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About DWMTM

Learn Move Unite

Dance with Madhuri TM, is a celebrity backed dance initiative, that allows you to LEARN with the masters in a fun and social way, MOVE and stay fit, and UNITE with the world.

The online platform is available on the web, IOS and Android.

The offline classes are now being offered in schools, clubs and gyms through DWM choreographers and trainers. At the same time, with the 'Dance with Madhuri portal, all activity and progress can be recorded and showcased for you and your friends to follow and join in.

BOLLYOUT is an initiative by DWM, to help people stay fit and healthy, on a physical, mental, emotional and social level.

CONTRIBUTORS

About Madhuri Dixit Nene

Madhuri Dixit Nene, a critically acclaimed Indian actress / dancer/ philanthropist, has been praised for her acting and dancing skills. She has won numerous awards including the Padma Shri, which is India's fourth-highest civilian award, by the government of India in 2008 as well as six Film fare awards, India's equivalent of the Oscar. She has been a champion of dance and is an accomplished Indian Classical dancer in the Kathak discipline. Her mantra for life is focused around dance as a means of staying fit.



Madhuri Dixit Nene

"Dancing is all about the body, mind and soul."

-Madhuri Dixit Nene



Dr. Shriram Nene

About Dr. Shriram Nene

Dr. Shriram Nene was born in London and grew up in the United States. A lifelong fitness advocate who loves mountain biking, tennis, running and surfing; he has devoted his life in helping others to achieve their health goals. Whether this was in Denver, where he practiced as a board certified Cardiovascular and Thoracic Surgeon, or now as the man-aging director of RnM Moving Pictures, a platform agnostic digital content company, his aim is to help people embrace their health. He has recently collaborated with the e learning and dance program called "Dance with Madhuri," that he and his wife created to embrace the passion for dance and use it as a means to stay fit.

In addition, he is active in the healthcare innovation sector creating new ways to deliver evidence based medicine for everyone.

"Life is all about balance, staying in great shape and living up to your full potential. It is about building the ecosystem and helping those around you to do the same."

-Dr. Shriram Nene



About Shalini Bhargava

Shalini Bhargava is an internationally recognized performance enhancement coach, group exercise instructor and personal trainer, with over 20 years of experience in the fitness industry. She holds certificates from reputed International Associations, A.C.S.M, ACE, NSCA, AFAA, STOTT PILATES, Schwinn Cycling, Yoga Institute, besides other dance fitness workouts. She heads JGs, a state of the art gym in Mumbai and the INDIAN FITNESS and AEROBIC INSTITUTE (IFAI) where methodologies and training techniques are taught to aspiring fitness trainers. She has also been a faculty member and presenter for the American Fitness and Aerobic Association and has been honored with several awards for her contribution in the Health and Fitness segment.

"When you follow your passion with determination, perseverance, conviction and focus, success follows without you having to run behind it and most importantly, since you love what you do, happiness, mental satisfaction and peace of mind are yours forever."

- Shalini Bhargava





About Bollyout

"What makes you tick?" said the clock to the man. The clock said, "I have cogs and wheels and springs. What's your secret?"

This statement epitomizes the complexity of most of our lives. Let's face it: Time waits for no one. How do you optimize your potential, have fun, stay healthy, inspire people around you to stay fit and make a difference to their lives. Much like we treat diseases, we must attend to people on several different levels: mind, body and soul. Ultimately if we could construct a system that would aid in prevention, early recognition and early treatment, we could prevention, recognition and early treatment, we could potentially change the staging and treatment of disease and save lives and lifestyles.

Bollyout aims to empower you to energies and enliven the

lives of people around you and start the journey to-ward better health.

BOLLYOUT seeks to make positive changes in people's lives, not only on a physical but also on a mental and social level, through a well-rounded program structure, foot tapping music and easy to follow Bollywood and other dance form moves and grooves.

