# Integrated Training and the OPT Model

According to the Merriam-Webster dictionary (2019), to integrate means to “form, coordinate, or blend into a functioning or unified whole.” In the world of food, a common lunch menu item is the chef salad. When we mix together or form this salad, the ingredients are as follows: lettuce as the base, hard-boiled eggs, deli ham, deli turkey, tomatoes, cucumbers, and cheese. This integrated approach to a salad shows that many ingredients can be included in this dish to provide a flavourful and enjoyable experience. At any point, this salad can be customized to the likes of the person who wants to eat it. For example, a patron who is lactose-intolerant can substitute the cheese with extra eggs or croutons, or a vegan can substitute more vegetables in replacement of eggs and deli meat.

An exercise program can follow a similar strategy. For instance, just like removing cheese from the chef salad, fitness professionals can opt out of heavy squatting to accommodate a client who was recently released from physical therapy due to a knee injury. Instead, the fitness professional can substitute core and balance drills to make that training session more tailored to their client’s needs and abilities. When fitness professionals take an integrated approach to exercise, their programs become well balanced while reducing boredom and can maximize results.

Integrated training is a concept that combines all forms of exercise into one system: flexibility; cardiorespiratory; core; balance; plyometric; speed, agility, and quickness; and resistance training. It is an all-inclusive approach to exercise that can lead to improvements in overall health, wellness, and athletic performance.

Using integrated training principles, a Certified Personal Trainer will discover many new and exciting exercises, movements, and other variables to add to their professional toolbox. As a result, fitness professionals will be able to create customized exercise programs for their clients that provide several benefits:

* Psychological benefits, such as stress relief, improved mood, and improved sleep
* Physiological benefits, such as improved cardiovascular, respiratory, and endocrine (hormone) functionality
* Body composition benefits, such as fat loss and increased lean muscle mass
* Performance benefits, such as increased flexibility, endurance, strength, and power.

A fitness professional can benefit a great deal from implementing integrated training with their clients because of the variety of exercises involved. Integrated training programs incorporating different types of training in a multiplanar fashion are more optimal than isolated resistance training programs. Areas of improvement were found in movement quality, speed and agility, strength, endurance, flexibility, and power. This does not mean that isolated training is ineffective, but when the fitness professional intends to provide the greatest changes to their clients, integrated training improves more variables than isolated training. Research has indicated that a multidimensional, or integrated, training approach can provide a greater effectiveness to an exercise program than an isolated resistance program. This indicates that if the fitness professional implements an integrated approach, the client can benefit to a higher extent by incorporating more variables aimed at creating specific results based on client goals, needs, and abilities.

However, it is important to note that integrated training principles involve more than a variety of exercises. Additional principles that must be observed include training in a systematic and progressive fashion, training fundamental movement patterns, training with optimal posture, training for optimal range of motion, training in all planes and motion, manipulating acute variables (e.g., sets, reps, and rest periods), and designing exercise programs based on assessment results.

**Training in a systematic and progressive fashion**

When a house is built, construction companies must use a systematic and progressive approach to ensure its solidity and stability, starting with the foundation. The outcome would be vastly different if a house was built directly on the ground versus a concrete slab foundation. For example, the walls and roof may become uneven or unstable, thus reducing the overall integrity of the house.

The same is true for exercise. Like a house, the body must also have a solid foundation of fitness before embarking on an intense training regimen. It is illogical and potentially dangerous for a fitness professional to recommend exercises that are too advanced or physically demanding for their clients. It may also cause frustration and reduce a client’s own self-efficacy. Fitness professionals should guide their clients to first build a solid foundation that includes appropriate levels of aerobic and muscular endurance, joint mobility and stability, and core strength. This is best accomplished by using a systematic and progressive approach to program design. If an exercise program is progressive and systematic, using a progressive overload approach, the body sufficiently adapts to the new demands placed on it and consequently becomes stronger and more resilient. Conversely, skipping steps may do more harm than good.

| **Skipping Steps** | **Progressive and Systematic** |
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| 1. Possible increased risk of injury 2. Potential client frustration because of inability to correctly perform exercises 3. Client’s goals may be delayed more than expected or may not be achieved 4. Lack of measurement and tracking; unable to track client success 5. Inconsistent exercise programming | 1. Decreased risk of injury or overtraining 2. Increased client adherence to the exercise program 3. Clients more likely to achieve goals 4. Ability to track client successes and setbacks 5. Consistent exercise programming with progressive overload |

TRAINING TIP

Goal setting, constant monitoring, and assessing clients at the appropriate times provide feedback to the fitness professional, so that they can adjust and deliver a systematic approach to all exercise sessions. Without completing these tasks, the fitness professional takes the chance of not getting the appropriate feedback, which is critically important for making the necessary changes for the client to experience continuous improvement.

