, keep your heels flat on the floor, avoid letting dumbbells cave knees inwards
- At the bottom of the movement and after a slight pause, strongly push back up to the starting position



Hamstrings

Seated Leg Curl



- **Isolated**
 - **Fixed Resistance**
- Adjust the back pad to line the knees up with lever arm pivot point, position roller just behind ankles.
 - Flex the knee joint to bring the roller downward and underneath the body, ensuring that the hips do not raise up off the pad during the movement.
 - Return to starting positions under control ensuring that the knees do not hyper-extend.

Lunge



- **Compound**
 - **Body Weight**
- Keeping your torso straight, step forward into a split stance position, the heel of your back foot should be raised.
 - Bending both knees to lower slowly until your back knee almost touches the floor, then push all the way back up to the starting position through the heel of the front leg.
 - Complete all your reps on one leg, then switch to the other.

Dumbbell Lunge



- **Compound**
 - **Free Weight**
- Keeping your torso straight, step forward into a split stance position, the heel of your back foot should be raised dumbbells held either side.
 - Bending both knees to lower slowly until your back knee almost touches the floor, then push all the way back up to the starting position through the heel of the front leg.
 - Complete all your reps on one leg, then switch to the other.

Barbell Lunge

- **Compound**
- **Free Weight**



- Keeping your torso straight, step forward into a split stance position, the heel of your back foot should be raised ensuring the barbell is held in place on the upper back.
- Bending both knees to lower slowly until your back knee almost touches the floor, then push all the way back up to the starting position through the heel of the front leg.
- Complete all your reps on one leg, then switch to the other.

Deadlift

- **Compound**
- **Free Weight**



- Grip bar with an overhand or mixed grip, keep elbows tucked to rib cage and lats engaged, brace core.
- Bend your knees and sit your hips back until you feel the hamstrings engage, keep hips weight on the heels, pull shoulders back and down, maintain a neutral spine.
- From this position, stand up straight by extending the knees and hips simultaneously, while ensuring the back does not round and a neutral spine is maintained.

Lying Leg Curl

- **Isolated**
- **Fixed Resistance**



- Lying in a prone position, line knees up with lever arm pivot point, position roller just behind ankles.
- Flex the knee joint to raise the roller up towards the upper body, ensuring that the hips do not raise up off the pad during the movement.
- Return to starting positions under control ensuring that the knees do not hyper-extend.

45 Degree Leg Press

- Compound
- Fixed Resistance



- While sitting at a 45 degree angle, place feet completely on footplate, slightly wider than shoulder-width apart, toes slightly turned out, keep core braced and eyes looking forward.
- Pushing through the sole and mid foot (not the toes), extend legs fully but do not lock knees.
- Lower under control and avoid rounding the lower back at the bottom of the movement.

Squat

- Compound
- Body Weight



- Set your feet shoulder-width apart, toes slightly turned out, keep core braced and eyes looking forward and arms held down by your sides.
- Slowly bend at the knees and drop your hips to lower your body, keep your heels flat on the floor, avoid letting the cave knees inwards.
- At the bottom of the movement and after a slight pause, strongly push back up to the starting position.

Dumbbell Squat

- Compound
- Free Weight



- Set your feet shoulder-width apart, toes slightly turned out, keep core braced and eyes looking forward and dumbbells held down by your sides.
- Slowly bend at the knees and drop your hips to lower your body, keep your heels flat on the floor, avoid letting dumbbells cave knees inwards.
- At the bottom of the movement and after a slight pause, strongly push back up to the starting position.

Barbell Squat

- **Compound**
- **Free Weight**



- With the barbell resting on upper traps and wrists and elbows directly under the bar in a vertical position for support, set your feet shoulder-width apart, toes slightly turned out, keep core braced and eyes looking forward.
- Slowly bend at the knees and drop your hips to lower your body, keep your heel flat on the floor and ensure wrists and elbows remain as vertical as possible.
- At the bottom of the movement and after a slight pause, strongly push back up to the starting position.

Dumbbell Rear Lunge

- **Compound**
- **Free Weight**



- While holding dumbbells down by your side and keeping your torso straight, step backwards into a split stance position, the heel of your back foot should be raised.
- Bending both knees to lower slowly until your back knee almost touches the floor, then push all the back up to the starting position through the heel of the front leg.
- Complete all your reps on one leg, then switch to the other.

Barbell Rear Lunge

- **Compound**
- **Free Weight**



- While holding the barbells on the upper back and keeping your torso straight, step backwards into a split stance position, the heel of your back foot should be raised.
- Bending both knees to lower slowly until your back knee almost touches the floor, then push all the back up to the starting position through the heel of the front leg.
- Complete all your reps on one leg, then switch to the other,

Rear Lunge

- Compound
- Body Weight



- While arms are by your side and keeping your torso straight, step backwards into a split stance position, the heel of your back foot should be raised.
- Bending both knees to lower slowly until your back knee almost touches the floor, then push all the back up to the starting position through the heel of the front leg.
- Complete all your reps on one leg, then switch to the other.



HAMSTRINGS WORKOUT



ORIGYM

KEY:

- FX
- FW
- BW
- ISO ①
- COM ②



①
SEATED LEG CURL

- Adjust the back pad to line the knees up with lever arm pivot point, position roller just behind ankles
- Flex the knee joint to bring the roller downward and underneath the body, ensuring that the hips do not raise up off the pad during the movement
- Return to start position under control, ensuring the knees do not hyperextend



②
LUNGE

- Keeping your torso straight, step forward into a split stance position, the heel of your back foot should be raised
- Bend both knees to lower slowly, the back knee almost touches the floor, then push all the way back up to start position through the heel of the front leg
- Complete all your reps on one leg, then switch to the other



②
DEADLIFT

- Grip the bar with an overhand or mixed grip, elbows tucked into rib cage, lats engaged and brace your core
- Bend your knees and sit your hips back until you feel the hamstrings engage, keep hips weight on the heels, pull shoulders back and down, maintain a neutral spine
- From here, stand up straight extending the knees and hips simultaneously, ensure the back does not round and a neutral spine is maintained



①
LYING LEG CURL

- Lying in a prone position, line knees up with lever arm pivot point, position roller just behind ankles
- Flex knee joint to raise the roller up towards the upper body, ensuring the hips do not raise up off the pad
- Return to starting position under control, ensuring the knees do not hyperextend



②
45° LEG PRESS

- While sitting at a 45° angle, place feet completely on footplate, slightly wider than shoulder-width apart, toes slightly turned out, keep core braced and eyes looking forward
- Pushing through the sole and mid foot (not the toes), extend legs fully but do not lock knees
- Lower under control, avoid rounding the lower back at bottom of the movement



Quadriceps

Squat



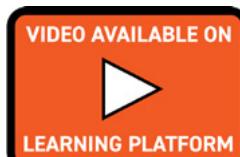
- **Compound**
 - **Body Weight**
-
- Set your feet shoulder-width apart, toes slightly turned out, keep core braced and eyes looking forward and arms held down by your sides.
 - Slowly bend at the knees and drop your hips to lower your body, keep your heels flat on the floor, avoid letting the cave knees inwards.
 - At the bottom of the movement and after a slight pause, strongly push back up to the starting position.

Dumbbell Squat



- **Compound**
 - **Free Weight**
-
- Set your feet shoulder-width apart, toes slightly turned out, keep core braced and eyes looking forward and dumbbells held down by your sides.
 - Slowly bend at the knees and drop your hips to lower your body, keep your heels flat on the floor, avoid letting dumbbells cave knees inwards.
 - At the bottom of the movement and after a slight pause, strongly push back up to the starting position.

Barbell Squat



- **Compound**
 - **Free Weight**
-
- With the barbell resting on upper traps and wrists and elbows directly under the bar in a vertical position for support, set your feet shoulder-width apart, toes slightly turned out, keep core braced and eyes looking forward.
 - Slowly bend at the knees and drop your hips to lower your body, keep your heel flat on the floor and ensure wrists and elbows remain as vertical as possible.
 - At the bottom of the movement and after a slight pause, strongly push back up to the starting position.

Dumbbell Rear Lunge

- Compound
- Free Weight



- While holding dumbbells down by your side and keeping your torso straight, step backwards into a split stance position, the heel of your back foot should be raised.
- Bending both knees to lower slowly until your back knee almost touches the floor, then push all the back up to the starting position through the heel of the front leg.
- Complete all your reps on one leg, then switch to the other.

Barbell Rear Lunge

- Compound
- Free Weight



- While holding the barbells on the upper back and keeping your torso straight, step backwards into a split stance position, the heel of your back foot should be raised.
- Bending both knees to lower slowly until your back knee almost touches the floor, then push all the back up to the starting position through the heel of the front leg.
- Complete all your reps on one leg, then switch to the other,

Rear Lunge

- Compound
- Body Weight



- While arms are by your side and keeping your torso straight, step backwards into a split stance position, the heel of your back foot should be raised.
- Bending both knees to lower slowly until your back knee almost touches the floor, then push all the back up to the starting position through the heel of the front leg.
- Complete all your reps on one leg, then switch to the other.

Lunge



- **Compound**
 - **Body Weight**
-
- Keeping your torso straight, step forward into a split stance position, the heel of your back foot should be raised.
 - Bending both knees to lower slowly until your back knee almost touches the floor, then push all the way back up to the starting position through the heel of the front leg.
 - Complete all your reps on one leg, then switch to the other.

Dumbbell Lunge



- **Compound**
 - **Free Weight**
-
- Keeping your torso straight, step forward into a split stance position, the heel of your back foot should be raised dumbbells held either side.
 - Bending both knees to lower slowly until your back knee almost touches the floor, then push all the way back up to the starting position through the heel of the front leg.
 - Complete all your reps on one leg, then switch to the other.

Barbell Lunge



- **Compound**
 - **Free Weight**
-
- Keeping your torso straight, step forward into a split stance position, the heel of your back foot should be raised ensuring the barbell is held in place on the upper back.
 - Bending both knees to lower slowly until your back knee almost touches the floor, then push all the way back up to the starting position through the heel of the front leg.
 - Complete all your reps on one leg, then switch to the other.

Barbell Back Squat

- **Compound**
- **Free Weight**



- With the barbell resting on upper traps and wrists and elbows directly under the bar in a vertical position for support, set your feet shoulder-width apart, toes slightly turned out, keep core braced and eyes looking forward.
- Slowly bend at the knees and drop your hips to lower your body, keep your heel flat on the floor and ensure wrists and elbows remain as vertical as possible.
- At the bottom of the movement and after a slight pause, strongly push back up to the starting position.

45 Degree Leg Press

- **Compound**
- **Fixed Resistance**



- While sitting at a 45 degree angle, place feet completely on footplate, slightly wider than shoulder-width apart, toes slightly turned out, keep core braced and eyes looking forward.
- Pushing through the sole and mid foot (not the toes), extend legs fully but do not lock knees.
- Lower under control and avoid rounding the lower back at the bottom of the movement.

Horizontal Leg Press

- **Compound**
- **Fixed Resistance**



- While sitting at a horizontal angle, place feet completely on footplate, slightly wider than shoulder-width apart, toes slightly turned out, keep core braced and eyes looking forward.
- Pushing through the sole and mid foot (not the toes), extend legs fully but do not lock knees.
- Lower under control and avoid rounding the lower back at the bottom of the movement.

Leg Extension

VIDEO AVAILABLE ON



LEARNING PLATFORM

- Isolated
- Fixed Resistance

- Adjust the back support to line knees up with lever arm pivot point, position roller just above ankles.
- Extend legs fully but under control, ensuring to avoid any hip extension during the movement.
- Return to starting positions under control, do not allow the weights to touch between repetitions.

DOWNLOADABLE
RESOURCE AVAILABLE

ON LEARNING PLATFORM

QUADRICEPS WORKOUT

O R I G Y M



KEY:
FX
FW
BW
ISO
COM

DUMBBELL SQUAT



②

- Hold dumbbells at your side, set your feet shoulder-width apart, toes slightly turned out, keep core braced and eyes looking forward
- Slowly bend at the knees, drop your hips to lower your body, keep your heels flat on the floor, avoid letting dumbbells cave the knees in
- At the bottom of the movement and after a slight pause, strongly push back up to the starting position

WEIGHTED REAR LUNGE



②

- Hold dumbbells by your side, keeping your torso straight, step backwards into a split stance position, the heel of your back foot should be raised
- Bend both knees to lower slowly. The back knee should almost touch the floor, then push back up to starting position through the heel of the front leg
- Complete reps on one leg, then switch to the other

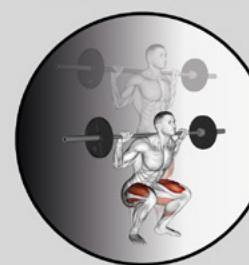
LUNGE



②

- Keeping your torso straight, step forward into a split stance position, heel of the back foot should be raised
- Bend both knees to lower slowly until your back knee almost touches the floor, then push all the back up to the starting position through the heel of the front leg
- Complete reps on one leg, then switch to the other

BARBELL BACK SQUAT



②

- With barbell resting on upper traps, and wrists and elbows directly under bar in a vertical position for support. Feet shoulder-width apart, toes slightly turned out, core braced and eyes looking forward
- Slowly bend the knees and drop hips to lower the body, keep heels flat on the floor, ensuring wrists and elbows remain vertical
- At the bottom of the movement and after a slight pause, strongly push back up to the starting position

LEG PRESS



②

- Place feet completely on footplate, slightly wider than shoulder-width apart, toes slightly turned out, keep core braced, eyes looking forward
- Pushing through the sole and mid foot (not the toes), extend legs fully but do not lock the knees
- Lower under control, avoid rounding the lower back at the bottom of the movement

LEG EXTENSION



①

- Adjust the back support to line knees up with lever arm pivot point, position roller just above ankles
- Extend legs fully but under control, ensuring to avoid any hip extension during the movement
- Return to start position under control, don't allow the weights to touch inbetween repetitions

Abductors and Adductors

Glute Bridge Hip Abduction

- **Compound**
- **Body Weight**



- Lie face up on the floor with your knees bent and feet flat on the floor, arms placed by your sides.
- Lift the hips off the floor by squeezing glutes until knees, hips and shoulders form a straight line, from here abduct the knees by pushing them outward.
- Be sure not to hyper-extend the back at the top, lower under control whilst keeping glutes engaged.

