

Fitness Focus Highlights and Review

Components of Health Related Fitness

Cardiovascular fitness or **aerobic fitness** is the ability to exercise the entire body for long periods of time.

Muscular Strength is the amount of force you can put forth with your muscles. It is often measured by how much weight you can lift.

Muscular Endurance is the ability to use the muscles, which are attached to the bones, many times without getting tired.

Flexibility is the ability to use your joints fully.

Body Composition is the percentage of body weight that is fat compared to other body tissue, such as bone and muscle.

Calculating Target Heart Rate

Maximum Heart Rate (MHR): $220 - \text{Age} = \text{Max Heart Rate}$

example: A 12 year olds max heart rate would be determined by calculating $220 - 12$.

12 years old = a maximum heart rate of **208**

Target Heart Rate Zone (THRZ): $\text{MHR} \times 60\% (.6)$ and $\text{MHR} \times 85\% (.85)$

example: to get a 12 year olds target heart rate zone you must first calculate the low end of the zone followed by the high end of the zone. (Remember, you need the Max Heart Rate number calculated above...208 to calculate the THRZ)

Low end of zone: $208 \times .6 = 124.8$

High end of zone: $208 \times .85 = 176.8$

So, the target heart rate zone is 125 to 176

Body composition is what your body is made up of. Your body is made of several components: muscle, bones, tissues, water, and fat cells. The health of your body composition depends on three things; nutrition, physical activity and genetics.

Benefits of fat:

- * Acts as an insulator, helping the body adapt to heat and cold
- * Acts as a shock absorber, helping protect internal organs and bones from injury
- * Helps body use vitamins effectively
- * Acts as stored energy when the body needs energy

Benefits of lean body mass:

- * Helps in burning calories
 - * Provides structure for the body
 - * Helps the body move effectively
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The **FIT formula** helps you know how much exercise is enough to build good fitness.

Frequency = how often a person exercises. For example, you need to exercise at least three times a week.

Intensity = how hard a person exercises. Remember there's a difference between pain that comes from over exercise and the tiredness that comes from not being fit. For example, for cardiovascular fitness, the heart should beat 135 - 165 beats/minute.

Time = how long a person exercises. For example, you need to exercise 15 - 30 minutes at one time to improve fitness.

Fitness Principles:

Principle of Overload – a muscle must work more than normal if it is to become stronger. In other words, the muscle must lift more than normal. If a muscle is worked less than normal, it will become weaker.

Principle of Progression – you should overload gradually to get the best improvement in muscle strength. In other words, the muscle must lift more each time, but gradually. If you try to lift too much too soon, you can injure yourself. Also, lifting too much too soon will not increase strength as much as if you began with easier exercises and progressed gradually to more difficult ones.

Principle of Specificity – You must exercise the specific muscles you expect to develop. For example, leg exercises develop the legs; arm exercises develop the arms.

Values of Total Fitness

Fitness allows a person to:

<u>Meet</u> emergencies	-run for help
<u>Be</u> healthy	-reduce risk of heart disease, back problems,
<u>Work</u> efficiently	-work with less fatigue and more efficiency
<u>Enjoy</u> leisure	-have energy to do physical activities such as playing sports
<u>Look</u> good	-look your best by building muscles and maintaining a desirable level of body fat.

Skill related motor abilities.

1. **Agility** - change body position quickly (basketball, soccer)
 2. **Balance**- keep upright posture (ice skating, gymnastics)
 3. **Coordination** - use two or more body parts together (baseball, tennis, soccer)
 4. **Power** - use strength quickly (football, shot put, discus, high-jump)
 5. **Reaction time** - time it takes you to move (track, swimming, driving)
 6. **Speed** - move or cover a distance in a short period of time (running, throwing)
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Stages of Learning Motor Skills

The Cognitive Stage:

This is the beginning stage of skill learning where the learner has many unanswered questions. (ie. Where do I stand? How do I hold the ball? Where should my hands be?) This stage is marked by numerous errors, inconsistent performance and a great deal of repetition is needed.

The Associative Stage:

At this stage, many of the basic mechanics of the skill have been learned. The mistakes are fewer, less serious and the performer is able to recognize his/her own mistakes and is aware of how to correct them.

The Autonomous Stage:

In this stage the skill has now become habitual or automatic. This stage is only realized after much practice, quality repetition, and experience with the specific skill. (depending on the skill this stage could take years to achieve).

History:

One of the first men to recognize the importance of physical activity in school curriculum was **Johann Bernard Basedow** in Germany. He included gymnastics as part of the daily curriculum devoting up to three hours per day to educating through the physical.

In 1810 **Friedrich Jahn**, “the father of gymnastics”, began working outdoors with his students using simple exercises and games sometimes taking long hikes. The thing that motivated Jahn to develop a system of physical training was his deep sense of patriotism. Germany had been soundly defeated in the Napoleonic wars. So, he developed his system with the hopes of creating strong, sturdy and fearless youth who would help secure Germany's freedom and could defend the Fatherland from outside forces.

Charles Beck who was a student, friend and follower of Friedrich Jahn teamed up with a friend and they made their way to Switzerland, France and eventually America. So, Beck became the first official Physical Education teacher in America in 1825.

Lesson Review:

1. For your fourth quarter test, you will be expected to know the information on this paper.
2. Don't be surprised if you end up taking a group test. Don't expect to pick your own groups for this test.
3. Create 2 organized Study Guides (1 to turn in and 1 to keep) to help you study for this test. Do not copy the information on this word for word. The point is to take this information and organize in such a way that you can study for the test and be successful.