**Training fundamental movement patterns**

Fundamental movements patterns are a necessity for all fitness professionals to demonstrate and teach to their clients. Fitness professionals must ensure their clients’ mastery of these movement patterns to minimize injury risk and increase exercise effectiveness. Most exercises involve at least one of these movement patterns; though more movement patterns exist, and many of these patterns can be combined into a single exercise:

1. Squatting
2. Hip hinge
3. Pulling motions
4. Pushing motions
5. Vertical pressing

Categorizing exercises according to movement patterns is an effective method for assisting fitness professionals when designing exercise programs. Historically, resistance training programs were developed and implemented according to isolated body-part training. This is especially true with regards to bodybuilding and those seeking to alter their body composition. For example, the individual may choose to train their chest and triceps on Monday, back and biceps on Tuesday, legs on Wednesday, and shoulders and arms on Thursday.

While isolated body-part training is still an effective method for increasing muscular hypertrophy, designing exercise programs based on movement patterns may provide enhanced adaptations when compared to isolated resistance training, such as enhancing neuromuscular coordination and athleticism. A movement pattern exercise design can include many variations. For example, the individual may choose pushing patterns on Monday, pulling patterns on Tuesday, squatting and hip hinging on Wednesdays, and vertical pressing on Thursdays. There are almost limitless possibilities.

TRY THIS

Not only should a fitness professional incorporate diverse movement patterns into their client’s training program, they should also master these movements for their own benefit. When instructing a client, fitness professionals must be able to explain, demonstrate, correct, and cue the individual. This will reduce worry and confusion for the client and subsequently elevate the fitness professional’s status as a true expert in the field of personal training.

**Training with optimal posture**

Posture is the relative disposition of the body parts in relation to the physical position, such as standing, lying down, and sitting. Generally speaking, posture is the way the body maintains spinal position in relationship to other body segments. Maintaining ideal posture places the client’s body in the most optimal state to perform movement patterns safely and effectively. However, maintaining ideal posture is a difficult challenge, especially as people age and have developed compensatory movement patterns and faulty static postures.

The aim of the fitness professional is to create progressive and systematic exercise programs that inherently maintain or correct posture to reduce injury risk, enhance the client’s physical health, and allow for a more enjoyable exercise experience. If a systematic and progressive approach is applied, many physical enhancements will occur, such as increased flexibility, endurance, strength, and power. Improving posture is another physical enhancement that occurs when using a systematic approach to program design.

When programming for optimal posture, the fitness professional will use appropriate flexibility and strengthening techniques to help correct muscle imbalances and include unilateral/bilateral and anterior/posterior exercises to create symmetry between right/left and front/back sides of the body. Without creating a balanced attack inside of a systematic program, maintaining or improving posture will be limited. The recipe for success is an integrated approach to program design. Flexibility, core, balance, plyometric, and resistance training exercises are all useful forms of exercise to improve posture. Cardiorespiratory exercise may also prove beneficial due to changes in body composition (e.g., reduced body fat) and improvements in muscular endurance.

**Training for optimal range of motion**

Like posture, working within an optimal range of motion (ROM) allows joints to move freely. Clients are often plagued by muscle imbalance, poor posture, or joint restrictions. As a consequence, ROM at certain joints can become restricted, which limits movement and may lead to injury. For example, limitations in hip mobility have been implicated in hip, spine, and lower extremity dysfunction.

Conversely, complete ROM means the body is not limited or restricted. In other words, complete ROM is the ability of a joint to move freely between the open and closed portion of the joint movement (Keogh et al., 2019). This also relates to the concentric and eccentric actions of the muscles that allow the joint to open and close.

The fitness professional must understand that restrictions of a particular ROM may occur because a prior injury may have caused scar tissue to form, which changes the mechanics of the joint. Ultimately, clients may have to work within specific constraints and use caution to avoid causing further injury to that area. On the other hand, an individual who does not have a limited ROM should work through all ROMs to maximize exercise adaptations. Training for optimal ROM requires patience by both the client and fitness professional because many factors come into play when dealing with the appropriate range for every person.