Total Hip Machine

- **Isolated**
- **Fixed Resistance**



- From a standing position, adjust the roller height to ensure it is placed on the lateral aspect of the mid-thigh of one leg, with upright torso, grip handles with both hands.
- With the leg that is pressed against the roller, push the leg outward as far as is comfortable.
- Return to starting position but do not allow weights to touch between repetitions, maintain an upright torso and neutral spine.
- The total hip machine can be used in many directions; abduction, adduction, extension and flexion..

Cable Hip Abduction

- **Isolated**
- **Fixed Resistance**



- From a standing position, adjust the cable pulley until it is in line with the ankles and strap to the ankle furthest from the cable, with upright torso, grip handles with both hands.
- With the leg that is furthest away from the cable, pull the leg outward (abduction) as far as is comfortable.
- Return to starting position but do not allow weights to touch between repetitions, maintain an upright torso and neutral spine.

Cable Hip Adduction

- **Isolated**
- **Fixed Resistance**



- From a standing position, adjust the cable pulley until it is in line with the ankles and strap to the ankle closest to the cable, with upright torso, grip handles with both hands.
- With the leg that is closest to the cable, pull the leg inward (adduction) as far as is comfortable across the body.
- Return to starting position but do not allow weights to touch between repetitions, maintain an upright torso and neutral spine.

Seated Hip Abduction

- **Compound**
- **Fixed Resistance**



- Place feet on foot plates and outside (lateral) of knees against pads.
- Push legs outward as far as is comfortable.
- Return to starting position but do not allow weights to touch between repetitions, maintain an upright torso and neutral spine.

Seated Hip Adduction

- **Compound**
- **Fixed Resistance**



- Place feet on foot plates and inside (medial) of knees against pads.
- Starting in as wide a position as flexibility will allow, bring legs together.
- Return to the starting position under control, maintain an upright torso and neutral spine.

Sumo Squat

- **Compound**
- **Body Weight**



- Set your feet approximately 6in outside of shoulder-width, toes should be facing at a 45 degrees angle, keep core braced and eyes looking forward.
- Slowly bend at the knees and drop your hips to lower your body, keep your heel flat on the floor and ensure that your knees track in line with your toes (45 degrees).
- At the bottom of the movement and after a slight pause, strongly push back up to the starting position.

Barbell Sumo Squat

- **Compound**
- **Free Weight**



- With the barbell resting on upper traps and wrists and elbows directly under the bar in a vertical position for support, set your feet wider than shoulder-width apart, toes slightly turned out, keep core braced and eyes looking forward.
- Slowly bend at the knees and drop your hips to lower your body, keep your heel flat on the floor and ensure wrists and elbows remain as vertical as possible.
- At the bottom of the movement and after a slight pause, strongly push back up to the starting position.

DOWNLOADABLE
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ON LEARNING PLATFORM

ABDUCTOR & ADDUCTOR



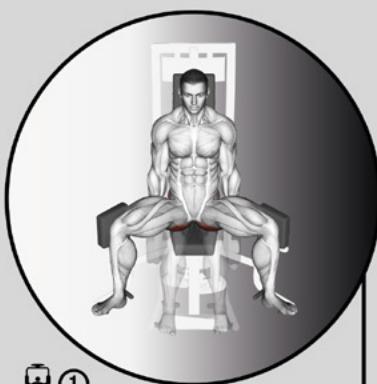
O R I G Y M

KEY:
FX 
FW 
BW 
ISO 
COM 



② GLUTE BRIDGE HIP ABDUCTION

- Lie face up on the floor with your knees bent and feet flat on the floor, arms placed by your sides
- Lift the hips off the floor by squeezing glutes until knees, hips and shoulders form a straight line, from here abduct the knees by pushing them outward
- Be sure not to hyperextend the back at the top, lower under control whilst keeping glutes engaged



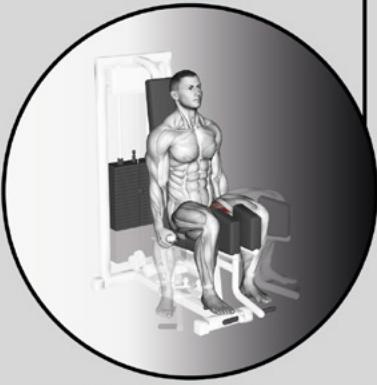
① SEATED HIP ABDUCTION

- Place feet on foot plates and outside (lateral) of knees against pads.
- Push legs outward as far as is comfortable
- Return to start position but do not allow weights to touch between repetitions, maintain an upright torso and neutral spine



① TOTAL HIP MACHINE

- From a standing position, adjust the roller height to ensure it is placed on the lateral aspect of the mid thigh of one leg, with upright torso, grip handles with both hands
- With the leg that is pressed against the roller, push the leg outward as far as is comfortable for you
- Return to start position but do not allow weights to touch between repetitions, maintain an upright torso and your spine should be neutral



① SEATED HIP ADDUCTION

- Place feet on foot plates and inside (medial) of knees against pads
- Starting in as wide a position as flexibility will allow, bring legs together
- Return to the starting position under control, maintain an upright torso and neutral spine



② SUMO SQUAT

- Set your feet approximately 6 inches outside of shoulder, toes should be facing at a 45° angle, keep core braced and eyes looking forward
- Slowly bend at the knees and drop your hips to lower your body, keep your heel flat on the floor and ensure that your knees track in line with your toes (45°)
- At the bottom of the movement and after a slight pause, strongly push back up to the starting position

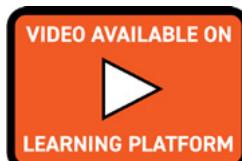
Gastrocnemius and Soleus

45 Degree Calf Press



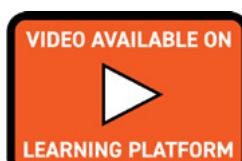
- **Isolated**
 - **Fixed Resistance**
- While sitting at a 45 degree angle, keep a slight bend in your knees and place the balls of your feet on the footplate.
 - With your toes pointing forwards, raise your heels up and contract your calves.
 - Slowly return to the starting position under control.

Seated Calf Raise



- **Compound**
 - **Fixed Resistance**
- In a seated position with your knees tucked tightly under the pad, place the balls of your feet on the footplate.
 - With your toes pointing forwards, raise your heels up and contract your calves.
 - Slowly return to the starting position under control.

Seated Barbell Calf Raise



- **Compound**
 - **Free Weight**
- Be in a seated position with the barbell resting on your knees gripping the bar with an overhand grip.
 - With your toes pointing forwards, raise your heels up and contract your calves.
 - Slowly return to the starting position under control.

Standing Calf Raise (supported)



- **Isolated**
 - **Body Weight**
-
- Stand upright holding onto a support in front of you, place the balls of your feet on an exercise step or weight plate or simply on the floor with your heels touching the bench or wall infant of you.
 - With your toes pointing forwards, raise your heels off the floor and contract your calves.
 - Slowly return to the starting position under control.

Bent Over Calf Raise (supported)



- **Isolated**
 - **Body Weight**
-
- Bending 90 degrees at the hip and holding onto a support in front of you, place the balls of your feet on an exercise step or weight plate with your heels touching the floor.
 - With your toes pointing forwards, raise your heels off the floor and contract your calves.
 - Slowly return to the starting position under control.

Dumbbell Standing Calf Raise



- **Isolated**
 - **Free Weight**
-
- Stand upright holding two dumbbells by your sides, place the balls of your feet on an exercise step or weight plate with your heels touching the floor.
 - With your toes pointing forwards, raise your heels off the floor and contract your calves.
 - Slowly return to the starting position under control.

Machine Calf Raise



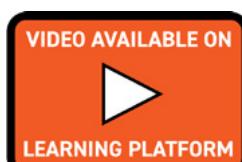
- **Isolated**
 - **Fixed Resistance**
-
- Stand upright shoulders firmly under the pads, place the balls of your feet on the step/plate with your heels hanging over the edge.
 - With your toes pointing forwards, raise your heels off the floor and contract your calves.
 - Slowly return to the starting position under control.

Smith Machine Calf Raise



- **Isolated**
 - **Fixed Resistance**
-
- Stand upright with the bar firmly on the upper traps, place the balls of your feet on an exercise step or weight plate with your heels touching the floor.
 - With your toes pointing forwards, raise your heels off the floor and contract your calves.
 - Slowly return to the starting position under control.

Barbell Calf Raise



- **Isolated**
 - **Free Weight**
-
- Stand upright with the barbell firmly on the upper traps, place the balls of your feet on an exercise step or weight plate with your heels touching the floor.
 - With your toes pointing forwards, raise your heels off the floor and contract your calves.
 - Slowly return to the starting position under control.

Calf Raise

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LEARNING PLATFORM

- Isolated
- Body Weight

- Stand upright hands held by the sides, place the balls of your feet on an exercise step, weight plate or the floor with your heels touching the floor.
- With your toes pointing forwards, raise your heels off the floor and contract your calves.
- Slowly return to the starting position under control.

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ON LEARNING PLATFORM

GASTROCNEMIUS & SOLEUS WORKOUT

O R I G Y M

KEY:

- FX
- FW
- BW
- ISO
- COM



② SEATED CALF RAISE

- In a seated position with knees tucked tightly under the pad, place the balls of your feet on the footplate
- With your toes pointing forwards, raise your heels up and contract your calves
- Slowly return to the starting position under control

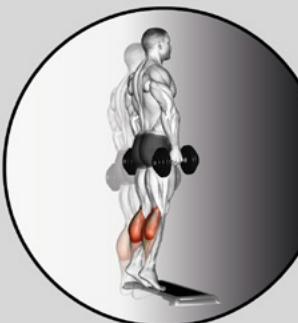
① 45° CALF PRESS

- While sitting at a 45 degree angle, keep a slight bend in your knees and place the balls of your feet on the footplate
- With your toes pointing forwards, raise your heels up and contract your calves
- Slowly return to the starting position under control



① DUMBBELL STANDING CALF RAISE

- Stand upright holding two dumbbells by your sides, place the balls of your feet on an exercise step or weight plate with your heels touching the floor
- With your toes pointing forwards, raise your heels off the floor and contract your calves
- Slowly return to start position under control



① STANDING CALF RAISE (SUPPORTED)

- Stand upright holding onto a support in front of you, place the balls of your feet on an exercise step or weight plate with your heels touching the floor
- With your toes pointing forwards, raise your heels off the floor and contract your calves
- Slowly return to start position under control



Dynamic Stretches

Squat to Overhead Reach

- Keep heels flat, push the hips back, avoid rounding the back, keep the chest up.
- Look straight forward, use a smooth, controlled tempo to rise upwards coming up onto the toes and pointing the fingers to the sky.
- Return towards the floor reversing the above action.



Lunge With a Twist

- Keep front shin vertical and knee behind toes.
- Lower rear knee to within an inch of the ground.
- Maintain upright torso, rotate upper body toward the leading leg.



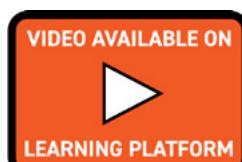
Posterior Step with Overhead Reach

- Stand up tall. Take a step backwards whilst reaching above your head.
- Fully stretch the body upwards and backwards.
- Return to a standing pose and repeat using the alternate leg.



Dynamic Chest Stretch and Clap

- Keep arms parallel to the floor, reach as far forward as comfortably possible with straight arms.
- Keeping arms parallel with the floor, return the arms simultaneously and clap the hands lightly.
- Keep the spine in a neutral position throughout.



Squat to Overhead Reach With Twist

- Keep heels, flat, push the hips back, avoid rounding the back
- Keep chest up, look straight forward.
- Using a smooth, controlled tempo, Stand up tall reaching above the head with a twist.

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DYNAMIC STRETCHES



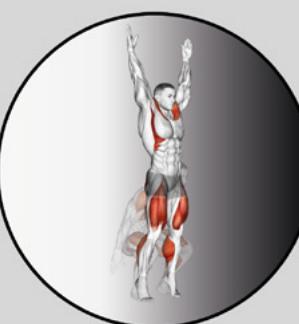
DYNAMIC CHEST STRETCH

- Keep arms parallel to the floor, reach as far forward as comfortably possible with straight arms
- Keeping arms parallel with the floor, return the arms simultaneously and clap the hands lightly
- Keep the spine in a neutral position throughout exercise



LUNGE WITH TWIST

- Keep front shin vertical and knee behind toes
- Lower rear knee to within an inch of the ground
- Maintain upright torso, rotate upper body toward leading leg

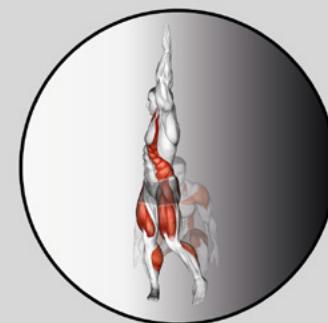


SQUAT TO OVERHEAD REACH

- Keep heels flat, push the hips back, avoid rounding the back, keep chest up,
- Look straight forward, use a smooth, controlled tempo to rise upwards coming up onto the toes and pointing the fingers to the sky
- Return towards the floor reversing the above action

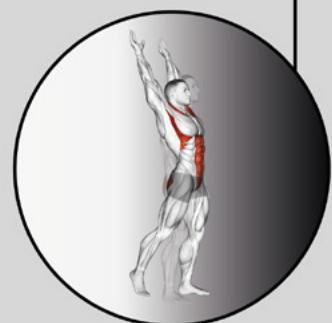
POSTERIOR STEP WITH OVERHEAD REACH

- Stand up tall. Take a step backwards whilst reaching above your head
- Fully stretch the body up and back
- Return to a standing pose and repeat using the alternate leg



SQUAT TO OVERHEAD REACH AND TWIST

- Keep heels, flat, push the hips back, avoid rounding the back
- Keep chest up, look straight forward
- Using a smooth, controlled tempo, Stand up tall reaching above the head with a twist



Cardio Exercises

Treadmill

- Maintain position in the centre of the belt.
- Upright posture, abdominals engaged and look forward.
- Comfortable leg stride, using heel-to-toe action.
- Swing the arms.
- Knees unlocked.



X-Trainer

- Upright posture, abdominals engaged, look forward.
- Feet flat on plates.
- Hips, knees, and ankles aligned.
- Knees and elbows unlocked.