One of the finest actors and dancers of Hindi cinema, Madhuri Dixit is now sharing her secret by creating an amazingly fun and social dance party workout called "BollyOut." It is the perfect combination of Bollywood dance steps and music with a high intensity, low impact aerobic workout and muscle conditioning.

The dance fitness workout will constantly provide dance moves from other genres as well, like Hip-Hop, Salsa, Samba, Jazz, Indian folk dances, along with the signature moves from Hindi cinema.

In essence, BollyOut aims to effortlessly get people into shape while having fun.

It works on the cardiovascular system to increase your stamina, at the same time increasing muscular strength and

"Don't Workout , Just BollyOut !"

endurance and flexibility. A 45 minutes to one hour session of Bollyout can burn up to 700 calories, depending on a participant's intensity.

BOLLYOUT WITH THE HEROES

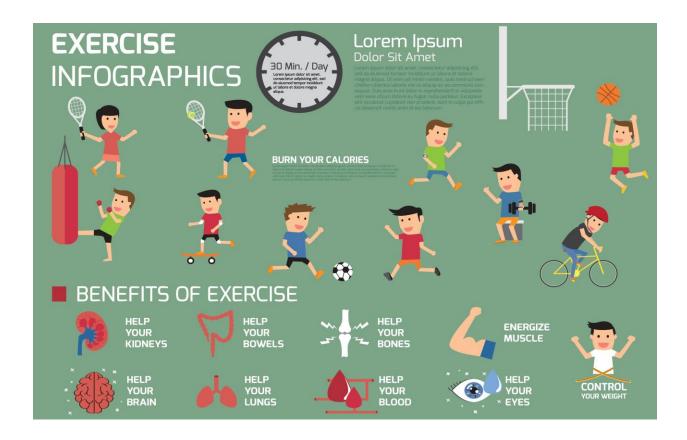
BollyOut Heroes are facilitators of health improvement and inspire and lead by example. To this effect, a basic knowledge of music analysis, technique, cuing, basic fitness principles, anatomy, kinesiology, physiology and heart rate training zones, as well as an understanding of risk factors is essential, along with the learning of the Moves and Grooves.

Traits of a BollyOut Hero

 Walk the Talk to inspire and motivate people by the way you conduct yourself, move, dress up and last but not the least, by your own fitness levels.

- The 4 P's, Passion, Perseverance, Patience & Professionalism Passion and love for what you do. Know the essence of Bollyout, live it, breathe it and own it and yet bring in your own versatility in it. Perseverance and practice will bring out your best in each class and make it look easy, smooth and seamless. Keep patience with your students and yourself. Deal professionally with not only your students but also the club/gym/school owners and staff.
- Be the best dancer in the world but be an even better teacher. Understand the rhythm and energy of your class as well of yourself. A rhythmic, easy to follow routine, which is fun and effective is preferable over a high energy, high impact routine, which only a few
- Try to do something BEYOND what you have already mastered and GROW.
- Set your classes apart by changing the focus of the class or bring back successful
- Educate the participants on all aspects of the class.
- Connect with your participants & Keep your classes fun, fresh and effective.

BENEFITS OF EXERCISE AND PHYSICAL ACTIVITY



The value of exercise need not be emphasized. We all know the advantages of daily exercise.

BOLLYOUT seeks to make positive changes in people's lives, not only on a physical but on a physiological level as well, through a well-rounded program structure, foot tapping music and easy to follow Bollywood moves.

	Man	Woman
Body Fat	<17 %	<24%
Composition		
Average Body	18-24%	25-31%
Fat %		

Apart from burning calories and lowering down the fat percentages, Bollyout works on cardiovascular efficiency, muscular endurance and strength and improves flexibility, balance and posture as well.



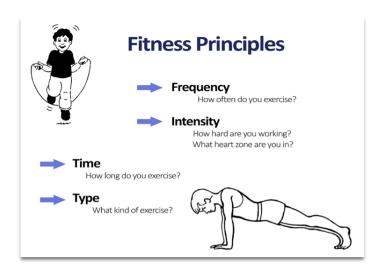
Strong Today, Stronger Tomorrow!

