

Physical fitness

Sport & Tourism, Fitness



1) Definition of Physical Fitness today. Physical fitness is a general concept defined in many ways by differing scientists. Here two major categories are considered: general fitness (a state of health and well-being), and specific fitness (a task-oriented definition based on the ability to perform specific aspects of sports or occupations). Physical fitness is generally achieved through correct nutrition, exercise, hygiene and rest. Components of Health Related Fitness;

Cardiovascular Endurance: is the ability of the heart and lungs to work together to provide the needed oxygen and fuel to the body during sustained workloads. Examples would be jogging, cycling and swimming. The Cooper Run is used most often to test cardiovascular endurance.

Muscular Strength: is the amount of force a muscle can produce. Examples would be the bench press, leg press or bicep curl. The push up test is most often used to test muscular strength.

Muscular Endurance: is the ability of the muscles to perform continuous without fatiguing. Examples would be cycling, step machines and elliptical machines. The sit up test is most often used to test muscular endurance.

Flexibility: is the ability of each joint to move through the available range of motion for a specific joint. Examples would be stretching individual muscles or the ability to perform certain functional movements such as the lunge. The sit and reach test is most often used to test flexibility.

Body Composition: is the amount of fat mass compared to lean muscle mass, bone and organs. This can be measured using underwater weighing, Skin fold readings, and bioelectrical impedance. Underwater weighing is

considered the “ gold standard” for body fat measurement, however because of the size and expense of the equipment needed very few places are set up to do this kind of measurement. Components of Skill Related Fitness;

Agility: The ability to rapidly and accurately change the direction of the whole body in space. Balance: The ability to maintain equilibrium while stationary or moving. Coordination: The ability to use the senses and body parts in order to perform motor tasks smoothly and accurately. Power: The amount of force a muscle can exert.

Reaction Time: The ability to respond quickly to stimuli. Speed: The amount of time it takes the body to perform specific tasks.

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Assignment in Physical Fitness 1) Show the difference of aerobics and anaerobics Aerobics is a form of physical exercise that combines rhythmic aerobic exercise with stretching and strength training routines with the goal of improving all elements of fitness (flexibility, muscular strength, and cardio-vascular fitness). It is usually performed to music and may be practiced in a group setting led by an instructor (fitness professional), although it can be done solo and without musical accompaniment. With the goal of preventing illness and promoting physical fitness, practitioners perform various routines comprising a number of different dance-like exercises. Formal aerobics classes are divided into different levels of intensity and complexity. Aerobics classes may allow participants to select their level of participation according to their fitness level. Many gyms offer a variety of aerobic classes. Each class is designed for a certain level of

experience and taught by a certified instructor with a specialty area related to their particular class. Examples of Aerobics:

Lower impact aerobic exercise includes: * Swimming * Cycling * Using an elliptical trainer * Walking * Rowing * Using an upper body ergo meter (a piece of equipment that provides a cardiovascular workout that targets the upper body only) Higher impact aerobic exercise includes: * Running * Jumping rope * Performing high impact routines or step aerobics

Anaerobic exercise is exercise intense enough to trigger Lactic acid fermentation. It is used by athletes in non-endurance sports to promote strength, speed and power and by body builders to build muscle mass. Muscle energy systems trained using anaerobic exercise develop differently compared to aerobic exercise, leading to greater performance in short duration, high intensity activities, which last from mere seconds to up to about 2 minutes. Any activity lasting longer than about two minutes has a large aerobic metabolic component. Examples of Anaerobics:

Sports- Activities such as tennis, racquetball, volleyball, basketball and football are anaerobic, because you perform points or plays at a very high intensity for less than two minutes. Your ability to recover after each point or play is important. Anaerobic workouts help you train your ability to recover more quickly, something aerobic exercise does not do. Circuit Training- Often used to improve muscular endurance, circuit training is an efficient way to create an anaerobic workout. Use very little weight or resistance as you move from exercise to exercise. Work at a high intensity for 30 to 60 seconds, taking a two- or three-minute recovery break after each circuit.

Bodyweight exercises and calisthenics are good choices for creating anaerobic exercises.

Resistance Training- Resistance training is another example of anaerobic exercise, because you perform repetitions for short periods at high intensities. You can body build with high loads and fewer reps, or create circuit-training routine using metabolic resistance training. In addition to bodyweight exercises, you can use dumbbells, resistance bands, a kettle bell, free weights or a home gym. **Sprint Training-** Performing short, high-intensity sprints on a treadmill, while jogging, rowing or cycling, creates anaerobic exercises. Start with 30-second sprints followed by 90 seconds of recovery. Lengthen sprints and recovery periods as you build stamina. **Isotonic Exercises-** These exercises are mostly followed by weightlifters who are used to lifting dumbbells/barbells on a regular basis. In these exercises, muscles are put in a continuous motion constrained by tension through the instrument used. Isotonic exercises help in muscle toning and reducing extra flab.

Isometric Exercises- Muscles, in isometric exercises, have to exert force against hard or immovable objects (like wall). These exercises require muscles to be held in a particular position for a long time. Isometric exercises aim at strengthening muscles to a great extent. However there are no movements in bone joints. Muscle flexibility increases due to these exercises. Some examples are mountain cycling, alpine skiing and wrestling.

Calisthenics Exercises- Callisthenic exercises, more commonly known as muscle strengthening exercises, do not involve any weights or equipment.

These exercises aim at improving body resistance. The most common examples of callisthenic exercises are squats, push-ups, pull-ups and sit-ups.

Sprinting Exercises- Sprinting is one of the most effective exercises for athletes. It aids in enhancing the overall metabolism rates of the body. Besides, sprinting exercises tone down the muscles and also sculpt the body structure well (sprinting is very good for hamstrings). Other anaerobic exercises under this category are cycling and marathon running (both at an increased pace).

Aerobic exercise is continuous activity performed for 15 minutes or longer, between approximately 60 percent and 80 percent of your maximum heart rate. The longer you exercise and the higher your heart rate, the more aerobic capacity and endurance you build. This type of training recruits your slow-twitch muscle fibers creates lactic acid in your muscle and burns more calories from fat than glycogen, compared to short, intense exercise. Anaerobic activity takes place in short bursts, calls on your fast-twitch muscle fibers and burns more glycogen than fat. During recovery periods, some lactic acid leaves your muscles.