Recline Bike

- Upright posture, Abdominals engaged, look forward.
- Feet securely strapped in on pedals.
- Seat adjusted for correct leg length. Leg should have a slight bend at the knee at the furthest point.
- Push with the mid part of the foot.



Hand Bike

- Set seat to a comfortable distance.
- Sit tall and face forwards.
- Grasp handles with an overhand grip, keep upper body relaxed.



Upright Bike

- Stand at the side of the bike to adjust the seat; it should be level with the hips.
- Put the ball of the foot on the pedal.
- Sit upright, abdominals engaged, look forward.
- Pedal while rocking body weight side to side.
- Hips, knees and ankles in line.
- Knees unlocked.
- Allow the ankle to move during pedalling action (plantarflexion and dorsiflexion, not flat-footed).



Rower

- Sit upright, chest lifted, abdominals engaged, knees bent, wrists in line with forearms and overhand grip of the bar (pronated).
- Drive movement using the following action: legs extend, arms bend, arms extend, legs bend.
- Keep the chain level with the middle of the body.
- Align knees with feet.

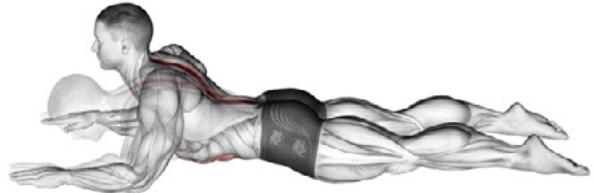


Static Flexibility

Upper Body

Prone Rectus Abdominus Stretch (Sphinx)

Rest on the elbows so that the upper arms are perpendicular to the floor. Ensure hips remain on the floor. Lift the chest and look straight ahead, keep shoulders down and back.



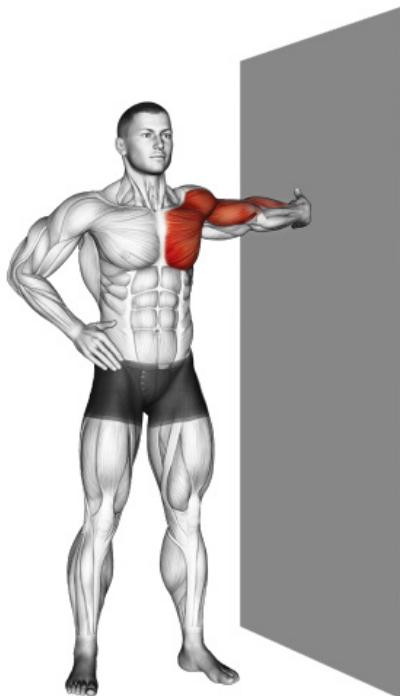
Kneeling Erector Spinae Stretch

Keep hips over knees and shoulders over hands to form a box shape. Lift the centre of the back up toward the ceiling. Push the floor away with the hands.



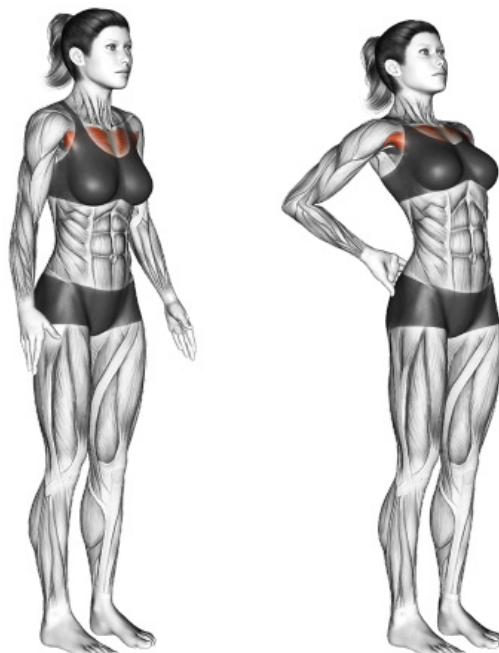
Standing Wall Pec Stretch

Elbow should be in line with shoulder. Adopt a split stance for balance and stability. Turn shoulders away from the side being targeted to deepen the stretch.



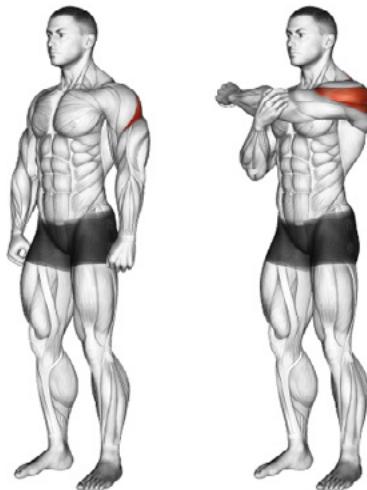
Standing Pec Stretch

Place hands on the lower back and squeeze elbows rearward and together. Keep chest up and look directly forward. Keep knees slightly bent.



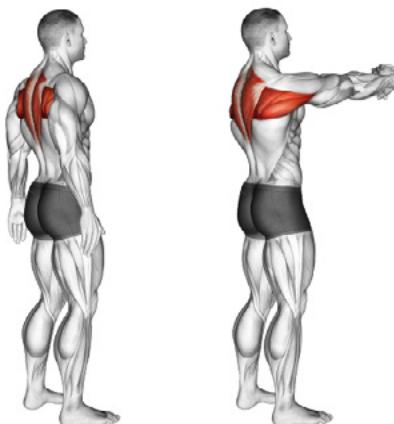
Standing Deltoid Stretch

Maintain an upright posture. Hold on above or below the elbow but do not place hand directly onto the elbow joint. Keep shoulders down and level. Keep knees slightly bent and look straight ahead.



Standing Trapezius and Rhomboid Stretch

Extend arms to the front with fingers interlocked. Keep lower back in neutral position. Try to spread the shoulder blades and reach forward.



Standing Biceps Stretch

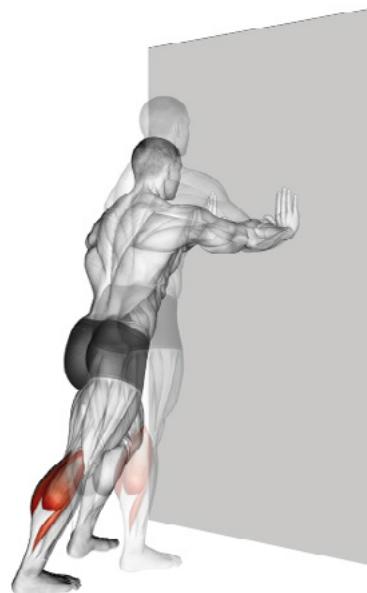
With arms extended outward at shoulder-height, turn palms down and to the rear. Maintain neutral spine and keep knees slightly bent.



Lower Body

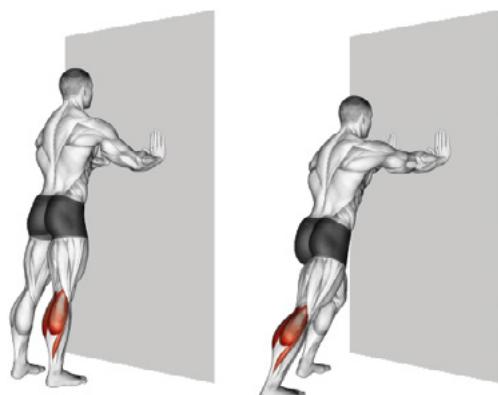
Standing Gastrocnemius Stretch

Make sure heels are flat on the floor and feet are parallel, both facing forward. Move the rear foot back to increase depth of the stretch. Have the knee partially flexed to hit the gastrocnemius more.



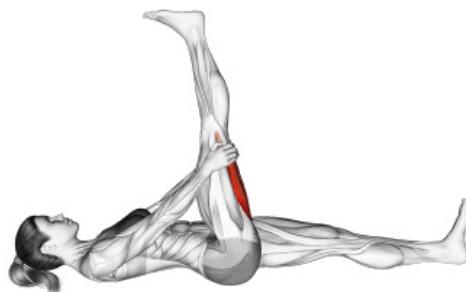
Standing Soleus Stretch

Make sure heels are flat on the floor and feet are parallel, both facing forward. Move the rear foot back to increase depth of the stretch. Straighten the knee to feel it more in the soleus



Supine Hamstring Stretch

Point extended leg up toward the ceiling. Keep upper body flat on the floor and ensure shoulders remain relaxed. Hold behind the knee or the calf and gently pull leg in. Place a towel or belt around the foot as an alternative



Supine Gluteal Stretch

Bend leg and hold behind the knee. Cross other leg over. Relax the body. Pull thigh towards the chest.



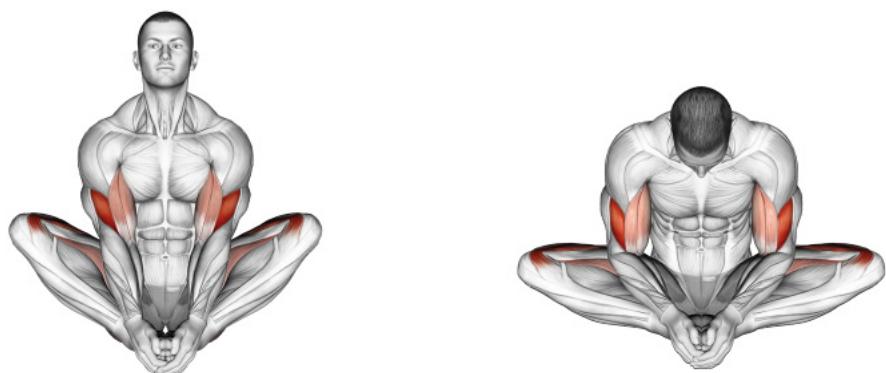
Supine Gluteal, Abductor & Oblique Stretch

Sit up, supporting weight with one hand. Cross legs and turn towards the crossed leg.



Seated Adductor Stretch

Place soles of the feet together and pull feet close to pelvis. Sit upright. Push elbows down onto thighs/knees to gently increase the depth of the stretch.



Prone Quadriceps Stretch

Rest head on non-involved arm. Keep knees close together. Grasp the ankle rather than the toes.



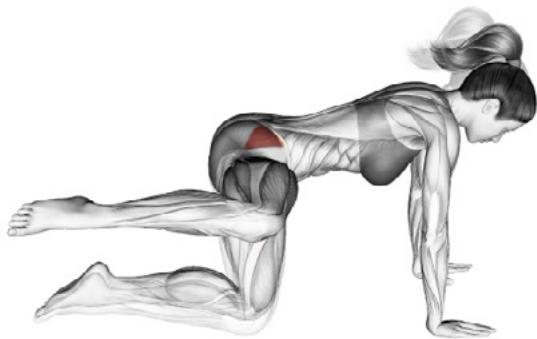
Standing Hamstring Stretch

Keep thighs parallel and place hands on thigh of bent leg. Push hips to the rear to deepen stretch. Maintain neutral spine throughout.



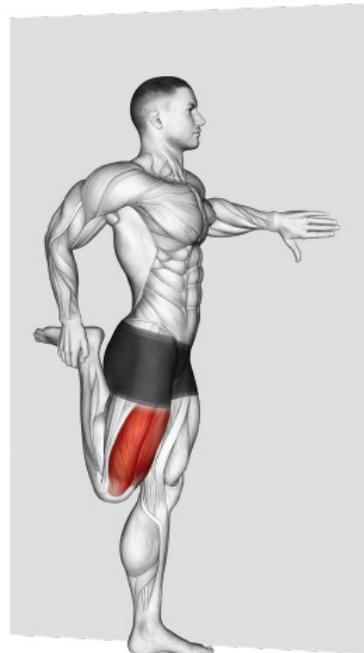
Kneeling Adductor Stretch

Keep upper body horizontal to the ground and ensure hips remain square. Knee and foot should point directly forward. Move extended leg away to deepen the stretch.



Standing Quadriceps Stretch

Use free hand for support as required. Keep thighs and knees together. Point bent knee straight down to the floor. Push hips forward slightly to deepen stretch. Hold the ankle and not the toes. Look straight forwards and stand tall.



Kneeling Hip Flexor Stretch

In a deep lunge position, make sure the front shin is vertical. Keep torso upright. Place hands on the front knee for balance. Move rear leg back to increase the stretch.