PRINCIPLES

A consistent, progressive and specific fitness program will produce the desired effect called the TRAINING EFFECT.

By consistently changing the above variables, the body is stimulated beyond its normal workload. This leads to greater benefits and is called as OVERLOAD Principle.

Bollyout challenges all of the above variables and produces a positive and progressive Training effect.



MUSCLE BALANCING

Bollyout uses different dance style steps. Each class uses a variety of moves and grooves challenging different muscle groups.

For every primary muscle (agonist) the opposing muscle group (antagonist) should also be worked (example: biceps / triceps). This lessens the possibility of muscular imbalance thus reducing the potential for injury.

If a step uses the right leg, then it should also be done on the left leg.



Improving Fitness

Improving fitness is achieved by participating in a minimum of 4-5 workouts per week .Additional workout sessions should be added only after an individual has become accustomed to the present level of exercise.

Fitness

Maintaining fitness is accomplished by a minimum of 3 workouts evenly spaced throughout the week. De-training occurs within 2 ½ weeks or less following cessation of exercise, depending upon training level and/or fitness level at the time of exercise cessation.

Over training

The body needs time to rest, recover and rebuild from the stress of vigorous exercise. Instructors and students should be aware of the symptoms of over training:

- o Fatigue
- o Anemia
- o Amenorrhea
- Stress related injuries
- Stress fractures
- o Tendinitis
- o Bursitis
- Shin splints or other persistent lower leg pain
- o chronic knee pain
- A typical change in resting and recovery heart rates



"Each participant should finish the class with a smile & a feeling of triumph, Satisfaction and Confidence"

- Madhuri Dixit Nene

FUNDAMENTALS OF

BOLLYOUT

Class Level:

Unless class level is specific, e.g., beginner or advanced, it is best to teach a heterogeneous class and provide modifications to suit all levels of participants.

Pre class Procedures:

Introduction:

- Introduce yourself .Speak about Bollyout and 'Dance with Madhuri'.
- Let the participants know the type, level and format

of the class.

- Ask if there are any new participants.
- Ask if anyone has a medical condition that you need to know and then provide him or her modifications/intensity as necessary or warranted.
- Explain the training intensities.
- Explain the training intensities and how to

- monitor their own intensities, using either a watch, heart rate or Borg Scale (explained later).
- Let the participants know the anticipatory cues that you will use.
- Remind the participants to always keep moving and not to stop abruptly.
- Remind the participants to always keep themselves hydrated.
- Make sure every participant has a physician's approval.

RISK FACTORS

Bollyout heroes should be aware of the risk factors associated with coronary artery disease and how individuals are classified as low, medium and high risk, based on the risk factors.

Risk Factors

Sedentary Lifestyle	Not meeting minimal requirements of 30 minutes of moderate intensity exercise on most days of the week.
Cigarette Smoking	Current smoker or individual who has quit within the past 6 months.
Hypertension	Systolic BP>140 mmHg or Diastolic BP>90 mmHg and verified on two separate occasions.
Family History	Sudden death before age 55 or father or male 1 st degree relative; or before age 65 in mother or other female 1 st degree relative.
	TC > 200 mg/dl
Abnormal Cholesterol	HDL < 40 mg/dl
	LDL > 130 mg/dl
	On lipid lowering medication
Obesity	BMI > 30 kg/m2 or waist circumference > 102 cm (40 in) for men and > 88 cm (35 in) for women
Fasting Blood Glucose	>110 mg/dl measured on two separate occasions.
Negative Risk Factor: (Note, a negative risk factor helps to 'negate' a risk to CAD)	
High HDL-Cholesterol	> 60 mg/dl

Risk Stratification

Low Risk

Younger individuals who are asymptomatic and meet no more than one risk factor threshold from above table.

