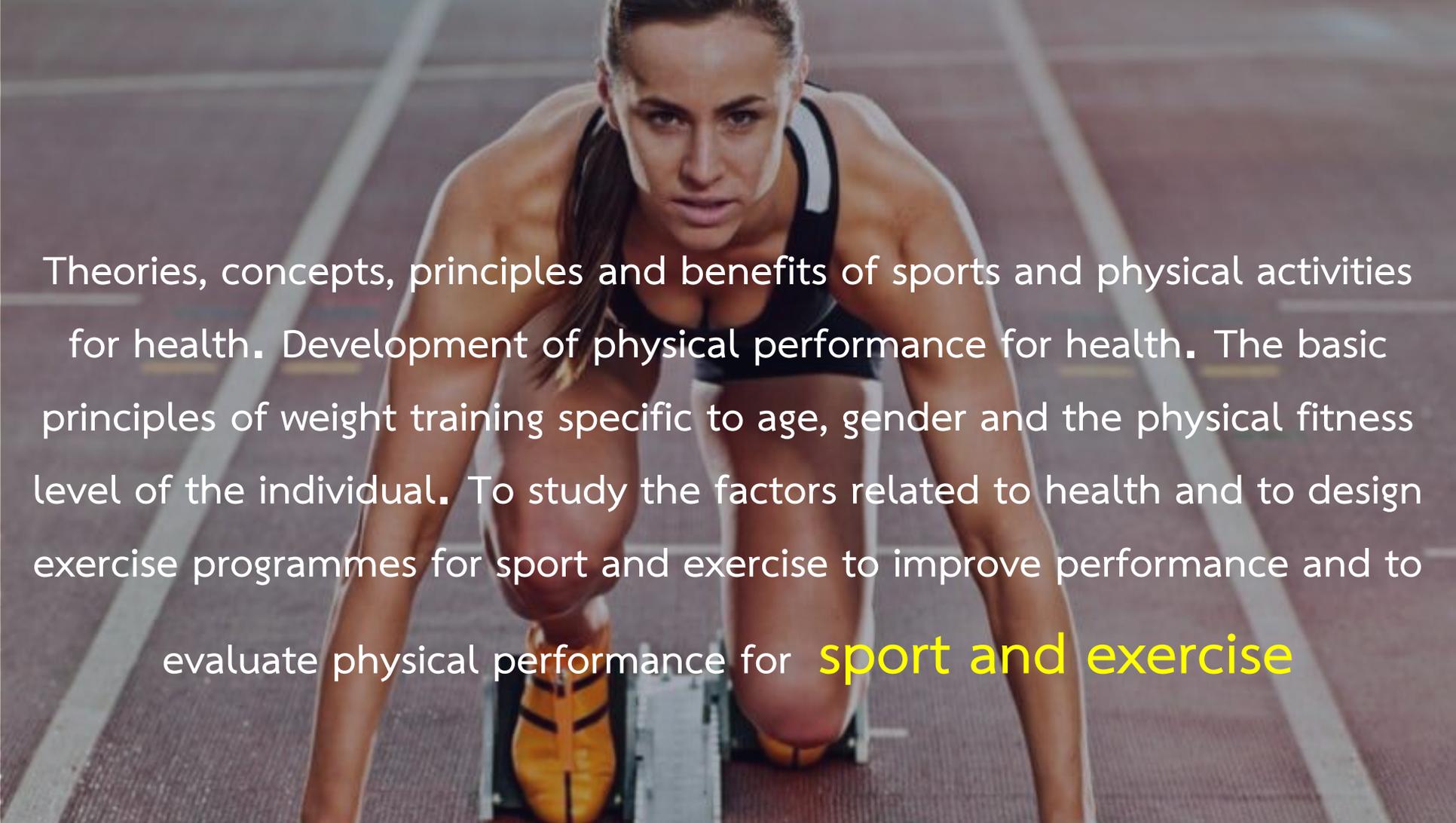


GEN64-151

Introduction of Sports&Exercise

A female sprinter is shown in a starting block on a track, wearing a black sports top and yellow shoes. She is in a crouched position, ready to start a race. The background is a blurred track with white lane markings.