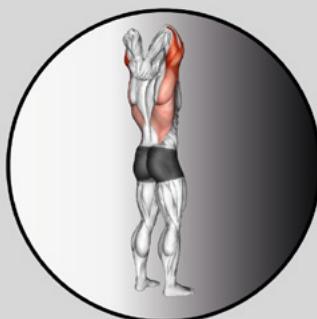
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ON LEARNING PLATFORM

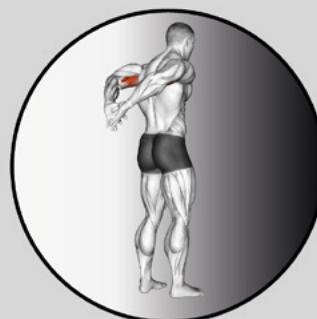
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STATIC STRETCHES

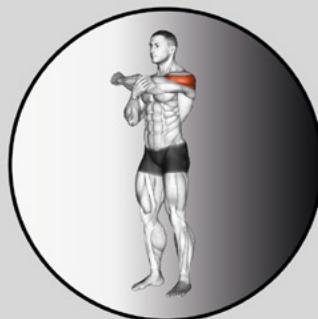
UPPER BODY



TRICEP STRETCH



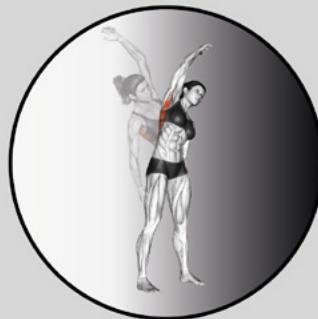
BICEP STRETCH



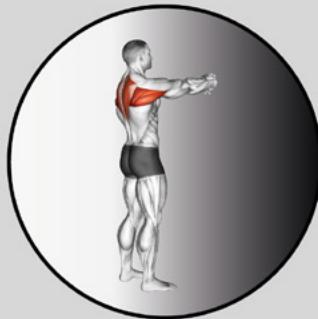
DELTOID STRETCH



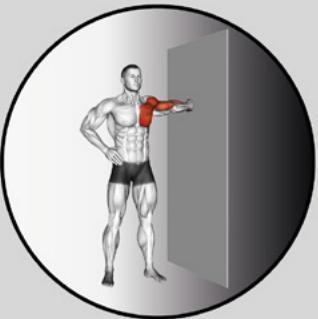
ERECTOR SPINAE STRETCH



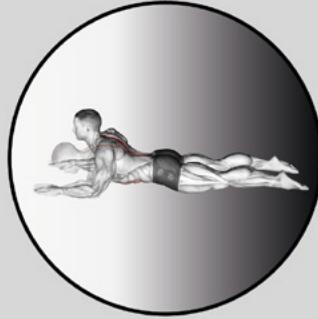
LATISSIMUS DORSI STRETCH



TRAPEZIUS AND RHOMBOID STRETCH



PECTORAL STRETCH



ABDOMINAL STRETCH

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ON LEARNING PLATFORM

O R I G Y M

STATIC STRETCHES

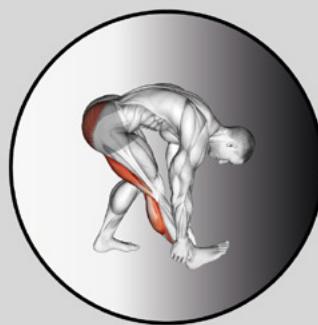
LOWER BODY



HIP FLEXOR STRETCH



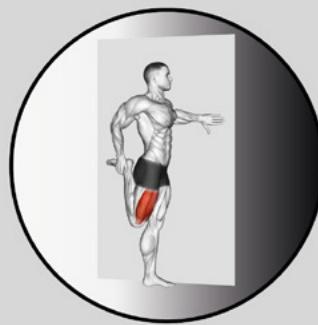
LYING QUADRICEP STRETCH



STANDING HAMSTRING STRETCH



GASTROCNEMIUS STRETCH



STANDING QUADRICEP STRETCH



GLUTEAL STRETCH



OBLIQUE AND ADDUCTOR STRETCH



ABDUCTOR STRETCH

Prepare self, client and facilities for a gym-based workout

MODULE 6:

GYM ENVIRONMENTS, HEALTH & SAFETY, RESISTANCE TRAINING, CONTRAINDICATIONS AND ADAPTATIONS

Writing and then delivering gym-based workouts is the main role a fitness professional can expect to perform. The client's enjoyment and results, as well as their health and safety, all hinge on the effective delivery and subsequent supervision of an appropriate program of exercise. A successful workout begins with proper preparation.

Preparing The Instructor

Before the exercise session begins, the instructor should ensure that all resources that will be required for the workout are present and in good working order.

Factors that need to be considered include:

- **The program has been written and is ready for use.**
- **The workout program meets the needs of the client.**
- **The instructor is clean, presentable, and promotes a positive image.**
- **The equipment required is available and in good working order.**
- **Alternatives have been identified in case of last-minute changes to the workout.**
- **The instructor is on time.**

By preparing for the workout in advance, the instructor ensures that the session will go as smoothly as possible and that they will not be "blindsided" by anything other than very unusual events.

Preparing The Client

Once the instructor and facilities are ready and the client arrives, the following steps should be followed before the commencement of exercise:

Welcome the client and explain any emergency procedures

A warm welcome will help establish rapport and put the client at ease from the outset of the session. Welcoming the client in a friendly but professional manner will set the tone for the rest of the session. If this is the client's first workout in this particular facility or there have been any procedural changes since their last visit, the instructor should clearly explain the location of the emergency phone, first aid kit and duty first aider and detail the procedures that should be followed in the case of a fire or other emergency.

Explain the purpose of the session

Give the client a brief outline of the session and its purpose so they can understand the value of the exercises they will be performing. This also gives them the opportunity to air any concerns regarding the upcoming session and provide any last-minute input.

Carry out a verbal PAR-Q

Prior to starting exercise, ask the client if, since completing their written PAQ-Q, has anything regarding their health changed i.e. do they have any aches or pains that need to be considered, are they feeling unwell in any way, are they still tired from the previous workout. This information should then be used to modify the workout as necessary and, in the case of illness or injury, may necessitate postponing the session. Once this preamble is complete, it is time to move onto the warm-up, main session and cool down.



Instructional Skills

It's all well and good having a very effective program planned and all the equipment set up in advance but if the instructor is unable to effectively communicate what the client needs to do, the workout can be much less productive than it ought to be. Delivering clear, concise and correct instructions is a skill that all instructors need to develop and practice if they are to be successful. Communicating can be verbal or visual and both types of communication are important to fitness instructors.

Verbal Communication

- Giving instructions
- Providing motivation and praise
- Delivering teaching points
- Providing corrections
- Counting
- Cueing



Visual Communication

- Demonstrations
- Body language
- Teaching position
- Eye contact
- Facial expression
- Physical contact



Verbal Communication

The ability to verbally communicate clearly and concisely is one of the instructor's most powerful tools. Clearly communicating concepts, ideas, reasoning, instructions and feedback will enhance the whole workout.

To communicate effectively, the instructor should be mindful of the following:

- **Terminology:** Instructors must realise that not all clients will be familiar with terms like "neutral spine", "keep your knees soft", "avoid hyperextending your elbows" and "brace your core". Technical terminology, if used at all, must be qualified with a clear initial explanation. Avoid the use of fitness jargon and abbreviation but, instead, use terms that your client will understand. Use the session as an opportunity to teach any relevant terminology to the client but do not try to "blind them with science" by making explanations unnecessarily technical.
- **Motivation:** As the workout progresses, the instructor will need to motivate most if not all clients to work at the appropriate level. This is best done by exuding enthusiasm and confidence and being passionate about what they do. Accompanied by the appropriate intonation and volume, terms like "Well done – only two more reps to go" or "You can do it!" can help the client work through any momentary discomfort. Avoid terms like "Don't stop" as the client can all too easily focus on the negative.
- **Teaching Points:** Teaching points are phrases, keywords and reminders used by the instructor to encourage good exercise technique. Always positive, teaching points remind the client about what to do rather than what NOT to do. For example, when doing press-ups, the instructor may use teaching points like "keep your elbows soft", "long neck", or "keep your elbows soft". Use teaching points to pre-empt technique errors before they happen or correct errors when they do. Avoid overly length or technical teaching points; a teaching point is not a fully-developed instruction but a brief phrase that is easily understood.
- **Correction:** Despite the instructor's best efforts, even the most advanced clients will still make mistakes and need correction. Corrections, like teaching points, should always be positive i.e. tell the client what they need to do, not what they must stop doing. For example, "keep your elbows soft as you press the weight up" is much better than "don't lock your elbows". Correction should be delivered patiently and in such a way that it does not come across like a "telling off" or being judgemental.
- **Cueing and Counting:** Cueing means letting the client know what is about to happen in their workout, for example counting them in as you hand them a weight, letting them know you are about to speed up or slow down the treadmill or warning them that you are about to increase the depth of a partner-assisted stretch. Counting, in contrast, tells the client how their set is progressing and how many reps they have left to do. An instructor should count, coach and encourage during each and every set and avoid just counting reps only.
- **Voice Intonation:** While the words used during an exercise session are important, the way they are spoken are important too. Voice intonation can reinforce the meaning behind the words and make all the difference to how information is interpreted. For example, saying the word "explode" in a monotonic way will have very little meaning whereas saying the word like it sounds "EXPLODE!!!" as the client drives up and out of the bottom position of a heavy squat is much more emotive and useful. Similarly, when it comes to lowering the intensity and moving into the cool-down stretches, a calmer, more measured voice will aid in relaxation and a better stretching experience.

Often, older people will respond better to a lower level of intonation while younger clients may prefer a more upbeat, energetic tone. Try to vary the volume, speed and general tone of your voice according to the component of the program; mirror the intensity of the workout with your voice.

Visual Communication

In addition to communicating verbally, instructors must also be familiar with non-verbal forms of communication. In noisy gyms and for reinforcing verbal communication, visual communication is essential.

- **Demonstrations:** To successfully teach an exercise, instructors must be able to do a good demonstration using proper technique. A demonstration should be precise, practiced and ultimately as perfect as possible. Make sure the client is positioned in such a way that they can clearly see the demonstration and do enough reps that they get adequate opportunity to see all the relevant points of the exercise being shown; 5 to 8 is ideal. Make the demo very controlled and emphasises the important aspects including breathing, lower back position etc. Use a lightweight when doing demonstrations so that a) there is no reason for technique not to be perfect, b) to allow for the fact that you are not warmed up or may have to do dozens of demos already, and C) avoid intimidating the client. If you cannot demonstrate an exercise, it can still be taught providing you can give very clear instructions but a demonstration is usually the best option. Once the demonstration is complete, the client should have the opportunity to ask questions before they have ago.
- **Observation:** When the client is performing any exercise, the instructor should adopt a good position from which to observe performance. This often means moving from one position to another to watch the client from a variety of angles. What looks look good exercise technique from the front could actually be very poor technique when viewed from the side so the instructor must not only move but also know the best position from which to spot common technique errors. In addition, the instructor must also end up in the right position at the right time to spot and help the client re-rack the barbell or put down dumbbells.
- **Body language:** Body language is often described as uncensored communication and while it's easy enough to sound motivating and enthusiastic, body language can give out a different message. Avoid slouching, sitting down, crossing your arms or otherwise looking anything other than being an enthusiastic, professional, approachable instructor and remember, body language can be read not just by the client but anyone else who happens to be in the gym.
- **Touching:** It is sometimes necessary to touch a client e.g. when getting them into a correct exercising position when spotting and in the case of Hilton's law (the nerves that innervate the skin also innervate the muscles underneath) however not everyone likes to be touched so it is important that the instructor obtains informed consent before touching the client and can always justify the use of touching. If no justification exists, it is possible that touching is unwarranted, maybe unwelcome and could lead to allegations of misconduct.

Instructing A New Exercise

One of the main roles of an instructor is introducing clients to new exercises; either on a one-to-one basis or in group inductions. It is very important that this initial instruction is done well as techniques learnt now will potentially influence how client's perform exercises for the foreseeable future and it is much easier to teach someone how to do an exercise properly from the outset than re-teach them once they have developed bad habits. There are several ways to teach a new exercise to a client but the best methods follow a logical pattern, are concise and give both the instructor and the client a framework with which to work. One such instructional method uses the acronym **N.A.S.T.Y.**

Name the exercise and the muscles involved

Call the exercise by its correct/accepted name and name the part of the body involved. E.g. "This is the leg extension machine and it mainly works the muscles on the front of your thigh – the quadriceps.

N

Adjustments

Show the client how to adjust the machine or their body position for safe and effective exercise performance.
Set the machine up for yourself ready for your demo.

A

Silent demonstration

Do 5 to 8 reps without saying anything making sure the demo is as clear and precise as possible. Ensure the client is in the best place to see.

S

Teaching points

Continue with the demonstration but add relevant teaching points and instructions. Be careful not to over-explain; time may be a limiting factor. However, make sure all important information is conveyed. Use non-technical dialogue so teaching points are easily understood.

T

You have a go!

Get the client into position so that they can perform the exercise. Count, coach and encourage them while they exercise.

Y

Some exercises are harder to master than others so make sure you are prepared to regress an exercise if the client is unable to perform a particular exercise properly or safely. It may be necessary to break complex exercises down into their constituent parts so that the client can master one small part of the movement at a time. Remember to only increase exercise intensity when good technique is demonstrated and never sacrifice good technique for heavier weights or more reps. If in doubt, choose easier/less technically demanding exercises that target the same fitness component and introduce more demanding exercises as the client's skill level increases.

NASTY

Managing Group Inductions



Many organisations induct or introduce groups of new members to the gym simultaneously. This job normally falls to the gym instructor. Inducting a group is more challenging than working with an individual for several reasons:

- Mixed ability groups mean that advanced and beginner exercisers have to be catered for at the same time
- Limited equipment means while some members of the group will be exercising, others will not
- In large groups, some people may feel excluded
- It is much harder to supervise a group of people than it is to supervise an individual
- Time limitations may mean that not all members of the group get to try all exercises
- It is very difficult to coach, correct and encourage each member of the group equally
- Members of the group may get in each other's way and make it hard to see the instructor's demonstrations
- Less outgoing clients may feel uncomfortable asking questions in a group environment
- More outgoing clients may try to monopolise the instructor's time and attention
- Group inductions make it very difficult for the instructor to offer personalised exercisers commendations

To manage group inductions effectively and efficiently, instructors may be required to only demonstrate a sample of the exercise equipment available so that the clients have sufficient knowledge to use other machines unsupervised. While not ideal, this is the only real way to deal with large numbers of new members. Secondary, more personalised, inductions should be offered when time permits.

Spotting

Spotting involves providing hands-on assistance to a client while they are performing a resistance exercise. Spotting is a skill and while good spotting is always well received and beneficial to the client, bad spotting can disrupt a set and be very annoying and even dangerous. Spotting needs to be practised.

THERE ARE THREE MAIN FUNCTIONS OF SPOTTING:

- Assisting the client if they are in difficulty
- Applying exercise intensifying techniques such as "forced reps"
- Reinforcing correct technique

In general, the greater the potential for injury, the more important spotting becomes. For example, in the bench press where the bar is held over the chest, a failed rep could result in serious injury so spotting is very important. However, for an exercise like triceps cable push-downs, spotting is much less important.

EXERCISES THAT COMMONLY REQUIRE SPOTTING INCLUDE:

- Supine exercises such as barbell or dumbbell bench presses
- Overhead exercises such as barbell shoulder presses
- Squats and lunges where the barbell is supported on the upperback
- Any other exercise where a failed rep could result in injury

Power exercises that are performed at high speed, such as kettlebell swings, cleans or push-presses, should not be spotted as there is a high risk of injury to both the exerciser and the instructor. Some machine exercises can also be spotted however this is generally done to intensify the workout rather than for reasons of safety.

SPOTTERS SHOULD:

- Be strong enough to safely assist if required
- Know the correct way to spot safely and effectively
- Be in the right position at the right time to assist
- Know how many repetitions are being attempted and when their help is likely to be needed
- Be attentive at all times and monitor exercise performance
- Understand that for some exercises, such as heavy squats, more than one spotter may be necessary
- Be in the optimal position to assist without risking injury to themselves
- Maintain neutral spine to minimise risk of injury
- Establish and maintain good communication with exerciser
- Not end up doing all the work for the client

Except in the instance of an acute injury or negative-only repetitions, the spotter should never have to lift all of the exercise weight on their own. The assistance should be limited to just enough so the repetition(s) can be completed with the client doing the majority of the work. If the instructor is lifting more weight than the client, the exercise has ceased to be productive and/or the load is too much for the client.