Moderate Risk

Older individuals (men >46 years of age; women >56 years of age) or those who meet the threshold of two or more risk factors from above table.

High Risk

Individuals with one or more signs/symptoms or with known cardiovascular, pulmonary, or metabolic disease.

Hydration Needs

1-2 hours before = 15-20 ounces

15mins before = 8-10 ounces

During workout = 8 ounces every 15mins for every pound lost replace with 16-20



Adequate Monitoring

Monitoring the participants for alignment and/or performance errors is a very important. Not only will it gain you respect, credibility and your participant's confidence but also help in preventing musculoskeletal injury.

Should you observe any one of the below danger signs or should a class participant complain of any of these, he/she should stop vigorous exercise immediately. If necessary, refer to a physician.

- Unusual fatigue
- Nausea
- Dizziness
- Tightness or pain the chest
- Loss of muscle control
- Severe breathlessness
- Allergic reactions e.g. rash or hives
- Blurring of vision

Body Alignment and Posture

When performing any exercise /move body alignment and posture are very important.

- Stand tall, keep posture relaxed.
- Keep body weight balanced and evenly distributed on both sides. Abdominal muscles should be contracted with rib cage lifted so pelvis is in a neutral alignment with the tailbone pointing down.
- Shoulders are back and relaxed.
- Knees and elbows are soft and not hyper ex-tended.

Cueing

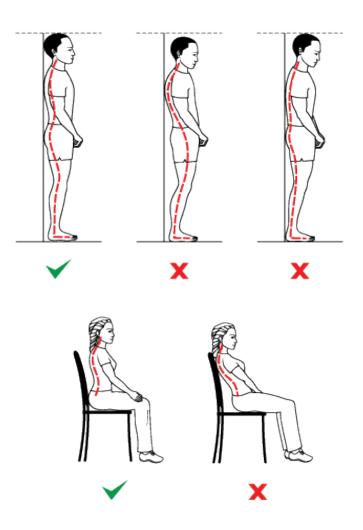
It is essential to use visual as well as vocal cueing when teaching Bollyout.

The names of the steps should be called out clearly and two beats before the start of the steps.

Visual cues with respect to directional and other changes are important.

A logical way would be to introduce the steps in the warm up itself, but on a lower intensity.

Teach and practice the steps a couple of times, before starting the main workout / choreography segment.

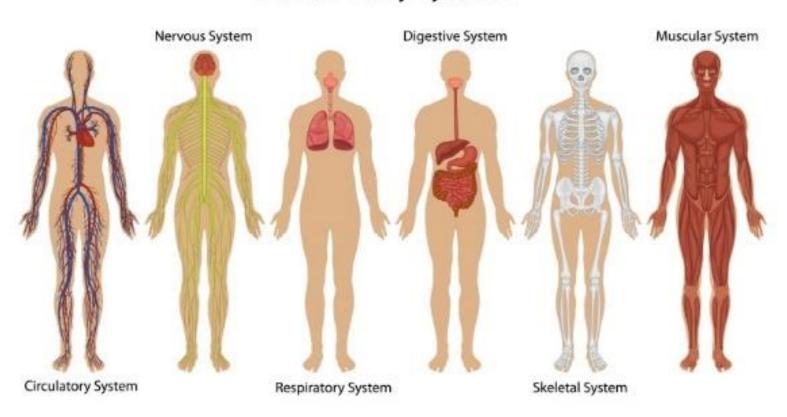


Basic Human Anatomy

As a Bollyout trainer, it is important to understand the basic human anatomy. Human body is a sum total of a number of systems, which work in unison.