Theories, concepts, principles and benefits of sports and physical activities for health. Development of physical performance for health. The basic principles of weight training specific to age, gender and the physical fitness level of the individual. To study the factors related to health and to design exercise programmes for sport and exercise to improve performance and to evaluate physical performance for **sport and exercise**



Theories, concepts, principles and
benefits of sports and physical
activities

ความรู้เบื้องต้นความหมายของกีฬา
และกิจกรรมการเคลื่อนไหว



SPORTS

“an activity involving physical exertion and skill in which an individual or team competes against another or others for entertainment.”



SPORT

“A game, competition or activity needing physical effort and skill that is played or done according to rules for enjoyment and/or as a job.”

A soccer player in an orange jersey is falling over a goalkeeper in a green jersey on a grass field at night. The player in orange is in the air, with his right leg extended and his left arm outstretched. The goalkeeper is on the ground, reaching out with his hands towards a soccer ball. The background shows a large stadium with a complex, lattice-like roof structure and bright lights illuminating the scene.

SPORT

“all types of physical activity that people do to keep healthy or for enjoyment”

Exercise?



- Physical Activity (PA)
 - Washing the car
 - Cleaning windows
 - Walking the dog
- Exercise
 - Planned
 - Organised
 - Controlled

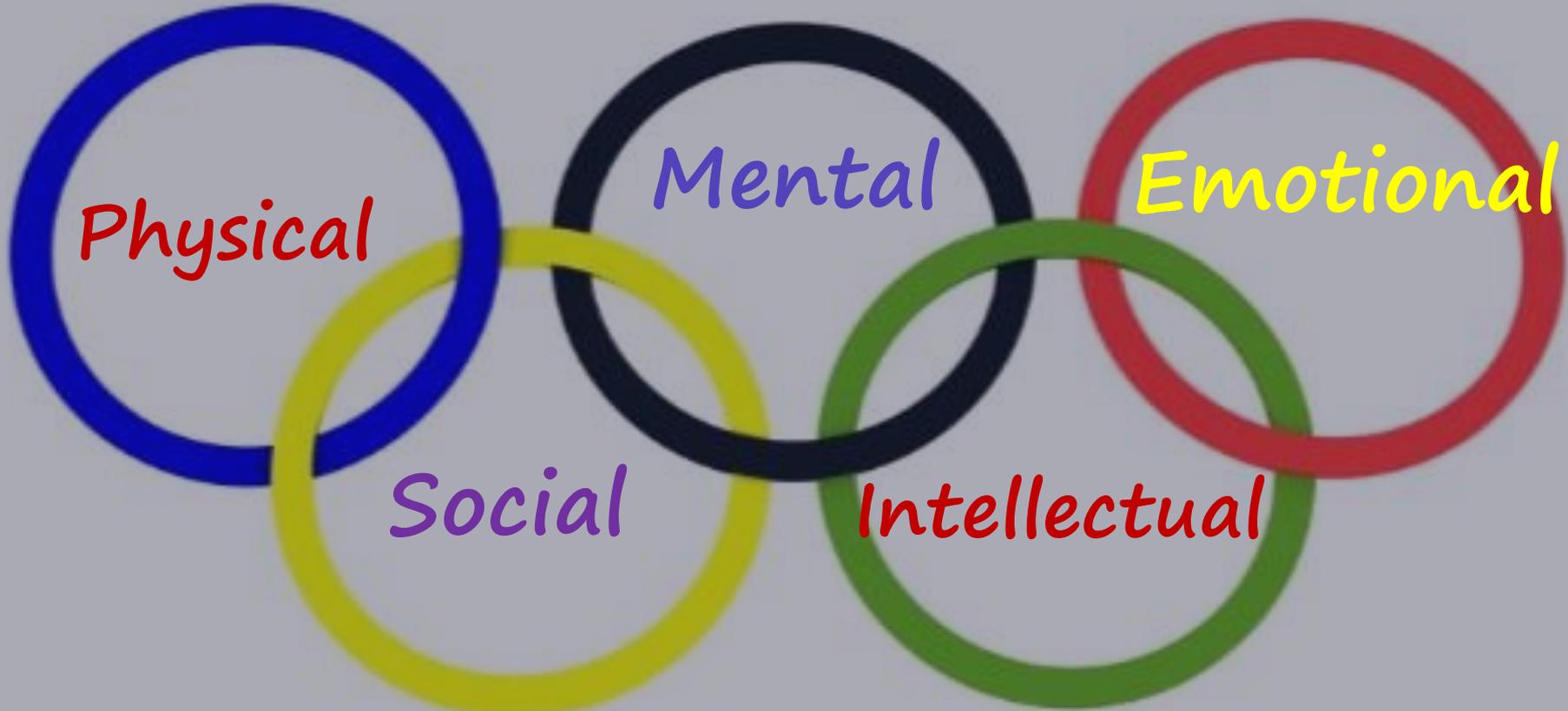




Principles and benefits of sports and physical activities

*It is a very important
activity for human
life.*





Physical

Mental

Emotional

Social

Intellectual



1. Develop
musculoskeletal system

**Have more
strength**

Large up

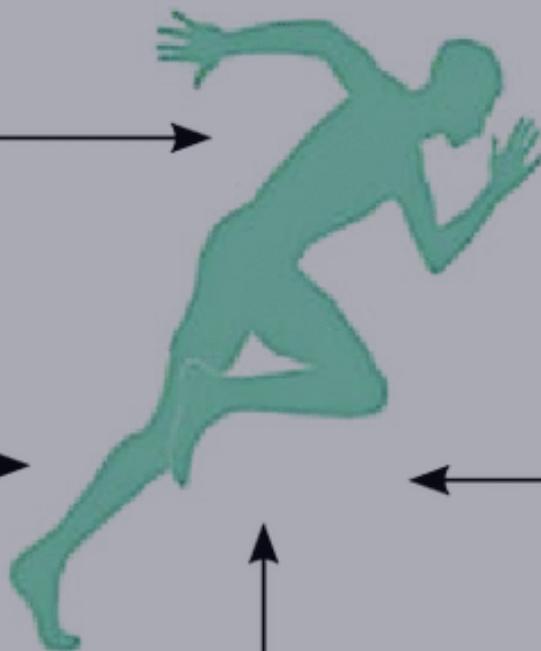
The benefits of exercise

Neurological

- ↓ Stroke
- ↓ Anxiety/Depression
- ↑ Cognitive function

Musculoskeletal

- ↓ Falls
- ↓ Osteoporosis



Cardiac

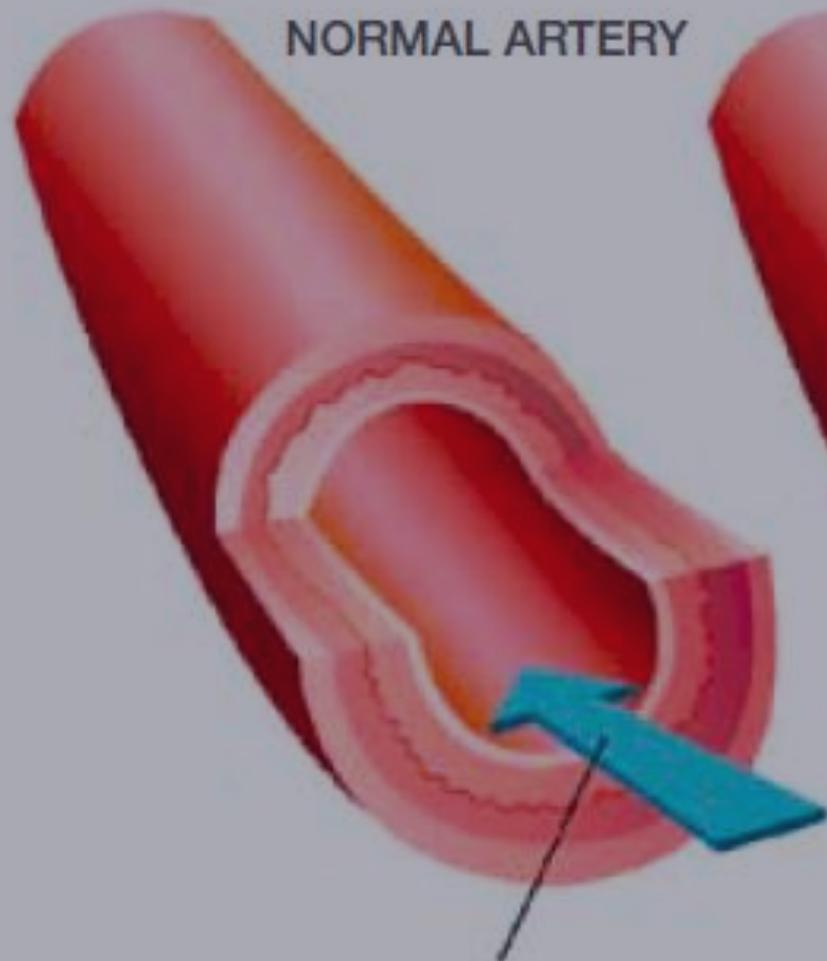
- ↓ Mortality
- ↓ CAD
- ↓ BP
- Cardiac rehab