Instructors should also avoid the temptation to spot each and every exercise in a program; some exercises simply do not need to be spotted or cannot be spotted safely. Overly-enthusiastic spotting can be as problematic as not spotting at all.

Spotting techniques

Different exercises require different spotting techniques:

- Barbell exercises are usually best spotted by gripping the barbell
- Dumbbell exercises are best spotted by applying pressure under the elbows
- Machine exercises are best spotted by applying pressure to the machine lever arm

Monitoring Safety

Monitoring safety is an essential part of a gym instructor's role, whether they are working 1-to-1 with a client or supervising the gym. That means that he/she must be able to stop incorrect and potentially dangerous exercise technique and offer corrections. While it is possible for any exercise to be done incorrectly, the most common incorrectly performed exercises are bodyweight and free weight exercises where movement paths are not guided and it's all too easy to forget about things like spinal position, when focusing on working a seemingly unrelated part of the body.



Planning Exercise For Health Reasons

While many people exercise for improved sports performance or enhanced appearance, many exercisers work out simply because they want to be healthier and live longer. In this instance, periodisation becomes less important because simply being active will improve health status as well as reducing the risk of developing diseases such as obesity and heart disease.

Research suggests that being physically active reduces all-cause mortality and being hypokinetic (sedentary) is a major risk factor for many medical conditions.

Despite the fact that "exercise is good for everybody's body", a study by the Health Education Authority (HEA), now called The National Institute for Health and Clinical Excellence revealed the following:

- **90% of adults believe that exercise is important however only 40% actually do it**
- **Most adults believe they are active enough to keep fit**
- **80% of adults do not know how much exercise they need to do**
- **70% of men and 80% of women are not active enough to benefit their health**
- **2/3 of women and 1/3 of men find walking briskly uphill for a few minutes very demanding**
- **1/3 of men and 1/2 of women aged 65 to 74 do not have enough strength to lift 50% of their body weight, making everyday tasks like climbing stairs and walking very demanding if not impossible**
- **Amount of exercise necessary to benefit health and fitness**

Health and fitness are two very different things. Health is an absence of disease whereas fitness is more to do with performance and the ability to perform physical work. It is possible to be very healthy but not fit and fit but not especially healthy (for example someone who exercises but smokes heavily) and according to the American College of Sports Medicine (ACSM), the exercise prescription for health and fitness differ significantly.

To Reduce Mortality

Frequency: 5-7 times a week

Intensity: moderate or 50-70% MHR

Time: 30 minutes in total per day

Type: any sustained, physically demanding activity using large muscle groups



Simply being physically active for 30 minutes or more a day provides health benefits e.g. gardening or walking for transport or leisure. Research suggests that the time can be cumulative providing eight or more minutes of activity are performed at a time. For general physical activity to have health benefits, the participant should get slightly out of breath and generally feel warm.

To Improve Fitness And Reduce Mortality

Frequency: 3-5 times a week

Intensity: vigorous 60-90% MHR

Time: 20-60 minutes in total per day

Type: sustained exercise using large muscle groups e.g. jogging, rowing etc. Examples of activities listed by intensity:



Moderate

- Cycling for pleasure
- Step machine
- Rowing machine
- Walking briskly
- Cricket
- Golf
- Swimming
- Gardening and mowing the lawn
- Badminton
- DIY



Vigorous

- Running at >5mph
- Hockey
- Squash
- Tennis
- Rugby
- Hill-walking
- Stair climbing
- Cross country skiing
- Rock climbing
- Circuit training

Benefits

When trying to "sell" exercise, it is important that instructors are able to explain the myriad of benefits that can be gained from participating in a regular fitness program. While many benefits are physical e.g. weight loss or have a positive health benefit, exercise can also have a positive effect on the mind and may even be socially or spiritually beneficial.

While it cannot be guaranteed that all exercisers will experience all the benefits, it is certain that being physically active will counter the effects of inactivity and can only be a positive undertaking.

Contraindications to Exercise and Key Safety Guidelines for Special Populations

MODULE 6:

GYM ENVIRONMENTS, HEALTH & SAFETY, RESISTANCE TRAINING, CONTRAINDICATIONS AND ADAPTATIONS

Older Adults (50+)

The ageing process is characterised by progressive loss and decline in the functioning of the skeletal, cardiovascular and neuromuscular systems.

These natural changes affect fitness potential and safety during exercise and adaptations may need to be made to training sessions to accommodate specific needs.

The effects of ageing are highly individual in that clients of the same age will not necessarily have the same loss of functioning. Although most individuals start to notice the effects of ageing around the age of 50; with effects becoming more noticeable and apparent around the age of 65, depending on lifestyle choices and any health conditions, the effects of ageing can show much earlier. The progressive decline in functioning can lead to reduced mobility, loss of independence, increased frailty and increased risk of falls which is why extra precautions may need to be taken when working with a client of this special population group.

CONTRAINDICATIONS MAY INCLUDE:

- **Unstable or uncontrolled medical conditions (diabetes, asthma, angina)**
- **Resting blood pressure greater than 180/90**
- **Resting heart rate over 100 bpm**
- **A joint condition made worse by exercise**
- **Unexplained dizziness**
- **The effects of the ageing process**

The effects of ageing can be detected in all of the body systems with a corresponding decline in physical capacity of 1-2% per year once the process has begun. A decline in things such as flexibility, stability and mobility can make everyday activities harder to perform which will, in turn, likely contribute to the reduction in activity levels.



The Effects of Ageing and Fitness Potential Considerations:

The Neuromuscular System



Some of the most common effects of ageing on the neuromuscular system include:

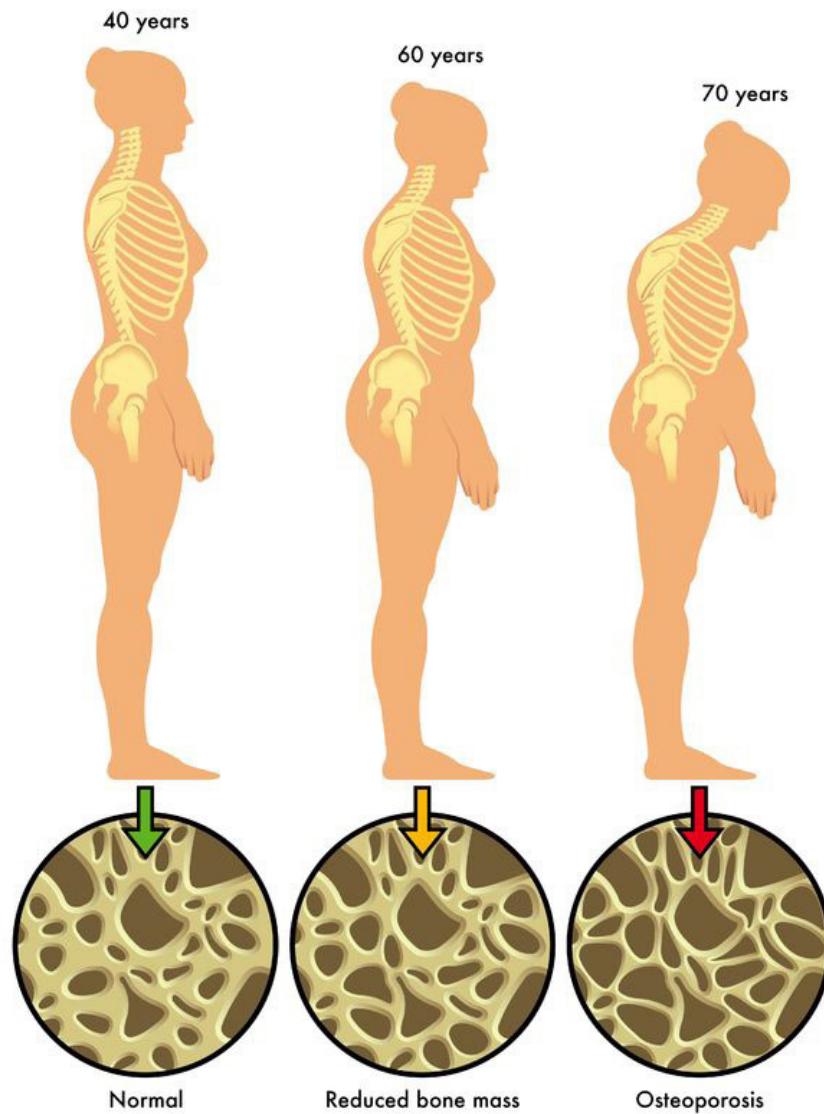
- Weaker and smaller muscle fibres
- Reduced neuromuscular transmission (fewer nerves sending messages)
- Reduced capillaries in the muscles
- Cognitive decline

With these effects, the following fitness potential considerations may be apparent:

- Reduced muscular strength and power
- Reduced movement speed
- Reduced muscular endurance
- Reduced short-term memory

The Effects of Ageing and Fitness Potential Considerations:

The Skeletal System



Effects of ageing on the skeletal system include:

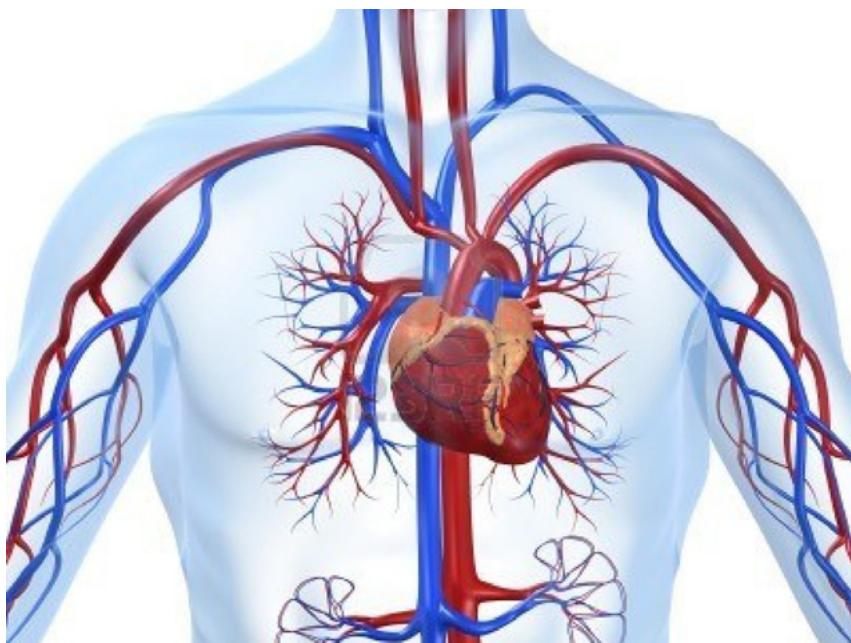
- Loss of bone mass and reduced bone density
- Increased risk of osteoporosis
- Reduced availability of synovial fluid
- Calcification of the joints (calcium laid down in the cartilage)

The fitness potential considerations for the skeletal system are:

- Bones will be less resilient to stress and more susceptible to fracture
- Stiffer, less mobile joints
- Reduced shock absorption in the joints

The Effects of Ageing and Fitness Potential Considerations:

The Cardiovascular System



As we age, the following effects on the cardiovascular system can be observed:

- Reduced stroke volume and cardiac output
- Less efficient heart and circulatory system
- Increased blood pressure
- Fewer capillaries
- Less elastic vessels
- Reduced intake, uptake and utilisation of oxygen

Fitness potential considerations in relation to reduced cardiovascular functioning include:

- Lower maximal heart-rate
- Lower training heart-rate
- Slower recovery rate
- Decreased tolerance to fatigue
- Tire quicker
- Lower anaerobic threshold
- Less tolerant of high-intensity exercise

Safety Considerations and Guide



Prior to participation, all clients should be pre-screened to identify any contraindications or risk factors. A healthy older adult (between the ages of 50-65) can partake in a regular exercise session so long as the appropriate adaptations are made to meet any age-related needs.

Older adults over the age of 65, or those between the ages of 50-64 with health conditions, need to be signposted to a GP for advice as they may require a specialist exercise referral instructor.

To minimise the risk of any adverse effects, the following general guidelines should always be followed when working with adults over the age of 50:

Warm-up and Preparation

- Use a longer and more gradual warm-up (15 minutes)
- Use more mobility exercises
- Increase the range of motion of mobility exercises gradually
- Use slower, controlled and simpler movements
- Focus on posture and correct technique



Cardiovascular Training

- Build intensity more gradually
- Lower working intensity
- Use fewer impact exercises
- Layer information in stages rather than all at once
- Emphasise correct technique



Muscular Training

- Use the endurance reps and sets range with longer rest periods
- Utilise exercises that strengthen postural muscles, pelvic floor muscles and muscles around potential fracture sites for osteoporosis (i.e. wrists, hips, spine)
- Use a slower pace and place emphasis on correct technique
- Simplify exercises to allow for loss of coordination and balance. Give suitable alternatives to clients who find certain exercises difficult. Make sure the risk of suffering a fall is minimised.



Cool-down and Closing

- Use longer, more gradual cool down
- Use more stable positions when stretching
- Use a smaller range of motion
- Consider more stretches for particular muscles



Anyone over the age of 50 is deemed to be an older exerciser because it is recognised that many physiological and medical changes occur at and around that age. Even fit and healthy-looking older people may be suffering the effects of ageing so instructors always need to be mindful that, regardless of outward appearances, aging is having an impact. 40 is the usual age for seeing more pronounced signs of ageing and 50 is when progressive loses in the neuromuscular and skeletal systems may require adaptation to the exercise program.

Ageing is not a disease but simply describes the fact that, with advancing years, the systems of the body start to break down faster than they can be rebuilt. This results in declines in physiological and even psychological fitness which can adversely affect exercise ability and performance. Eventually, these losses lead to increased frailty and an inability to respond to stress and disease.

Functional status can be positively affected by exercise and diet which means that exercise is increasingly important for people over the age of 40 but while exercise can significantly slow the decline, ageing is an inevitable process.

