

Physical Fitness for Health and Sports

To be considered **physically fit**, a person must first develop the core **Health Fitness Factors (HFF)**.

These form the foundation of general health and long-term fitness.

Health Fitness Factors (HFF)

1. **Muscular Strength**

The ability of muscles to produce force or perform work ($\text{Work} = \text{Force} \times \text{Distance}$).

2. **Flexibility**

The ability of muscles to lengthen and allow joints to move through a full range of motion.

3. **Cardiovascular Endurance**

The ability of the heart, lungs, and blood vessels to deliver oxygen to working muscles and tissues for extended periods.

4. **Lean Body Mass & Body Composition**

The optimal balance between muscle and fat, achieved through regular exercise and healthy nutrition, with minimal but essential body fat.

☐ For most individuals seeking general fitness, combining these four factors—through regular exercise, balanced diet, and adjustments for injuries or age-related changes—is sufficient to achieve and maintain health and wellness across the lifespan.

Sports Fitness Factors (SFF)

For people who participate in recreational or competitive sports (e.g., tennis, soccer, golf, softball), a **higher level of conditioning** is required. This is called **Sports Fitness**, which builds on the foundation of Health Fitness.

To train the SFF effectively, a person must first establish the HFF. Each SFF builds progressively upon the HFF and the SFF that precedes it.

The Sports Fitness Factors



1. Power

- The ability to apply strength quickly.
- Defined as: **(Force × Distance) ÷ Time**.
- Built upon strength and flexibility, trained through explosive, high-speed movements using body weight or resistance (e.g., jumping, sprint drills, weighted throws).

2. Speed

- The ability to move the body or a body part rapidly in a purposeful manner.
- Defined as: **Distance ÷ Time**.
- Built from strength, flexibility, and power.
- Examples: a 100 m sprint, fast punches in boxing, or quick kicks in karate.

3. Agility

- The ability to change direction rapidly, often at high speeds.
- Built from the combination of power and speed, and is critical in nearly all competitive sports.
- Trained through sport-specific drills that mimic actual game movements (e.g., shuttle runs, cutting, pivoting in basketball or soccer).

4. Durability

- The resilience to withstand regular training and competition while minimizing risk of injury.
- Achieved when HFF and SFF are simultaneously optimized.
- With durability, athletes can train harder and play longer without frequent interruptions from injuries.

Why Order Matters



Attempting to participate in sports training without first developing the **Health Fitness Factors** often leads to injuries caused by deficits in strength, endurance, flexibility, or body composition. Proper progression—HFF → SFF—both reduces injuries and enhances sports performance.

Fitness Development Pathway

Health Fitness (HFF):

Strength → Flexibility → Cardiovascular Endurance → Optimal Body Composition

Sports Fitness (SFF):

Power → Speed → Agility → Durability

Outcome:

- ☑ **Reduced Injuries**
- ☑ **Improved Sports Performance**

👉 Summary:

- Everyone needs **Health Fitness** to stay strong, flexible, and healthy for life.
- Athletes and sports enthusiasts need to **build upon that base** with Sports Fitness to reach higher levels of performance and reduce the risk of injuries.
- Progress step by step: first HFF, then SFF, for safe, lifelong fitness and success in sport.

Adapted courtesy of Dr. Tom Gill.