Endocrine

- ↓ Weight
- ↓ Diabetes
- Improves lipid profile

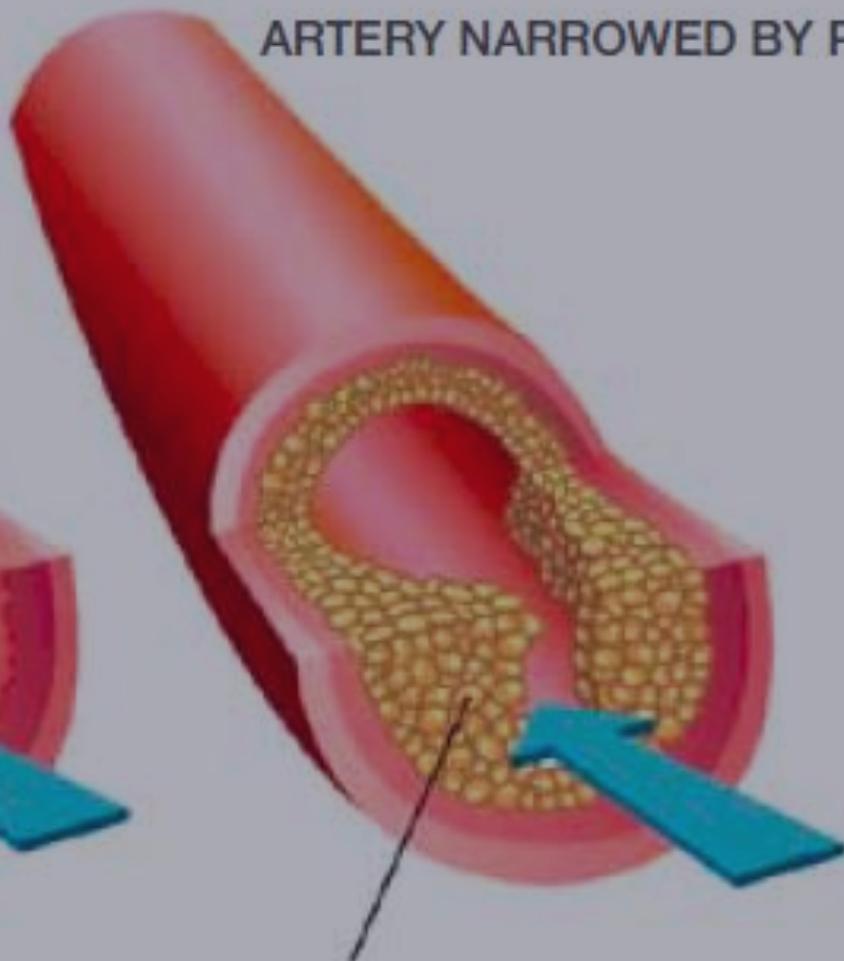
- ↓ **Cancer**
e.g., Prostate, breast,

NORMAL ARTERY



BLOOD FLOW

ARTERY NARROWED BY PLAQUE

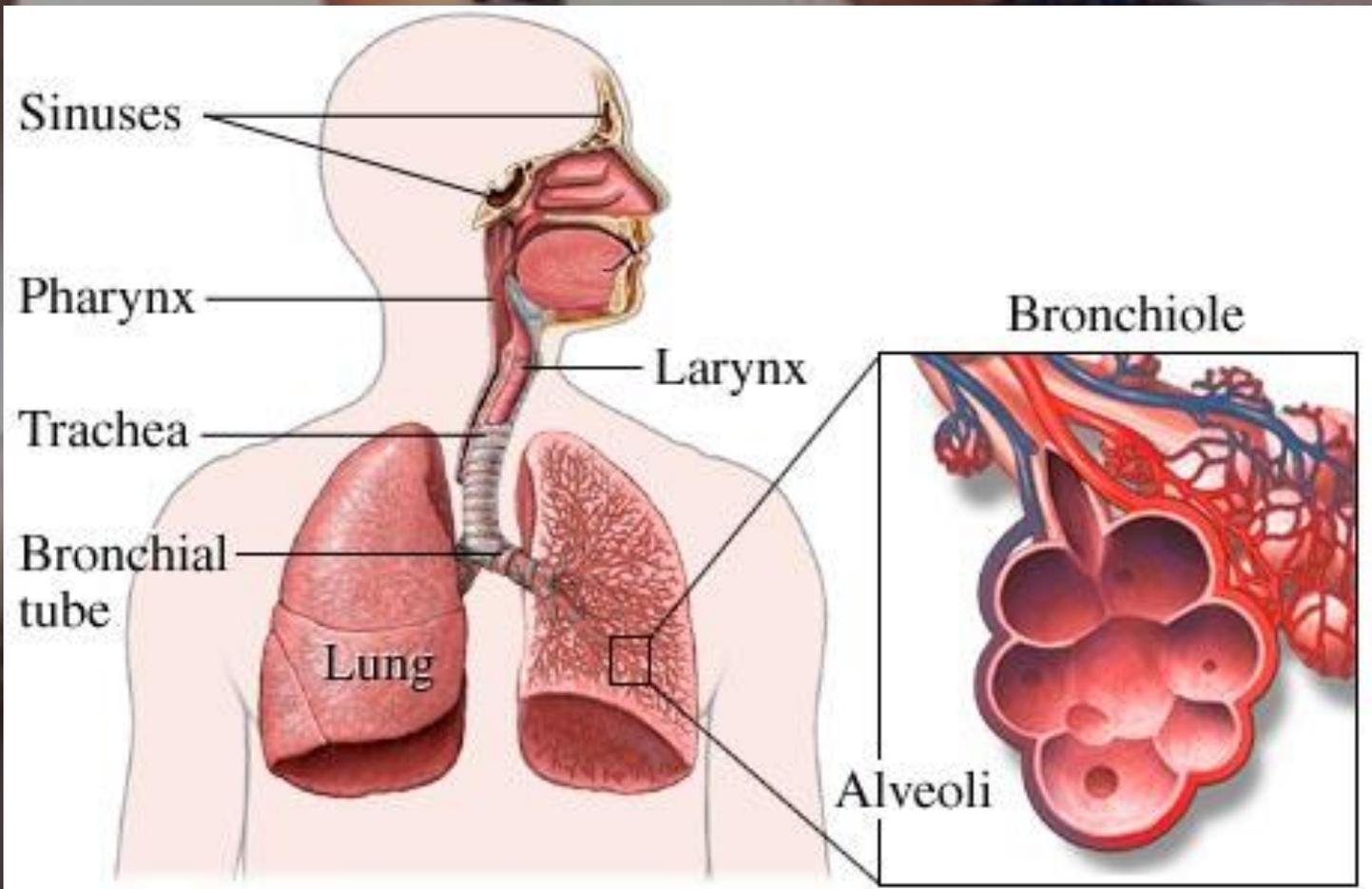


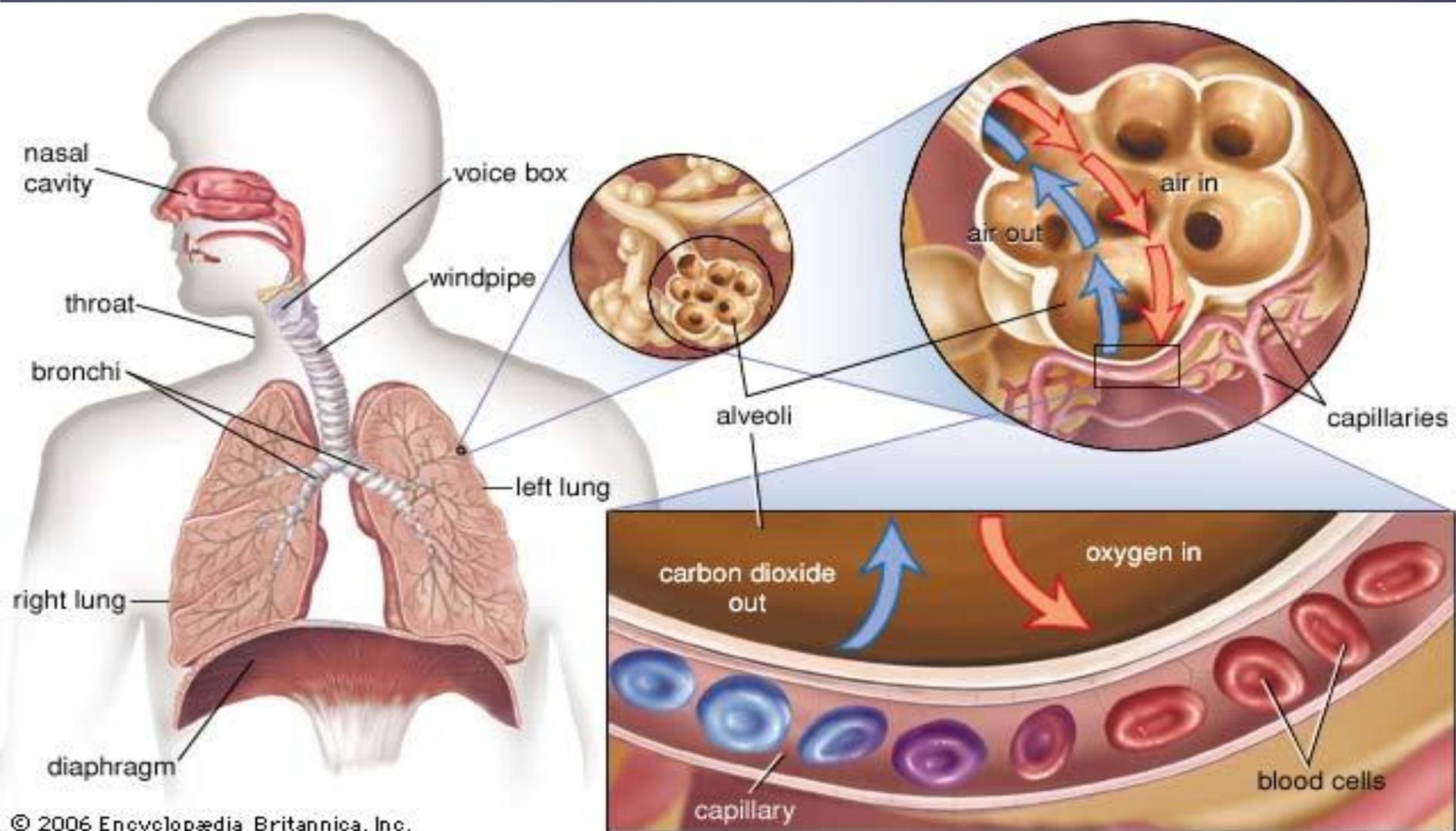
ATHEROSCLEROTIC PLAQUE

Benefits of Exercise

- **Arteries**

- less risk of atherosclerosis
- lower blood pressure