The body systems that concern Bollyout trainers are:

Human Body Systems



Skeletal System

The human skeletal system (in Fig) is made up of 206 bones and can be divided into two sections:

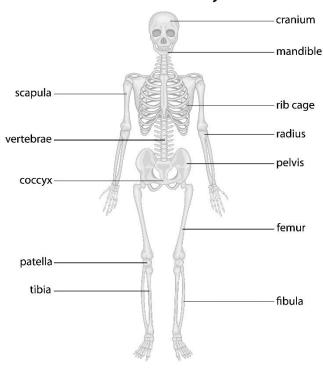
The axial skeleton has 80 bones that comprise the head, neck, and trunk.

The appendicular skeleton has 126 bones that form the extremities.

Functions:

- The skeletal system provides protection for many of the vital organs, such as the heart, brain, and spinal cord.
- The skeleton provides support for the soft tissues so that erect posture and the form of the body can be maintained.
- The bones provide a framework of levers to which muscles are attached. When particular muscles are stimulated, long bones act as levers to produce movement.
- The red marrow of bone is responsible for the production of certain blood cells, namely, red blood cells, some types of white blood cells, and platelets.
- Bones serve as storage areas for calcium, phosphorus, potassium, sodium, and other
 minerals. Due to their high mineral content, bones often remain intact for thousands of years
 after death. Fat is also stored within the middle section of long bones in the medullary
 cavity.

Human Skeletal System



Muscular System

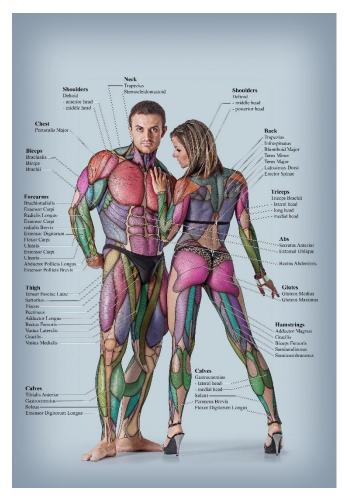
The skeletal system forms the structural framework for the body, and the muscular system, through the coordinated activation and relaxation of specific muscles, enables us to move.

Skeletal muscle tissue is attached to bones by tendons and is typically named according to its location, function, or size. Skeletal muscle is voluntary muscle; that is, it can be made to contract and relax by conscious effort (in this case through exercise).

There are more than 600 muscles in the human body, accounting for about 36% to 45% of the body weight. But only the major muscles will be discussed in this chapter.

When skeletal muscle is stimulated by an impulse from its motor nerve, it develops tension (force).

There are three ways in which a muscle can achieve this:



- By shortening and producing joint movement (concentric muscle action).
- By lengthening and controlling the motion (eccentric muscle action).
- By staying the same length and creating no joint motion (isometric muscle action). In an isometric action, the muscle generates force against a resistance but does not overcome it and therefore does not shorten, lengthen, or cause joint motion. Many of the body's posture muscles work isometric ally to hold or restrain the skeleton in the upright posture in opposition to the force of gravity.

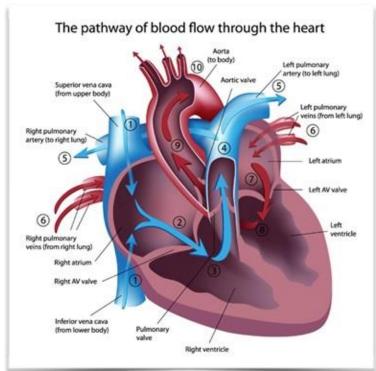
- Generally speaking, concentric muscle actions occur when the direction of movement is opposite the pull of gravity, and eccentric muscle actions occur when the direction of motion is the same as the force of gravity. Concentric and eccentric muscle actions involve dynamic work, in which the muscle is either moving a joint or controlling its motion.
- To enable the body to move, the muscles usually work together as groups. Most muscles on the trunk and extremities are arranged in opposing pairs. When one muscle is acting to achieve a desired movement, it is referred to the agonist; the muscle that opposes the action of the agonist is known as the antagonist.
- At most joints, several muscles work together to perform the same anatomical function; these muscles are functionally known as synergists (syn = together; erg = work).
- There are three properties of muscles, elasticity, extensibility, and contractility. The first two properties permit a muscle to be stretched similarly to an elastic band and —when the stretching is discontinued-to return again to its normal resting length. Contractility is the unique ability of a muscle to shorten, pro-duce tension at its endpoints, or do both. Most skeletal muscles can shorten to nearly one-half their resting length and can be stretched up to 150% of their resting length.