AT A RATE OF APPROXIMATELY 1-2% PER YEAR, AGEING RESULTS IN A LOSS IN:

- **Aerobic endurance**
- **Balance and coordination**
- **Flexibility and mobility**
- **Muscle strength**
- **Muscle power**
- **Bone density**

ADDITIONALLY, AGEING CAN RESULT IN SENSORY AND COGNITIVE DECLINES INCLUDING:

- **Difficulty learning new skills**
- **Visual impairment**
- **Aural impairment**
- **Reduced short term memory**

It goes without saying that an instructor needs to be aware of these changes and be prepared to adapt any program of exercise accordingly.

TO BE SAFE AND TO FOLLOW BEST PRACTICE, THE FOLLOWING GUIDELINES SHOULD BE OBSERVED FOR EXERCISING ADULTS WHO ARE 50 OR OLDER:

- All people over the age of 50 should be screened prior to exercise to establish whether they are asymptomatic (free from symptoms) and any adverse symptoms should result in a medical referral prior to participation.
- Warm-ups should be longer and more gradual and include additional mobility exercises for all major joints. 15- minutes or longer is an appropriate duration.
- Cooldowns should be longer and gradual than for younger exercisers to minimise the potential for blood pooling and delayed onset muscle soreness. 15-minutes or longer is the appropriate duration.
- Exercise intensity should be challenging but health-related i.e. without pain or strain.
- Intensity should be adjusted so the client is working within their own individual comfort zone by using RPE and the talk test. Energy levels and joint pain can fluctuate from one day to the next so the instructor should be prepared to change the program on short notice according to how the client is feeling on any given day.
- Ensure correct technique is used at all times because of the increased risk of musculoskeletal injury with this group.
- Allow for more time and be prepared to provide assistance when moving from floor to standing exercises.
- Simplify exercises to allow for loss of coordination and balance. Give suitable alternatives to clients who find certain exercises difficult. Make sure the risk of suffering a fall is minimised.
- Learn new exercises in the easiest position e.g. seated or using a machine, and then progress in difficulty gradually.
- Avoid extreme spinal flexion i.e. sit- ups, to reduce wear and tear on an already potentially worn spine. Focus on bracing exercises instead.
- Be prepared to explain exercises clearly and repeatedly because of developing auditory and memory issues.
- Understand that older joints are less mobile than younger ones so it may be necessary to reduce the range of movement to reflect this.
- Programs should include resistance training to help slow the loss of muscle and strength and maximise bone mass.

Older exercisers are a very important special population that is growing every year and are very rewarding to work with. Older people often have more free time and disposable income to dedicate to exercise and are more aware of the health and functional benefits of exercise in the maintenance of the quality of life. By modifying exercise appropriately, an instructor can have a huge impact on the life of an older client.

Pre-Natal and Post-Natal Women

Pre-natal Adaptations to Session Structure and Content

In the not too distant past, exercise was frowned upon for women during pregnancy. It was thought that exercise could have a negative effect on foetal development and could even lead to premature birth. More recently, opinions have changed and more and more women are choosing to exercise through their pregnancy.

In the vast majority of cases, exercise is safe for both the mother-to-be and the baby and exercise of the appropriate intensity and in line with the current recommendations should not have any adverse effect on foetal development or the birth. However, this makes the assumption that no history exists that would make even the right sort of exercise problematic. If any such history exists, the client should be referred to their doctor before commencing or continuing with an exercise program.

While it seems normal and natural for an already exercising woman to exercise through their pregnancy, some women actually choose to take up exercise when they become pregnant. This means that not only is their body trying to adapt to being pregnant, they also have to adapt to exercise too. In this instance, the instructor should program 15-minutes of continuous aerobic exercise and gradually increase week by week up to 30- minutes per session.

Pregnant women should exercise according to how they are feeling. Hormonal and postural changes make pregnant women more susceptible to injury, joint misalignment, muscular imbalance and motor skills decline, especially if they are genetically hyper-mobile. These changes may start very early on in the pregnancy with effects becoming gradually more significant as the pregnancy progresses. Pregnant women are vulnerable to nausea, dizziness and fainting.

There are several key guidelines to consider when working with otherwise healthy pre and post-natal clients:

- Pregnant women should endeavour to stay well hydrated and avoid exercising in hot or humid conditions to reduce the risk of foetal hyperthermia or overheating
- Sessions should be limited to around 45-minutes and be adjusted according to the mother-to-be's energy levels on the day
- Use RPE rather than heart rate as changes in the cardiovascular system make heart rate ranges less accurate
- Severe calorie restriction is not recommended during pregnancy as it may harm foetal development



PREGNANT WOMEN SHOULD AVOID:

- Exercising in the supine position after 16 weeks
- Exercising to the point of exhaustion (the goal should be to maintain activity rather than improve fitness)
- Prone lying exercises
- Prolonged motionless standing
- Heavy, uncontrolled, isometric or prolonged resistance work above the head
- Abdominal exercises. Focus instead on posture, mobility and pelvic floor muscles
- Loaded forward flexion exercises
- Leg abduction or adduction against a resistance
- Isometric exercises
- Loaded forward flexion
- Rapid changes of direction/position
- Uncontrolled twisting
- Exercise with a risk of falling or abdominal trauma
- Excessive and uncontrolled de-stabilisation (balance) techniques e.g Bosu
- No developmental stretches, hip abduction or hip adduction exercises because of joint laxity

Post-natal Adaptations to Session Structure and Content

Women should not begin exercising post birth until they have been given clearance by their healthcare professional, usually at the post-partum six-to-eight week check.

After birth, before progressing to more vigorous exercise, the focus of sessions should be to correct posture and joint alignment, to address muscular imbalances, to improve stability and motor skills and to encourage transversus abdominis recruitment and pelvic floor function.

Clients should be referred to a health care professional immediately if they are experiencing any of the following symptoms post-birth:

- Stress incontinence or pelvic floor muscle weakness
- 'Dragging' pain or a feeling of heaviness in the lower abdominal or pelvic floor area
- Groin or low back pain or difficulty walking; even if only mild and intermittent
- Abdominal muscle weakness, umbilical hernia, abdominal muscle separation or softness/sinking at the umbilical mid-line, excessive abdominal doming



Guideline Adaptations to the Programme

THE FOLLOWING ADAPTATIONS SHOULD BE CONSIDERED WHEN WORKING WITH PRE- AND POST-NATAL CLIENTS:

Warm-up and Preparatory Phase:

- Emphasise correct posture at the start and throughout the session
- Make movements slow and more controlled
- Utilise more mobility exercises
- Use a full range of motion mobility exercises to warm up the muscles
- Build intensity of movement more gradually to avoid any sudden changes in blood pressure
- Support stretch positions and take care not to exceed a comfortable range of motion



Cardiovascular Exercise

- Use low to moderate intensity
- Use low impact exercises
- Build and lower intensity more gradually
- Use less choreography
- Use the talk test rather than heart rate monitoring
- Use a slower tempo
- Clients who are unused to exercise should start with shorted durations i.e. begin with 15 minutes and increase gradually to 30 minutes
- Maintain adequate hydration
- Avoid exercising in very hot or humid conditions

Muscular Fitness

- Include exercises for the pelvic floor muscles
- Avoid supine and prone lying for pre-natal clients
- Select comfortable starting positions
- Avoid exercises that place a lot of pressure on the pelvic girdle
- Use movements related to everyday life
- Perform fewer repetitions
- Use less intense exercise
- Do not use heavy abdominal exercises. Sit-ups, crunch or oblique cross-over type exercises are not an appropriate choice for abdominal muscle re-education post-birth

Cool-down and Closing

- Include specific relaxation work
- Avoid positions which may overstretch the ligaments
- Select balanced and comfortable positions for passive stretching
- Use shorter-hold stretches to maintain rather than develop flexibility

These guidelines help reduce the risk of any adverse effects of exercise and should always be followed, however, exercise should stop and the client should be immediately referred to a doctor or midwife if any of the following abnormal symptoms occur:

- Dizziness, fainting or nausea
- Bleeding or leakage of amniotic fluid
- Abdominal or contraction type pain
- Unexplained pain in the back, pelvis, groin, buttocks or legs
- Excessive shortness of breath, chest pain or palpitations



Additional Pre And Post-Natal Exercise Considerations

Hormonal and postural changes mean that women are more vulnerable to injury during pregnancy. Joint instability, laxity and misalignment, muscle imbalances, impaired balance, increased body weight and size and decline in motor skills all increase injury risk and become more apparent as the pregnancy develops.

During pregnancy, as the baby grows, there is an increased tendency toward forward flexion and lumbar hyperlordosis and thoracic hyperkyphosis leading to lower back and neck pain.

Exercise should be adapted accordingly.

- Instructors must monitor for faintness, dizziness and nausea and be prepared to stop the session if the client experiences any of these or other symptoms
- Women should only return to exercise after their post-partum 6-8 week medical check. In the case of caesarean deliveries, this extends to 12-weeks
- The return to exercise should be gradual to allow recovery from the birth and ensure the new mother has sufficient energy to look after their baby
- Post-partum exercise programs should be designed to re-establish joint stability and muscle imbalances but high impact exercises, rapid changes of direction and twisting movements are best avoided for at least 6-months into the post-natal period
- Strengthening the core and pelvic floor muscles should be a priority in the post-natal period, so too should postural re-education. Crunches and sit-up type exercises are not appropriate in the immediate post-natal period
- Babies should not be used for resistance training and should be excluded from the exercise area

Women should be referred to their health professional if they suffer any of the following post-natal symptoms:

- Stress Incontinence or Noticeable Pelvic Floor Weakness
- "Dragging" pain or a feeling of heaviness in the lower abdomen or pelvic area
- Groin or lower back pain
- Difficulty and pain when walking.
- Abdominal muscle weakness or doming

During pregnancy, a woman's body changes from one week to the next and the exercise program should reflect this; what was fine last week may not be okay this week.

The instructor should remain flexible and be prepared to change the workout at a moment's notice and understand that the expected physical changes do not always happen on schedule. Get constant feedback from the client and remember that exercise must not only be safe for the mother but also the growing foetus.

Young People (14-16)



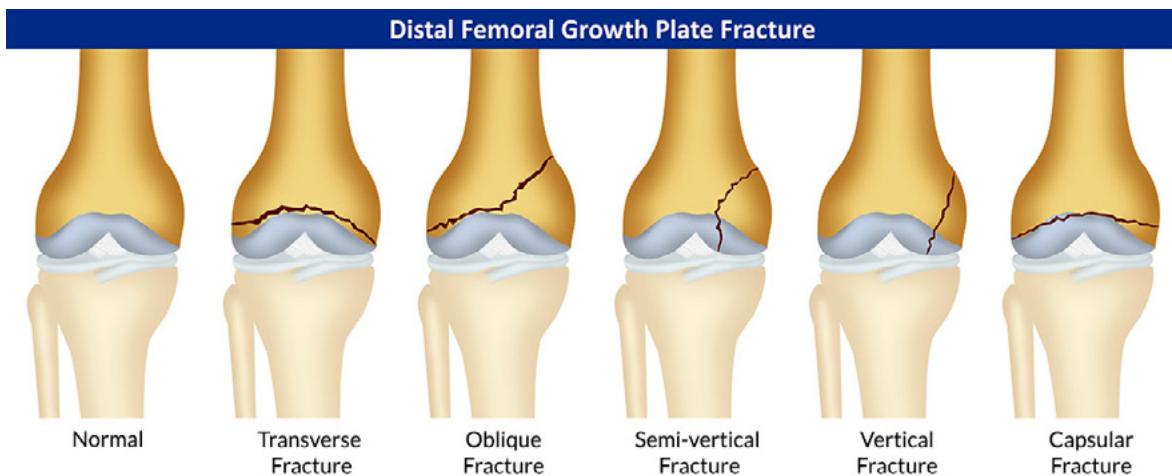
Provided basic modifications are made, most 14-16-year-olds can be accommodated within a regular exercise session. If working with young people, it is advisable to gain further training/certification for working with adolescents to gain an understanding of the physiological and psychological changes that affect this age group.

Like with all other populations, a comprehensive pre-screening process is essential and any participants with medical conditions must be signposted to a GP prior to commencement of a physical activity programme.

Until relatively recently, young people got plenty of exercise at school and as a part of everyday living. More recently, with the advent of passive entertainment like games consoles and computers and the emphasis many schools place on academic league tables, structured physical activity is on the decline. As a result, more and more young people are overweight and even obese and are developing conditions more commonly associated with older people such as type 2 diabetes and arthritis.

Subsequently, an increasing number of young people are joining (or being enrolled in) fitness programs. However, young people are a legitimate special population group that must be exercised with caution and while following certain guidelines.

Safety Considerations and Guidelines



GROWTH PLATE FRACTURES:

The growth plate is the weakest area of the growing skeleton and fractures to this area account for up to 15% of all childhood fractures with the greatest incidence amongst 14-16-year-old boys and 11-13-year-old girls.

PREVENTATIVE MEASURES TO AVOID GROWTH-RELATED INJURIES INCLUDE:

- Avoid excessive training; this can include playing too much of one sport or using a resistance that is too heavy
- Avoid too much static, high-impact activity such as jogging on the spot
- Use appropriate equipment for the activity i.e. the correct size and weight
- Avoid playing the wrong sport for their body type and inappropriate size matching when in pairs
- Always teach an appropriate warm-up and cool down and provide the correct equipment for the activity (correct size, weight, etc)

Flexibility

During the growth spurt there is an increased risk of injury as the soft tissue around the joints is already stretched because muscle growth does not keep up with bone growth rates.

Caution should be taken when teaching any stretch exercise and the aim should be to only stretch to the point of mild tension and to avoid over-stretching.

Technique

Young adults generally do not have a well developed 'body awareness' or co-ordination. Closer supervision is important to ensure correct alignment. Beginning with simple non-complex, low resistant exercises and movement patterns that replicate everyday activities helps to reduce the risk of injury. Progression should only be applied when technique is correct.