**Training in all planes of motion**

Fitness professionals should develop exercise programs to require movement in all three planes of motion: sagittal, frontal, and transverse. A common mistake made in the fitness industry is to develop exercise programs that overly emphasize the sagittal plane of motion (front-to-back motions) and neglect exercises in the frontal (side-to-side motions) and transverse planes (rotational motions). The advantage to the body working in all three planes of motion is the enhancement of muscle recruitment. For example, the posterior fibres of the gluteus medius concentrically perform hip abduction and hip external rotation. As such, to effectively target all muscle fibers of the gluteus medius, the client must perform a variety of movements at the hips (abduction, external rotation). In other words, simply performing common hip extension exercises (e.g., squats, lunges) does not effectively target the gluteus medius muscles.

In addition, many injuries occur in the frontal and transverse planes of motion. Unfortunately, when a client does not train in all three planes of motion, the fitness professional is limiting that client’s body to move efficiently, thereby diminishing ideal movement and athleticism. Therefore, selection of a variety of exercises in all planes of motion is a critical component of a client’s training program.

### Acute variables of training

Acute variables, also known as exercise training variables, determine the amount of stress placed on the body and ultimately the physical adaptations that occur, such as increased strength, endurance, weight loss, or muscle gain. Acute variables can be viewed as all the building blocks that are used to design an exercise program, which include repetitions, sets, training intensity, repetition tempo, rest intervals, training volume, training frequency, training duration, exercise selection, and exercise order.

STRETCH YOUR KNOWLEDGE

A repetition is one complete movement of an exercise. A set is a group of consecutive repetitions. Training intensity is an individual’s level of effort compared with their maximal effort, which is usually expressed as a percentage. A rest interval is the time interval that is given between each set. Training volume is the sum of the repetitions performed in a given set during each training session multiplied by the resistance used.

Acute variables are the most fundamental components of an integrated training program because they determine the amount of stress placed on the body during an exercise session. Properly manipulating acute variables will help the fitness professional elicit optimal performance from their clients while reducing the risk of injury.

**Training based on assessment results**

Programming efforts should focus on the assessments conducted by the fitness professional prior to their client’s initial workout. Appropriately conducted assessments are needed to develop a baseline value for different exercises that will be completed in the exercise program. Also, the detection of muscle imbalances, postural abnormalities, and other health concerns can reveal necessary information about a potential client. The fitness professional can then gain an accurate portrayal of the client to develop the proper movement patterns for the new exercise program.

Although this seems easy, gathering data from a fitness assessment and then accurately using that data to design exercise programs can be a difficult task.

However, this process separates generic physical activity from systematic and progressive exercise programs, which is important because a lack of assessment can lead to ineffective exercise selection and programming strategies by the Certified Personal Trainer. From this baseline starting point and constant improvement from a progressive and systematic program, fitness professionals can schedule reassessments and further their understanding of the direction in which the clients are heading.

**Introduction to integrated training concepts**

Recall that integrated training combines many forms of exercises into one program. Clients may be familiar with these forms of exercise, but not necessarily when used in a systematic fashion. However, integrated training can have a profound impact on a client’s health, fitness, and athletic performance. This approach is ever changing and provides a systematic and progressive framework, but only if the training is implemented correctly. The next few sections will provide a brief overview of specific components of integrated training.

**Flexibility training**

Flexibility training increases joint ROM. In other words, flexibility training involves different types of stretching techniques to improve tissue extensibility, which allows the body to move freely without being hindered.

We recommend using a variety of stretching options in a systematic fashion to elicit optimal results. These stretching techniques include self-myofascial techniques, such as foam rolling, static stretching, active stretching, and dynamic stretching.

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| Increased joint ROM  Possible decrease in muscle soreness  Potential for a reduction in injury risk |

**Cardiorespiratory training**

The number one cause of death around the world is heart disease. To combat this issue, cardiorespiratory training is a cornerstone of improvement for heart and lung functionality. Cardiorespiratory training refers to the capacity of respiratory and cardiovascular systems to provide muscles with oxygen during sustained and/or intense exercise. Typical forms of cardiorespiratory exercise include walking, jogging, running, cycling, biking, swimming, rowing, and sports competition. In most cases, cardiorespiratory training is a critical component of an integrated training program. However, the mode, duration, and intensity of cardiorespiratory exercise will be dependent on the client’s health, wellness, and performance goals.