Cardiovascular System

The cardiovascular system is made up of the heart, and the blood vessels, namely the arteries and the veins.

The primary function of the cardiovascular system is:

- 1. Transport blood to the body to provide oxygen and nutrients to the tissues.
- 2. Transport deoxygenated blood back to the lungs for gas exchange.



The Heart:

The heart is a unique organ in that it is both a muscle with its own pacemaker as wells as the main pump for blood in the body. It collects deoxygenated blood on the right side in the right atrium. This blood is then pumped by the right ventricle to the lungs where gas exchange occurs. The blood returns and collects in the left atrium after which it is pumped to the body from the left ventricle. In essence, the heart is two separate pumps, the right heart and the left heart, in parallel.

Respiratory System

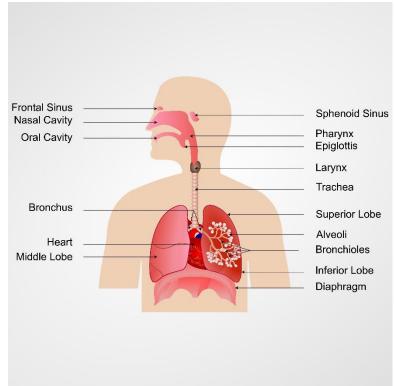
The respiratory system consists of the nasal cavity, larynx, trachea, bronchi, bronchioles and the lungs.

The primary function of the respiratory system is the basic exchange of oxygen and carbon dioxide.

The Lungs:

As air passes through the nose, the nasal cavities perform three distinct functions.

- Warming
- Humidifying
- Purifying the air



Air is then distributed to the lungs by the way of the trachea, bronchi and bronchioles. The trachea is called the first generation respiratory passage and, the right and left main bronchi are the second generation passages each division thereafter is an additional generation (bronchioles). There are approximately 23 generations before the air finally reaches the alveoli, where gases are exchanged in respiration.

Human Movement Terminology

- Human motion occurs in three dimensions as body parts rotate about the joints.
- Flexion and Extension both occur in the sagittal plane and this fundamental movement occurs at most of the synovial joints.

Flexion	Usually involved a decrease in the angle between the anterior surfaces of articulating bones.
Extension	Most often describes an increase in the angel.

Abduction	A lateral movement away from the midline on the body. When the arm or leg is moved away from the midline of the body, abduction occurs.
Adduction	It is the return motion from abduction and involves movement of the body part toward the midline of the body, to regain anatomical position.
Rotation	It is a joint that occurs in the transverse plane about a longitudinal axis and is describes as begin either internal rotation or external rotation of the bone involved. The hip, shoulder, and joints of the spine are among the joints most frequently requiring rotation of the performance of the activities of daily living.

Forearm Supination and Pronation are motions that occur in the transverse plane.

Supination	A term that specifically describes the external rotation of the forearm (radioulnar joint), which causes the palm to face anteriority. The radius and the ulna are parallel in this position for the forearms.
Pronation	Describes the internal rotation of the forearm that causes the radius to cross diagonally over the ulna and the palms to face posteriori.
Circumduction	Biplane movement that involves the sequential combination of flexion, abduction, extension, and abduction. Circumduction is possible at the shoulder, hip, wrist, and spinal joints, among others.

BASIC PHYSIOLOGY

Energy is required to perform any physical work or activity. When chemical energy is converted to mechanical energy, movements occur. This chemical energy is derived from the breakdown or conversion of the food we eat (carbohydrates, proteins and fats).