Gymnasium Equipment

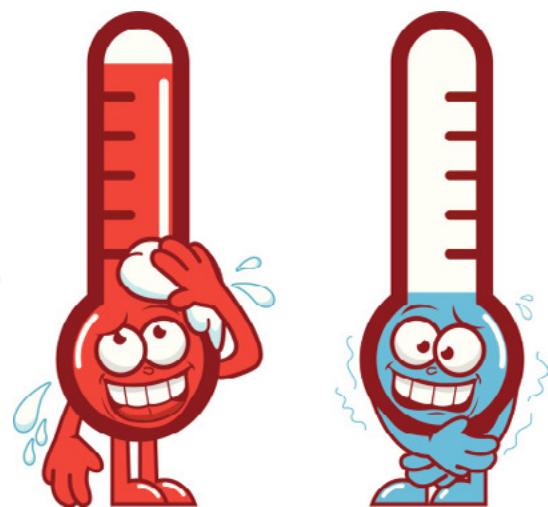
As resistance machines in most gyms are designed for adult users, the weight increments are often too great for young people. Using free weights allows smaller weight increments and are generally a better choice as their safe and effective use is not determined by the size of the exerciser. If using free weights, it is essential to check for correct technique.

Body Temperature and Dehydration

Young people are sensitive to heat stress because they expend more energy per kilogram of body weight than an adult during exercise putting them at a higher risk of dehydration.

To help combat this:

- Regular water breaks should be given to maintain hydration
- Exercise in hot, humid conditions should be avoided
- A less intense warm-up should be utilised
- Active rests between bouts of vigorous activity should be used



Limb Length

During the growth spurt, young people have disproportionately long legs meaning they are bio-mechanically out of balance and are potentially less co-ordinated. Focusing on correct technique and avoiding exercises with over-complicated movements will help reduce the risk of injury.

Aerobic Exercise

Young people have less glycogen stored per gram of muscle and have fewer stores of creatine phosphate resulting in a lower anaerobic work level. Young people should only be working at lower-to-moderate intensity and activities such as power lifting, body building and maximal resistance lifts should be avoided until they reach physical and skeletal maturity.

Cardiovascular and Cardiorespiratory Considerations

The Cardiorespiratory System In Regards To Children

Children may seem untiring but if you observe a child during 20 or more minutes of continuous exercise you will observe that they naturally slow down and speed up to allow themselves to periodically cool off. Children are less able to regulate their body temperatures so it is important that they are given the opportunity to slow down and cool off when necessary.

ADDITIONAL CONSIDERATIONS REGARDING BODY TEMPERATURE INCLUDE:

- Allow regular water breaks
- The warm-up component can be shorter than for adults
- The cool-down component can be shorter than for adults
- Active rest should be given between bouts of intense exercise
- Monitor for signs of heat exhaustion and dehydration

Because their cardiovascular systems are not yet fully developed, instructors must be aware of the risk factors associated with sustained, high intensity, aerobic training for children.

- **Lung volume and peak flow rates:** Measures associated with lung volume and peak flow increase steadily until adulthood. Not yet fully developed lungs mean that children have inferior pulmonary functions to adults. This is characterised by more rapid breathing and a tendency to get out of breath quickly.
- **Cardiovascular function:** Children have smaller heart and heart chambers which means that stroke volume is lower than adults both at rest and during exercise. Children compensate for this by having higher resting and exercising heart rates however, even a higher heart rate cannot compensate for reduced cardiac output.
- **Aerobic capacity:** VO₂ max increases from 6 to 18 years in boys and 6 to 14 years in girls but, because of the corresponding increase in body weight, this is not reflected in fitness levels. There is a slight decline in VO₂ max in girls at puberty because of an increase in body fat levels whereas boys, who gain muscle at this age, usually experience a slight further increase.

Absolute VO₂ does not limit performance in young people. The limiting factor is more likely to be lack of movement efficiency, limb size and muscle development. Because children develop at differing rates, the mitigating factor in sports and exercise performance and more likely to be the stage of physical development as more developed muscles and bones are better able to exert force.

Anaerobic Exercise

Anaerobic capacity is not fully developed until the age of 20. Due to their smaller muscles, children have smaller glycogen and creatine phosphate stores than adults and will fatigue faster as a result. Combined with their reduced ability to control their body temperatures, anaerobic training should be carefully monitored and not performed in excess or to exhaustion.

The main cardiovascular and respiratory differences between adolescents and adults include:

- Lower stroke volume and cardiac output due to smaller heart chambers and lower heart volumes
- Young people have higher maximal heart rates to compensate for lower stroke volume
- Lower blood pressure as young people have not been exposed to the risk factors affecting blood pressure for so long (longevity effects)
- Higher respiratory rate due to lower lung volume in young people (60 breaths per minute for children and young people compared to 40 breaths per minute for adults). More air passes in and out of the lungs of young people per litre of oxygen consumed which shows that children have inferior pulmonary functions to adults

Disabled People

It's widely recognised that exercise can be very physically and psychologically beneficial for people with disabilities. The benefits are, by and large, the same as for a non-disabled exerciser but may also reduce the risk of developing complications associated with the disability in question and enhance functionality making the tasks of everyday living easier to perform.

However, many people with disabilities and, in particular, mobility limitations often experience a lack of suitable facilities and qualified staff needed for them to exercise.

The Disability Discriminations Act Of 1995 (DDA)

According to the DDA, it is unlawful to refuse to serve a disabled person or offer a reduced level of service. Service providers must make "reasonable adjustments" to their facilities to ensure they are accessible by all.

Adjustments must be made in advance of any potential usage by disabled persons and not retrospectively as it is unreasonable for a disabled person to have to wait to obtain access or services.

An Introduction to the Equality Act 2010

A new Equality Act came into force on 1 October 2010. The Equality Act brings together over 116 separate pieces of legislation into one single Act. Combined, they make up a new Act that provides a legal framework to protect the rights of individuals and advance equality of opportunity for all.

The Act simplifies, strengthens and harmonises the current legislation to provide Britain with a new discrimination law which protects individuals from unfair treatment and promotes a fair and more equal society.

THE NINE MAIN PIECES OF LEGISLATION THAT HAVE MERGED ARE:

- The Equal Pay Act 1970
- The Sex Discrimination Act 1975
- The Race Relations Act 1976
- The Disability Discrimination Act 1995
- The Employment Equality (Religion or Belief) Regulations 2003
- The Employment Equality (Sexual Orientation) Regulations 2003
- The Employment Equality (Age) Regulations 2006
- The Equality Act 2006, Part 2
- The Equality Act (Sexual Orientation) Regulations 2007

More information can be found at:

<https://www.equalityhumanrights.com/en/equality-act/equality-act-2010>

The Inclusive Fitness Initiative (IFI)

The IFI provides guidance and support for service providers interested in welcoming disabled people into their facilities and for disabled people wanting to exercise or be more active. The following information is provided in line with the policies of the IFI.

Benefits and Barriers to Activity

People often automatically think of disabled people as wheelchair users, however, wheelchair users only make up 6% of the disabled population.

Disability is an umbrella term covering impairments, activity limitations or participation restrictions and include:

- **Blindness or partial sightedness**
- **Deafness or partial hearing**
- **Down's syndrome**
- **Stroke**
- **Obesity**
- **Cerebral palsy**
- **Fibromyalgia**
- **Arthritic conditions**
- **Mental health conditions e.g. severe depression**
- **Cancer**
- **HIV**
- **Limb amputation**
- **Wheelchair users**

Regular physical activity in a safe and supporting environment offers many health benefits for disabled people such as improved independence and the reduced risk of developing chronic health conditions.

Disabled people are one of the populations that have been identified as not meeting the recommended levels of physical activity due to many people finding they experience various barriers to accessing sufficient physical exercise. Promoting physical activity and enabling participation are therefore priorities in the fitness industry.

The Equality Act 2010 states that service providers must make 'reasonable' adjustments to facilities and services so that they are accessible to disabled people. The Inclusive Fitness Initiative (IFI) provides support and guidance to operators interested in welcoming disabled people into their facilities and to disabled people interested in getting active.

Contraindications and Safety Considerations

Prior to participation, it is essential to pre-screen (PAR-Q) and check for any contraindications (e.g. stage 3 hypertension or heart conditions) that may need clearance or guidance from a GP/health professional. Certain medical conditions will require referral to a specialist instructor.

To enable participation, the following must be considered for adaptation in relation to the needs of the individual:

Exercise Selection

- Simplifying some exercises
- Reducing intensity by using fewer repetitions, lower resistance, controlled rate and appropriate range of motion
- Modifying exercise positions and modalities e.g. using wheelchair based activities for wheelchair users or chair based activities for individuals with physical or functional limitations or issues with balance



Teaching Style

- Clarity of verbal instructions for the blind or visually impaired
- Clarity of demonstrations; facing the person and speaking clearly when instructing the deaf or those with partial hearing - i.e to enable lip reading
- Find appropriate ways to engage and encourage people with learning disabilities e.g. Down's syndrome



Health and Safety

This will include consideration of:

- Entry and access to all facilities
- Safe evacuation procedures in emergencies
- Respect to other legislation e.g. safeguarding vulnerable adults

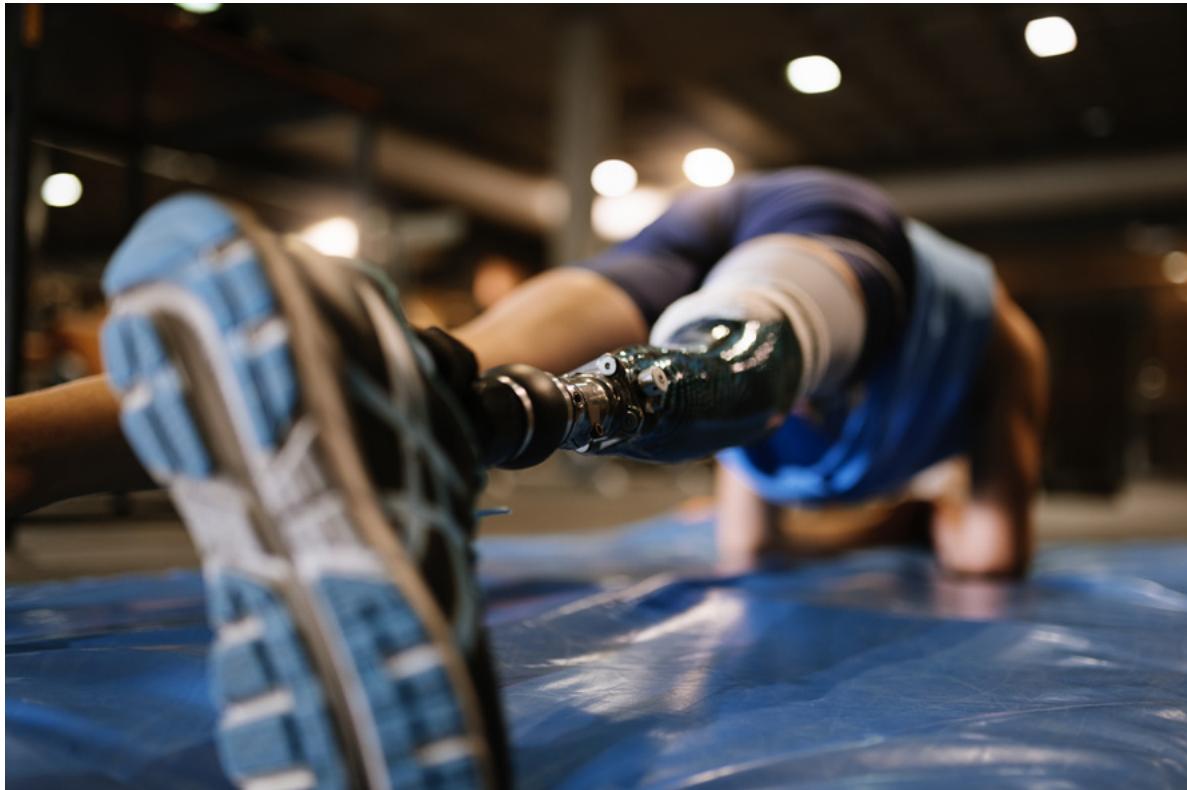


Physical Disabilities

Because of the wide range of possible disabilities, the instructor must realise that it is impossible to provide a definitive exercise guide for all conditions. Instead, the instructor should work with the disabled person to establish what is and what isn't possible.

Some disabilities are classified as progressive which means they get worse over time – multiple sclerosis for example. Progressive disabilities require careful monitoring to ensure the current exercise program is not making the condition worse.

Strokes, cerebral palsy and loss of limbs can result in asymmetrical weakness or loss of function i.e. they affect one side of the body more than the other. If there is a difference in strength and/or functionality from one side to the other, the instructor should endeavour to strengthen the affected side as much as possible without neglecting the side that is unaffected. However, if nerve control or tissue damage is very severe, the ability to improve the affected side will be very limited.



- **Progressive Disorders:** These conditions worsen over time and careful monitoring is essential to ensure the exercise programme does not exacerbate (worsen) the condition. Multiple sclerosis is an example of a progressive disorder.
- **Asymmetrical Weakness:** These conditions result in a difference in strength between the left and right sides of the body. The aim should be to improve the affected side as much as possible without neglecting the unaffected side. If the nerves controlling the affected side are damaged, the ability to improve in the affected muscles is greatly reduced. Participants who have cerebral palsy or that have had stroke(s) may experience asymmetrical weakness.
- **Spasticity:** Spastic muscles are very tight and rigid and are often present with physical disabilities. Flexibility training can be beneficial for tight muscles and is hugely important but advice from a suitably trained medical authority on how to stretch a spastic muscle without causing injury should always be sought out prior to incorporation into a physical activity programme.
- **Neurological Conditions:** These affect the central nervous system (CNS) and tend to result in the muscles becoming progressively weaker as a result of the decline in CNS functioning. This can be offset by concentrating on general fitness levels but if the participant experiences any rapid decline in function, they should immediately be referred to their GP for guidance.
- **Sensory Nerve Damage:** Damage to sensory nerves occurs with many types of physical disability. An inability to detect pressure against the skin can result in a pressure sore which is an increased risk for wheelchair users. The use of certain gym equipment may bring about similar risks and so additional checks for any signs of injury should be advised.
- **Depression:** Although a disabling condition in its own right, this is sometimes a secondary condition resulting from the physical and psychological conditions of living with a disability. Depression reduces motivation and energy levels and can increase the likelihood of participants dropping out of their programme. Medications used to treat depression can be hugely beneficial to some people, however, they have many side effects including weight gain and suicide risk.

Examples of Adaptations



Stroke:

Muscular imbalances are common in people that have experienced a stroke. When performing bilateral exercises, such as a bicep curl using a barbell, the stronger side of the body will compensate for weaker muscles in the other side - i.e if the stroke has caused an impairment in the left side of the body, the right arm will compensate. You can adapt this exercise by switching the barbell for dumbbells to ensure equal distribution of weight.