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| Decreased resting heart rate and blood pressure  Increased stroke volume and cardiac output  Improved gas exchange, decreased airway resistance, and improved oxygen uptake  Decreased blood flow resistance and increased blood volume  Improved blood lipid profile/chemistry  Improved blood flow back to the heart via veins |

**Core training**

The core musculature includes those of the trunk and pelvis that are responsible for spinal and pelvic stability. These muscles also generate or transfer energy from the core to the extremities. Core stability is the ability to control the position and motion of the trunk over the pelvis and legs for optimal production, transfer, and control of force and motion. Exercises aimed at enhancing functionality of the core musculature and core stability are considered part of core training.

Core training is sometimes misconstrued and only associated with the anterior abdominal region of the body, such as the rectus abdominis (i.e., six-pack muscle). In other words, individuals may believe crunches and sit-ups are lone core exercises. Fortunately, many movements can be completed using a variety of exercises that work all three different planes of motion as well as many muscle groups, including the obliques, low-back, and gluteal complex.

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| Enhanced posture and spinal health  Better bodily function for activities of daily living and on-the-job movements  Increased balance, stabilization, and coordination of the kinetic chain  Minimized or resolved low-back pain conditions or symptoms  Improved skill-related movements and power (i.e., swinging a racket or golf club) |

**Balance training**

Balance is the ability of a person to maintain, achieve, or restore a specific state of balance without falling. Balance training is a method that can create better movement patterns for all clients and reduce the occurrence of falls in the elderly and ankle sprains for athletes. Balance training is used for improving postural control by challenging the alignment of the body’s centre of gravity with regard to the base of support.

The more control the body is able to maintain, the more opportunities abound to incorporate more challenging movements into most exercise sessions. This holds true for any age of a client, and while it does benefit the elderly immensely, it should not be diminished in those who are considered younger.

Balance training can be very beneficial for the general population, experienced exercisers, and even highly skilled athletes.

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| Reduced risk of falls  Reduced risk of ankle sprains  Improvements in landing mechanics (which may reduce risk of anterior cruciate ligament injury)  Improvements in lower-extremity muscular strength  Improvements in proprioception and body awareness  Improvements in agility-based outcomes in athletes  Stronger hip musculature (e.g., gluteal complex) and lower extremities |

**Plyometric (reactive) training**

Plyometric training is also known as reactive or jump training. A fallacy exists that plyometric exercises are only appropriate for athletes. However, plyometric training can be a safe and effective mode of exercise for many populations, since it is a form of exercise characterized by the expression of muscular power. Yet, variations of plyometric training exist to accommodate clients of differing skill and fitness levels.

Plyometric training does not require many exercises or a high amount of volume, especially if it is completed prior to a resistance training session. In addition, a plyometric training session may be completed on different days in which the volume and amount of exercises can be increased for a greater stimulus. Plyometric exercise improves the stretch-shortening cycle, which enhances a client’s ability to move explosively.

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| Increased bone mineral density and decreased risk of bone/joint injuries  Improved soft tissue (ligaments, tendons, cartilage) strength and decreased risk of injury  Increased metabolic expenditure for improved weight management and/or weight loss  Increased strength and power for athletes and general population  Improved muscle contractions and nervous system synchronization  Improved performance or game play for athletes of all levels |

**Speed, Agility, and Quickness training**

Speed, agility, and quickness (SAQ) training is another form of exercise that can be misconstrued as something fit just for athletic purposes. Like plyometrics, these drills can all be modified to be beneficial for most types of clients.

SAQ training is a system of progressive exercises and instruction aimed at developing fundamental motor abilities to enhance the capability of individuals to be more skilful at faster speeds and with greater precision. The movement patterns used can also be of great assistance in preventing falls and increasing agility, reaction time, sprinting velocity, and lower-body power.

SAQ training is similar to explosive jump, or plyometric training, but the idea is to propel the body as quickly as possible, to accelerate and decelerate as fast as possible, or to change directions with ease and speed changes. Like plyometrics, SAQ exercises can be completed as their own workout or combined into an integrated training session.

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| Improved performance for top speed, change of direction, and rate of acceleration/deceleration  Improved health-related physical fitness  Enhanced response time to a stimulus or better reaction time  Improved technical skills in sprinting and change of direction mechanics |

**Resistance training**

Resistance training can promote marked increases in muscle strength and hypertrophy, with improvements in these outcome measures seen irrespective of age and gender. In addition, resistance training has shown to be an effective mode of exercise to improve bone density and muscular strength and enhance cardiovascular health. Moreover, resistance training plays a fundamental role in improving athletic performance and rehabilitation from musculoskeletal injury. Lastly, resistance exercise is an effective method for increasing lean body mass and reducing body fat, especially when it is combined with proper dietary measures.