The process of breaking down large molecules into smaller molecules, such as breakdown of carbohydrates into glucose, is generally accompanied by the release of energy and is termed catabolic.

The synthesis of larger molecules can be accomplished using the energy released from catabolic reactions. This building up process is termed anabolic, and an example of this process is the formation of proteins from amino acids.

The human body is in a constant state of anabolism and the catabolism, which is defined as metabolism, or the total of all the catabolic and anabolic reactions in the body. Energy obtained from catabolic reactions is used to drive anabolic reactions, through an intermediate molecule, adenosine triphosphate (ATP).

Without an adequate supply of ATP, muscular activity and muscle growth would not be possible.

Adenosine triphosphate is a high energy molecule as it stores large amounts of energy in the chemical bonds of the two terminal phosphate groups. The breaking of these chemical bonds releases energy to power various reactions in the body.

Muscle cells store ATP only in limited amounts and activity requires a constant supply of ATP to provide the energy needed for contraction. Therefore, ATP must be replenished continuously.

ATP = ADP + P

Energy Systems

Three energy systems exist in human body to replenish ATP.

- Phosphagen system (an anaerobic process, i.e. one that occurs in the absence of oxygen).
- Glycolysis (two types; fast glycolysis and slow glycolysis).
- Oxidative system (an aerobic process; i.e. one that requires oxygen).

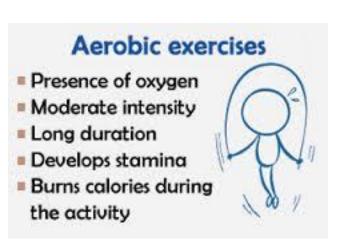
Of the three main food components (carbohydrates, fats and proteins), only carbohydrates can be metabolized for energy without the direct involvement of oxygen).

Aerobic energy systems

During aerobic metabolism, oxygen is used to manufacture ATP from fats, carbohydrate, and to a lesser extent, proteins. The by-product of this metabolism is carbon dioxide (CO2) and water (H2O). This carbon dioxide is easily diffused into the blood stream and is then carried to the lungs to be exhaled. Water is given out by the body in the breath, but also by increased sweating during thermo-regulation (to cool the body during exercise).

Since the aerobic metabolism produces no fatiguing by-products, it can continue for a long time and pro-duce large and sustained amounts of energy.

Anaerobic exercises Absence of oxygen High intensity Short duration Develops force Burns calories even when the body is at rest



Anaerobic Energy Systems

There are two forms of anaerobic metabolism.

- ATP-PC system (PC-Phosphocreatine).
- Lactic acid system.

The APT-PC system derives its name from Phosphocreatine, PC, a substance in the cell used to make / synthesize ATP. The energy from this system is limited to a maximum of 10 seconds. It is already stored in the muscle (ATP) or it can be produced very quickly (PC) for explosive power.

During high intensity exercise, the muscles have the unique capability to produce energy when the cardio-vascular system is unable to deliver enough oxygen to the cells to meet energy demands. This is when the lactic acid system takes over.

The name of the Lactic Acid system (also known as anaerobic glycolysis) derives from the byproduct of this system, a substance called lactic acid. As lactic acid builds up in the muscles and in the blood stream, it immediately leads to a feeling of discomfort – a burning sensation – and then quickly to fatigue. It al-so creates an increase in stress hormone response.

During a BollyOut session, both anaerobic and aerobic pathways are used. For example, during mot low impact dance movements, the body is aerobic and may switch to anaerobic during bursts of hops, jumps and other high intensity moves.

A class can be structured to challenge and improve the participant's aerobic and / or anaerobic systems.

Energy systems have an overlap, invariably energy systems stem from each other, changing consistently de-pending on the variation of effort.

- When starting the training, the initial energy is taken from the first storage of ATP and thereafter from PC. Depending on the length of the class most of the energy comes from the aerobic energy system.
- If teaching an extensive interval class, the energy used comes mainly from glucose but during the peaks the energy is needed faster and the body changes to the anaerobic glycolysis.

