

FITNESS ST. GUIDE #5 (10-12)
SCHS PHYS. ED. DEPT.

Designing a Personal Fitness Program

Health-Related and Skill-Related Fitness

Health-related fitness – This is your ability to become and stay physically healthy.

Skill-related fitness – This is your ability to maintain high levels of performance on the playing field.

Five Components of Health-Related Fitness

- **Body Composition** – This is the relative percentage of body fat to lean body tissue, including water, bone, muscle, and connective tissue.
- **Cardiovascular Fitness** – This is the ability of your body to work continuously for extended periods of time. Because this involves your lungs as well as your heart and vessels, cardiovascular fitness is sometimes called **cardiorespiratory endurance**. Activities that promote cardiovascular fitness include hiking, jogging, dancing, skipping rope, rowing, swimming, skating, and brisk walking.
- **Muscular Strength** – This refers to the maximum amount of force a muscle or muscle group can exert against an opposing force.
- **Muscular Endurance** – This refers to the ability of the same muscle or muscle group to contract for an extended period of time without undue fatigue. Exercises such as sit-ups and push-ups can increase muscular endurance.
- **Flexibility** – This is the ability to move a body part through a full range of motion.

Six Components of Skill-Related Fitness

- **Agility** – The ability to change and control the direction and position of the body while maintaining a constant, rapid motion. Sports that require a high level of agility include football, soccer, basketball, baseball, and softball.
- **Balance** – This is the ability to control or stabilize the body while standing or moving. Activities such as walking, golfing, gymnastics, and skating all need high degrees of balance.
- **Coordination** – The ability to use the senses to determine and direct the movement of your limbs and head. Gymnastics, cheerleading, and juggling demand a high level of coordination.
- **Speed** – The ability to move your body, or parts of it swiftly. Although speed is largely determined by heredity, speed can be increased.
- **Power** – The ability to move the body parts swiftly while simultaneously applying the maximum force of your muscles.
- **Reaction Time** – The ability to react or respond quickly to what you hear, see, or feel. The quicker your response, the better your reaction time.

FITT and the Principle of Overload

Your Exercise Prescription – A breakdown of how often you need to work, how hard, the length of time per session, and the type of activity or exercise performed. Factors of exercise prescription are often referred to as **FITT: frequency, intensity, time, and type**.

Frequency – how often you work and the number of times per week you engage in physical activity or exercise.

Intensity – how hard you work, or the difficulty or exertion level of your physical activity or exercise.

Time – length of time, or duration, that you work, refers to the duration of a single workout, usually measure in minutes or hours. A workout that is too brief may result in limited progress. A workout that goes on too long will increase your risk for injuries.

Type of Activity – the specific type or mode of activity you choose. As a teen, you should be physically active on a daily basis. You should also engage in three or more sessions per week of activities that last at least 20 minutes and require moderate-to-vigorous levels of exertion.

Exercise prescriptions are governed by three scientific principles: the overload principle, the specificity principle, and the progression principle.

Overload Principle – In order to improve your level of fitness, you must increase the amount of regular activity or exercise that you normally do.

Percentage of Maximum Heart Rate – The term heart rate refers to the number of times your heart beats per minute. Another name for heart rate is pulse. To compute your maximum heart rate, subtract your age from the number 220. Once you know your maximum heart rate your target zone is figured by a percentage of that number.

Perceived Exertion – a measure of how hard you feel you are working during physical activity or exercise. Ratings of perceived exertion are based on your awareness of specific body cues. These cues include how hard you are breathing, your heart rate, your body temperature, and any muscle or skeletal discomfort.

Talk Test – a measure of your ability to carry on a conversation while engaged in physical activity or exercise. If talking is very difficult or impossible, you are overdoing it. If you are able to talk effortlessly, you are not working hard enough to get any benefits.

The Principle of Progression – This principle states that as your fitness levels increase so do the factors in your FITT (Frequency, Intensity, Time & Type of Activity). The work gets harder as you progress, and you are the best judge of when you are ready to move forward. You make this decision by “listening” to your body. Increasing exercise levels too quickly can cause **overuse injury**. This is a muscular injury that results from overloading your muscles beyond a healthful point.

Stages of Progression

- An initial stage
- An improvement stage
- A maintenance stage.

Factors that Affect Progression

- Your initial fitness level (the lower you start, the more quickly you usually improve)
- Your heredity
- The rate at which you overload your body or change your FITT
- Your specific goals (health or performance)
- **Trainability** – the rate at which an individual’s fitness levels increase during fitness training.

Overtraining and Health Problems – exercising, or being active to a point where it begins to have negative effects. Overtraining has a number of well-defined effects on health. Many of these are serious health problems. They include

- **Chronic fatigue** – the feeling of being tired all the time.
- **Insomnia** – or sleeplessness
- Constant muscle soreness
- Rapid weight loss
- Loss of appetite
- Elevated resting heart rate
- Elevated blood pressure
- Weakened immune system
- In females, absence of menstrual cycles
- Eating disorders such as bulimia and anorexia nervosa.