The role of resistance training in an integrated training program cannot be overemphasized, and fitness professionals must be well-versed in its benefits. In addition, fitness professionals must be skilled at designing and implementing resistance training protocols for a variety of clients, including youths, athletes, elderly, pre- and postnatal parents, and weight-loss clients.

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| Increased endurance, strength, and power  Increased muscular hypertrophy  Improved weight management and enhanced weight-loss efforts  Improved resting metabolic rate, resting heart rate, and blood pressure  Improved coordination and athleticism  Decreased risk of injury due to strength of all soft tissues (ligaments, tendons, cartilage, and muscle fibres) |

### The Optimum Performance Training Model

Exercise training programs are largely based on the past experiences of those designing them. For example, training programs designed by those with backgrounds in bodybuilding, powerlifting, or Olympic weightlifting tend to vary considerably from programs designed by those with experience in endurance training or group exercise, such as aerobics, dance, or Pilates. Although experience is always an important quality to have in any field, including personal training, it is not the only qualification; in some cases, it is not even the most important qualification held by a Certified Personal Trainer. Designing safe and effective exercise training programs requires a variety of skills, including knowledge of anatomy, physiology, and human movement; the ability to communicate effectively with clients; and experience in working with diverse populations.

To help Certified Personal Trainers design safe and effective training programs based on the client’s individual needs, We recommend using a structured, scientifically based program design model. The training program should be a methodical approach to improve physical and performance adaptations. The best way to achieve consistent, superior results is to follow a structured, periodized training program. Evidence also exists that an integrated program that includes flexibility; core; balance; plyometric; speed, agility, and quickness; resistance; and cardiorespiratory training can decrease injury and improve performance.

As such, NASM created an evidenced-based training system known as the Optimum Performance Training (OPT) model. The OPT model was conceptualized as a training program for a society that has more structural imbalances and susceptibility to injury than ever before. It is a process of programming that systematically progresses any client to any fitness or sport-performance goal.

The OPT model is divided into three different levels of training—stabilization, strength, and power, which are subdivided into five phases. It is imperative that fitness professionals understand the scientific rationale behind each level and each individual phase of training so they can properly use the OPT model.

**Stabilization**

The first level of training in the OPT model focuses on two main adaptations: improving movement patterns and enhancing stabilization. By doing so, it prepares the body for the demands of higher levels of training that may follow. This period is crucial for all beginners. It is also necessary to cycle back through this level after periods of strength and power training to maintain a high degree of core and joint stability. In addition, it allows the body to actively rest from more intense bouts of training. The focus of stabilization training includes the following goals:

* Improving movement patterns and exercise technique
* Improving muscle imbalances
* Improving joint ROM and flexibility
* Improving stabilization of the core musculature and peripheral joints
* Preventing tissue overload by preparing muscles, tendons, ligaments, and joints for the upcoming imposed demands of training
* Improving overall cardiorespiratory conditioning

The stabilization level of training in the OPT model consists of one phase of training: Phase 1 Stabilization Endurance Training.

Phase 1 stabilization endurance training

Phase 1 Stabilization Endurance Training is designed to teach optimal movement patterns (e.g., pushing, pulling, pressing, squatting, hip hinging) and to help clients become familiar with various modes of exercise. In addition, this phase of training creates optimal levels of joint and core stabilization and postural control. Although this phase is the first phase of training in the OPT model, it will also be important to cycle back through this phase of training between periods of higher-intensity training seen in Phases 2 through 5. This will ensure proper recovery while maintaining high levels of stability.

Phase 1 Stabilization Endurance Training focuses on exercises and movements that enhance muscular endurance, joint ROM, joint and core stability, and muscular coordination. It requires slow and controlled movements, relatively light loads, and meticulous attention to proper posture and exercise technique.

In the early implementation of this phase, fitness professionals should focus a great deal of energy on honing and perfecting proper movement patterns and introducing clients to a variety of exercise modalities. The goal is to improve the client’s ability to move in a biomechanically correct manner to reduce the risk of injury, which may have the added benefit of increasing client adherence to the exercise program. Clients are more likely to stick with an exercise program if they feel confident in their abilities.