In a competition class most of the time will be spent just below the anaerobic threshold. Because of the urgent need of energy, the fat metabolism cannot be used. Therefore the energy supplied comes from glucose, during high intensity anaerobically and during lower intensity

aerobically.

Exercise Intensity

Regulating and monitoring exercise intensity are the keys to developing the correct training session and preventing over-or -under training. A certain threshold of heart rate reserve (HRR), (the difference between a person's maximal heart rate and his or her resting heart rate), must be reached during an aerobic exercise session to reap improvements in the cardio respiratory system.. If the exercise intensity is too high, over-training and injury may If the intensity is too low, the physiological stimulus to improve will be insufficient, and it will take longer to reach the goals that have been set.

The only way to determine a person's MHR is to perform a graded exercise test that takes the client to the point where the heart rate does not increase in an increase in workload. At this point the heart rate has reached its maximal beat per minute (beat/min) capacity.

It is beyond the scope of a Bollyout trainer to perform this test.

However, the trainer can use an estimate of client's MHR in most cases. The most commonly used age-predicted maximal heart rate (APMHR) equation is as follows:

APMHR = 220 - age

To determine the intensity training zone

During a session of BollyOut, aerobic or cardiovascular fitness is the primary goal. For this, the intensity of the participants based on their low, medium or high risk categories needs to be maintained.

using a percent of APMHR, for an apparently healthy adult, multiply the client's APMHR by 60% and 85% (the percent of APMHR method). The results will be the lower and upper limits of exercise heart rate needed for improving cardiovascular function.

THR = APMHR x exercise intensity

Percent of Heart Rate Reserve: The Karvonen Formula. The Karvonen formula is related to the per-cent of APMHR formula, except that the Karvonen formula allows for differences in resting heart rate (RHR) between individuals. To use this formula, first measure the client's RHR and then subtract the RHR from the APMHR to obtain the HRR:

HRR = APMHR - RHR

The HRR is the available increase in heart rate over the RHR, up to the APMHR. In other words, the HRR is the number of beats per minute that the heart rate can increase from resting up to maximal. For an instance a 40 year old client with an RHR of 70 has an APMHR of 180 and an HRR of 110 beats/min (an APMHR of 180 minus an RHR of 70). As mentioned earlier, 60% to 85% of HRR is needed to improve cardiovascular function, for an apparently healthy person. To determine the target training zone, multiply the HRR by 70% and 85%, and then add the RHR back to each answer to obtain the lower and upper heart rate limits.

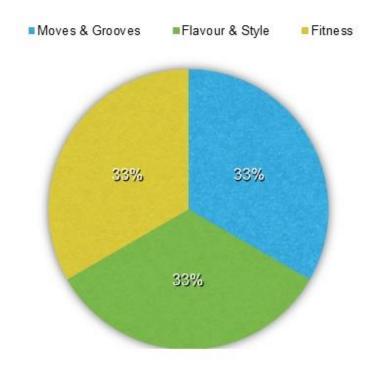
Failure to add the RHR back to the answer will result in a underestimated training zone that will not provide the desired improvements.

Although, the above method is a good starting point to determine the intensity, adjustments ay need to be made as the participant's progress.

Another way to assess the intensity is by using the Rate of Perceived exertion scale.

Participants choose a number on the Borg Scale relating to how hard they feel, to determine their exercise intensities.

ESSENCE OF A BOLLYOUT HERO



The choreography should be loosely based on the above ratio. Special attention should be paid towards the safety and injury prevention of the participants.

- Provide modifications to suit all fitness levels and age groups.
- Avoid repetitive stress.
- Maintain temperature, air circulation of the room.
- Choose wooden suspended, cushioned flooring.
- Advice participants to wear comfortable clothing also based on the climatic changes. For example, layering is advisable during cold weather.
- Advice participants to wear the right shoes.

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