Wheelchair User:

Cardiovascular equipment such as the rowing machine will not be appropriate for wheelchair users as the correct and effective use relies heavily on the legs. Implementing an arm cycle machine will provide a suitable cardiovascular workout for wheelchair users. Also, consider an environment change e.g. outside route.

Summary

Fitness instructors are not medically trained and are not qualified to offer medical advice on the treatment and/or management of disabilities. That being said, exercise can have a powerful and profound effect on many disabilities and the instructor should not underestimate the impact they can have on the life of someone living with a disability. If, however, the instructor does not feel adequately qualified or experienced to work with someone with severe disabilities, they should refer the client to someone who is.



Instructing and Adapting Exercise

MODULE 6:

GYM ENVIRONMENTS, HEALTH & SAFETY, RESISTANCE TRAINING, CONTRAINDICATIONS AND ADAPTATIONS

Session Preparation

One of the main parts of a personal trainer's job is selecting, instructing and being able to adapt exercises to meet the needs of the client. This level of skill is usually beyond the capacity of a typical gym instructor. This important difference between personal trainers and gym instructors should be explained to the client so that he/she understands the value of personal training – both financial and with regards to the benefits available.

COMPARED TO A GYM INSTRUCTOR, A PERSONAL TRAINER SHOULD:

- **Be able to create a variety of programs to suit the needs of an individual**
- **Be better prepared for a fitness session**
- **Be a better observer and have better communication skills**
- **Be skilled in exercise adaptation, progression and regression**
- **Be able to review fitness session and provide feedback**
- **Be able to act on feedback to improve personal practice**

Once the initial fitness consultation has been conducted, the personal trainer should have a fuller picture of the wants and needs of the client. Combined with their health and exercise status and history, this should allow them to write an appropriate exercise program that caters for the client's goals. Where gym instructors are more likely to produce and supervise general fitness sessions, a personal trainer's approach should be much more specific.

Prior to the arrival of the client, the personal trainer should ensure **all required resources are available and are in good working order**. Any adjustments to the program because of changes in or lack of equipment should be made in advance.

When The Client Arrives

Once the trainer and facilities are ready and the client arrives, the following steps should be followed before the commencement of exercise:

Welcome the client and explain any emergency procedures

A warm welcome will help establish rapport and put the client at ease from the outset of the session. Welcoming the client in a friendly but professional manner will set the tone for the rest of the session. If this is the client's first workout in this particular facility or there have been any procedural changes since their last visit, the trainer should clearly explain the location of the emergency phone, first aid kit and duty first aider and detail the procedures that should be followed in the case of a fire or other emergency.

Explain the purpose of the session

Give the client a brief outline of the session and its purpose so they can understand the value of the exercises they will be performing. This also gives them the opportunity to air any concerns regarding the upcoming session and provide any last-minute input. If the client should show any concerns or reservations about the coming session, the trainer should acknowledge and address these prior to starting the session.

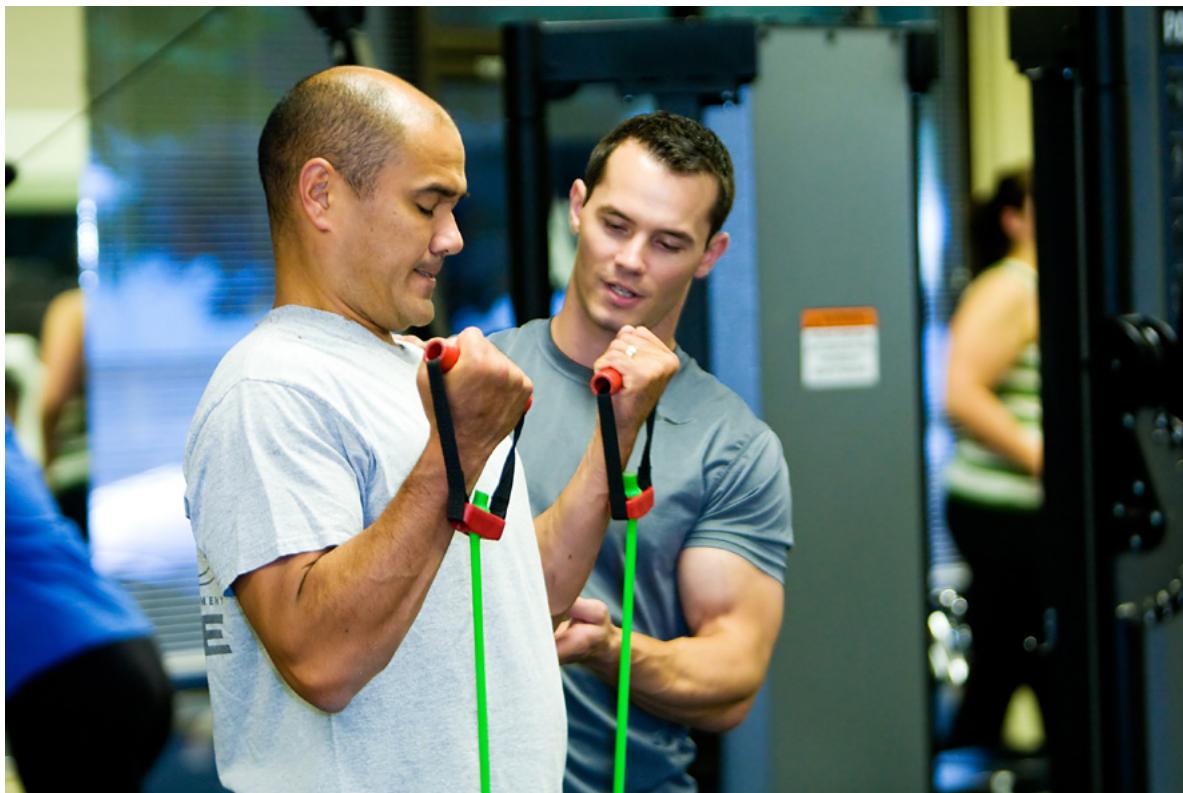
Carry out a verbal PAR-Q

Prior to starting exercise, ask the client if, since completing their written PAQ-Q, has anything regarding their health changed i.e. do they have any aches or pains that need to be considered, are they feeling unwell in any way, are they still tired from the previous workout. This information should then be used to modify the workout as necessary and, in the case of illness or injury, may necessitate postponing the session. Once this preamble is complete, it is time to move onto the warm-up, main session and cool down.

Instructional skills

A successful fitness session hinges on good communication; the best-written program in the world will be much less productive if the trainer is unable to instruct effectively. Good instructional skills are essential for ensuring the client develops a sound understanding of exercise techniques and can work toward becoming a self-sufficient exerciser.

Factors that contribute toward an effective fitness session



THE FOLLOWING FACTORS WILL CONTRIBUTE TOWARD AN EFFECTIVE FITNESS SESSION:

- Clear, concise and technically correct
- Stress positive exercise technique
- Avoid teaching common technique errors
- Be observant and offer appropriate corrections and praise as required
- Adapt teaching and motivational style to suit the client
- Ease back on instructions as form improves to allow exercise independence to develop
- Listen to and act upon feedback gained from the client

As the client becomes more familiar with the exercises, the trainer can gradually increase the amount of information they tell the client about the movements being performed.

Where initially the main focus of the session might have been the correct performance of the exercise, as good form becomes less of a conscious effort, the trainer may add new information about muscles and joints, levers, future exercise options and benefits of the exercise being performed.

During the performance of exercises, the personal trainer must count, coach and encourage and offer feedback at appropriate junctures. Try to avoid stopping performance of an exercise to deliver information but, instead, give the client modifications/corrections as they perform each exercise. Only stop the performance of an exercise if poor form may lead to injury.

The personal trainer can enhance their instructional skills by using both verbal and non-verbal communication and also identifying their client's dominating learning style and adapting their own teaching style to reflect this.

Dominant Learning Styles

Different people learn in different ways and aligning your teaching style to the client's preferred style of learning can make the process of learning much easier. The three main learning styles are:

1. Visual
2. Auditory
3. Kinaesthetic

While it is unlikely any one style will be used in isolation, the trainer should ensure that an emphasis is placed on the style best suited to the needs and preferences of the client.

The Visual Learner

Visual learners learn best from watching demonstrations, seeing pictures and observing body language. They respond well to hand gestures and eye contact so trainers should ensure they are within view when explaining and/or correcting.

The Auditory Learner

Auditory learners respond best to verbal instructions and information so explanations, cues, and teaching points should be emphasised. Instructors should use vocal tonality, volume and pitch variations to communicate effectively.

The Kinaesthetic Learner

Kinaesthetic learners learn best by doing and feeling. Explanations should be brief for kinaesthetic learners with the bulk of the explanation describing how/what the client should feel. Physical contact is more important with kinaesthetic learners but should always be justified and not unwarranted.



Other Motivating Factors

Using the dominant learning style will help keep the client motivated but there are other aspects of motivation that need to be considered. Trainers need to have access to a range of motivational methods so they can match motivational output with their client's needs.

Factors to consider include:

- **Volume of voice**
- **Use of visual imagery**
- **Reinforcing beliefs**
- **Inverse motivation**
- **Identifying key performance markers**
- **Praise**



Volume Of Voice

When a workout starts to become more demanding, it is usual for the trainer to raise his or her voice by a similar degree. Likewise, as intensity levels come down, so too should the trainer's voice. Volume should generally be higher when the client needs a real boost in motivational energy. However, not all clients respond to loud voices and some may prefer a more restrained level of motivation. Overuse of a loud voice devalues its impact somewhat so save increasing volume until it is appropriate.

Use Of Visual Imagery

Creating images with words can help visual dominant clients get a better idea of what is expected of them. This can be something as simple comparing an exercise to an everyday task and asking the client to picture themselves doing it e.g. "squat down as though you are sitting on a low stool just behind you". Visual imaging can also be used during cardio e.g. "keep going – you can almost see the top of the hill now!"

Reinforcing Beliefs

When exercise gets difficult, some people may think they just cannot achieve what is being asked of them. Of course, a good trainer will always push their clients hard but within their current level of ability and reinforcing beliefs by using terms like "you can do it" can help maintain motivation.

Inverse Motivation

Inverse motivation involves challenging exercises to work harder than they might otherwise want to. For example by saying "I bet you can't do two more reps!" This form of motivation is only really suitable for more advanced exercisers and those whose motivation won't be derailed if they fail to meet the proposed challenge. Needless to say, perfect form must be maintained!

Identifying Key Performance Markers

Monitoring time, weight, repetitions performed and other quantifiable workout measurements can be used for motivational performance i.e. setting benchmarks or goals that the client should try and achieve or even surpass.

Praise

Genuine deserved praise can be very motivating however flippant or undeserved praise has no value. Praise should be earned but never withheld if it is deserved.

Adapting Exercise

During a workout, a PT must be observant and able to adapt exercise to suit their client's needs. This can be to make an exercise easier OR make it more difficult depending on the client's performance.

Reasons for adjustment include:

Inability to perform an exercise properly

Not all clients can do all exercises. If a client is unable to perform an exercise properly, the trainer must regress the exercise so that they can exercise the same body part or muscle group safely and with perfect form.

Exercise is too intense

Too much weight, too many reps or too little rest between sets can make an exercise overly intense. While exercise needs to be intense enough to trigger fitness improvements, prescribed intensity should always be on the side of caution to minimise the risk of injury.

Technical ability

Some exercises are more technically demanding than others and need to be progressed toward rather than introduced suddenly. Power exercises are a good example of this. Technical mastery of certain basic movements needs to occur before more advanced movements are introduced.

Exercise is not intense enough

The exercise that is not demanding enough will be unproductive. If the exercise being performed is too easy the trainer must adapt the exercise by choosing a more difficult variation or increasing weight, reps, sets or by decreasing reps.

The client is feeling tired

If the client is still tired after a previous workout, because of their employment or for any other reason, it may be necessary to adapt the exercise or workout to reflect this.

Special population requirements

The exercise may need to be adapted to reflect the needs of a special population group e.g. if the client is under the age of 16, is an older adult, is pregnant etc.

Size/shape of the client

Size and shape can make some exercises more demanding. Long levered ectomorphs may find exercises like the squat and bench press very difficult whereas very heavy individuals may not be able to safely perform high impact exercises.

Monitoring Progress

During the workout, the trainer should monitor how hard the client is working to ensure progress is being made. Using a training log or diary is essential for doing this. The trainer should record the following information where appropriate:

- Exercises performed
- Weight used
- Rep range or reps performed
- Sets
- Tempo
- Recovery between set
- Heart rate
- Rating of perceived exertion
- Speed/resistance/incline level
- Any deterioration in form
- Notes for adjustment for next session e.g. increase weight, decrease recovery etc.

By recording and referring to this information, the PT will be able to track progress from one workout to the next and also evaluate the success of the workout. This information can also be used for setting and tracking progress toward goals and for future program design.

MOISTABLE AREAS

Name: _____ Date: _____ Your Logo Here _____

Target Muscles: _____ Injuries: _____ Notes: _____

Cardio: _____ Target Heart Rate: _____ % BPM: _____

machine setting: Set 1 Set 2 Set 3 Set 1 Set 2 Set 3

Set 1 Set 2 Set 3 Set 1 Set 2 Set 3 Set 1 Set 2 Set 3 Set 1 Set 2 Set 3 Set 1 Set 2 Set 3 Set 1 Set 2 Set 3 Set 1 Set 2 Set 3 Set 1 Set 2 Set 3

Workout Notes: _____

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RATE OF PERCEIVED EXERTION (RPE)						
BORG RPE	MODIFIED RPE	BREATHING	TRAINING ZONE	% of MHR*	EXERCISE TYPE	
6	0	No Exertion				
7						
8	1	Very Light				
9						
10	2					
11						
12	3					
13						
14	4	Deeper but comfortable breathing. Able to hold a conversation.				
15	5					
16	6	Aware that breathing is harder; able to talk but difficult to hold conversation				
17	7					
18	8	Starting to breathe hard and getting uncomfortable				
19	9					
20	10	Deep and forceful breathing. Uncomfortable and not wanting to talk				
		Extremely hard				
		Maximum exertion				

* % of maximum heart rate