Once movement patterns have been addressed, exercises can be progressed by introducing a greater challenge to the balance and stabilization systems of the body versus simply increasing the load. For example, a client may begin by performing a push-up and then progress by performing the same exercise using a stability ball. This progression requires additional activation from the nervous system and the stabilizing muscles of the shoulders and trunk to maintain optimal posture while performing the exercise.

Phase 1 Stabilization Endurance Training not only addresses the existing structural deficiencies, it may also provide a superior way to alter body composition (reduce body fat) because all the exercises can be performed in a circuit fashion, using short rest periods along with a high number of repetitions. By performing exercises in a controlled yet unstable environment, the body is forced to recruit more muscles to stabilize itself. In doing so, more calories are potentially expended, especially when performed in succession with minimal rest.

**Strength**

The emphasis of the strength level of training in the OPT model is to maintain stabilization endurance while increasing overall muscular strength. This is also the level of training to which an individual will progress if their goals are hypertrophy (increasing muscle size) or maximal strength (lifting heavy loads). The strength level in the OPT model consists of three phases: Phase 2 Strength Endurance Training, Phase 3 Muscular Development Training, and Phase 4 Maximal Strength Training.

Phase 2 strength endurance training

In Phase 2 Strength Endurance Training, the goal is to enhance stabilization endurance while increasing prime mover strength. These two adaptations are accomplished by performing two exercises in a superset sequence, back-to-back without rest, with similar joint dynamics. The first exercise is a traditional strength exercise performed in a stable environment (such as a bench press), whereas the second exercise is a stabilization-focused exercise performed in a less stable (yet controllable) environment (such as a stability ball push-up). The principle behind this method is to predominantly work the prime movers in the first exercise to elicit prime mover strength. This is immediately followed with an exercise that challenges stability and postural control. This produces an increase in muscular endurance, joint stability, and ideal posture.

| **Body Part** | **Strength-Focused Exercise** | **Stabilization-Focused Exercise** |
| --- | --- | --- |
| Chest | Bench press | Push-up |
| Back | Seated cable row | Standing cable row |
| Shoulders | Shoulder press machine | Single-leg dumbbell overhead press |
| Legs | Barbell squat | Single-leg squat |

Phase 3 muscular development training

Phase 3 Muscular Development Training is designed for individuals who have the goal of maximal muscle growth (such as bodybuilders). This phase of training can use a variety of resistance training exercises and methods to elicit a maximal response in muscle growth. This form of training can also benefit those seeking to lose body fat while maintaining lean muscle mass. Because the goal of this phase of training is primarily muscular hypertrophy, the fitness professional will want to increase the volume (lots of sets) and intensity (using moderate to heavy weight) of the program. This phase is optional depending on the goals of the client, because some clients do not wish to achieve high levels of muscular growth, such as endurance athletes. However, this phase is very popular among fitness enthusiasts seeking to reduce body fat and improve muscle tone.

Phase 4 maximal strength training

Phase 4 Maximal Strength Training works toward the goal of maximal prime mover strength by lifting heavy loads. In other words, in this phase of training the client will opt for exclusively heavy weights when performing resistance training exercises. This phase of training is common for strength athletes, such as those who compete in powerlifting or strongman competitions and others who require maximal strength (i.e., shot-putters, rugby athletes, American football linemen).

Because the goal is to increase maximal strength capabilities, individuals must be accustomed to resistance training. This is an advanced form of exercise that is optional, depending on the goals of the client.

**Power**

The power level of training should only be entered after successful completion of the stabilization and strength levels—unless the client is well-conditioned, exhibits adequate joint and core stability, and is familiar with power forms of exercise. This level of training emphasizes the development of speed and power. This is achieved through one phase of training simply named Phase 5 Power Training.

Phase 5 power training

The goal of Phase 5 Power Training is to increase maximal strength and rate of force production. This phase of training is important for improving velocity of movement and athleticism. The premise behind this phase of training is the execution of a traditional strength exercise (with a heavy load) superset with a power-focused (high-velocity) exercise of similar joint dynamics. This form of training, also known as complex training, has been shown to improve sprint and vertical jump performance.

| **Body Part** | **Strength-Focused Exercise** | **Power-Focused Exercise** |
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| Chest | Bench press | Medicine ball chest pass |
| Back | Lat pulldown | Medicine ball soccer throw |
| Shoulders | Dumbbell shoulder press | Front medicine ball oblique throw |
| Leg | Barbell squat | Squat jump |