- lower risk of blood clots
- develop new (extra) blood vessels
- bigger arteries = more blood flow





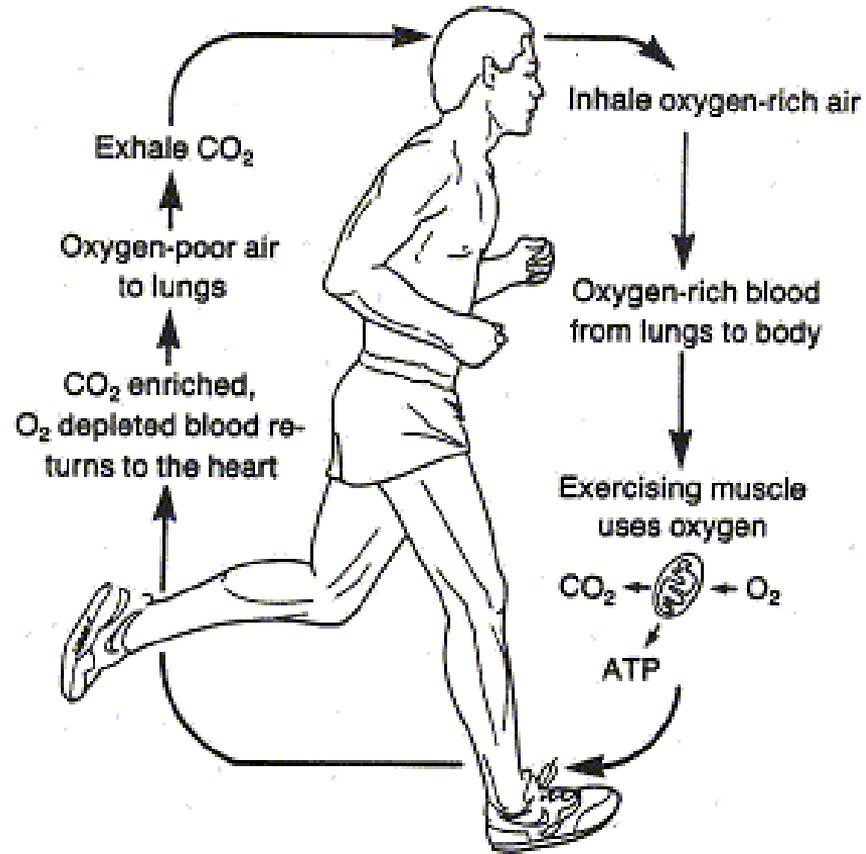


Figure 2.1 The pathways by which oxygen is transported from atmospheric air to the active muscles.

2. Develop mental prosperity

A group of people are playing beach volleyball on a beach at sunset. The sun is low on the horizon, creating a warm, golden glow. A volleyball is in the air, and several people have their arms raised, trying to reach it. The scene is captured from a low angle, emphasizing the height of the players' jumps.

Patience

Sportsmanship

Generosity

Justice

3. Develop Emotional

A large group of Liverpool football players in red kits are celebrating on a stage. They are holding up the UEFA Champions League trophy in the center. The players have their arms raised, shouting, and some are wearing medals. The background is a blue backdrop with the UEFA Champions League logo and the text 'UEFA CHAMPIONS LEAGUE'. The scene is filled with confetti and bright lights, creating a festive atmosphere.

**Reduce
stress**

concentration

**Self
Esteem**



4. Social development

**Team
work**

Leadership

Adaptation

Sincere

5. Intelligent development



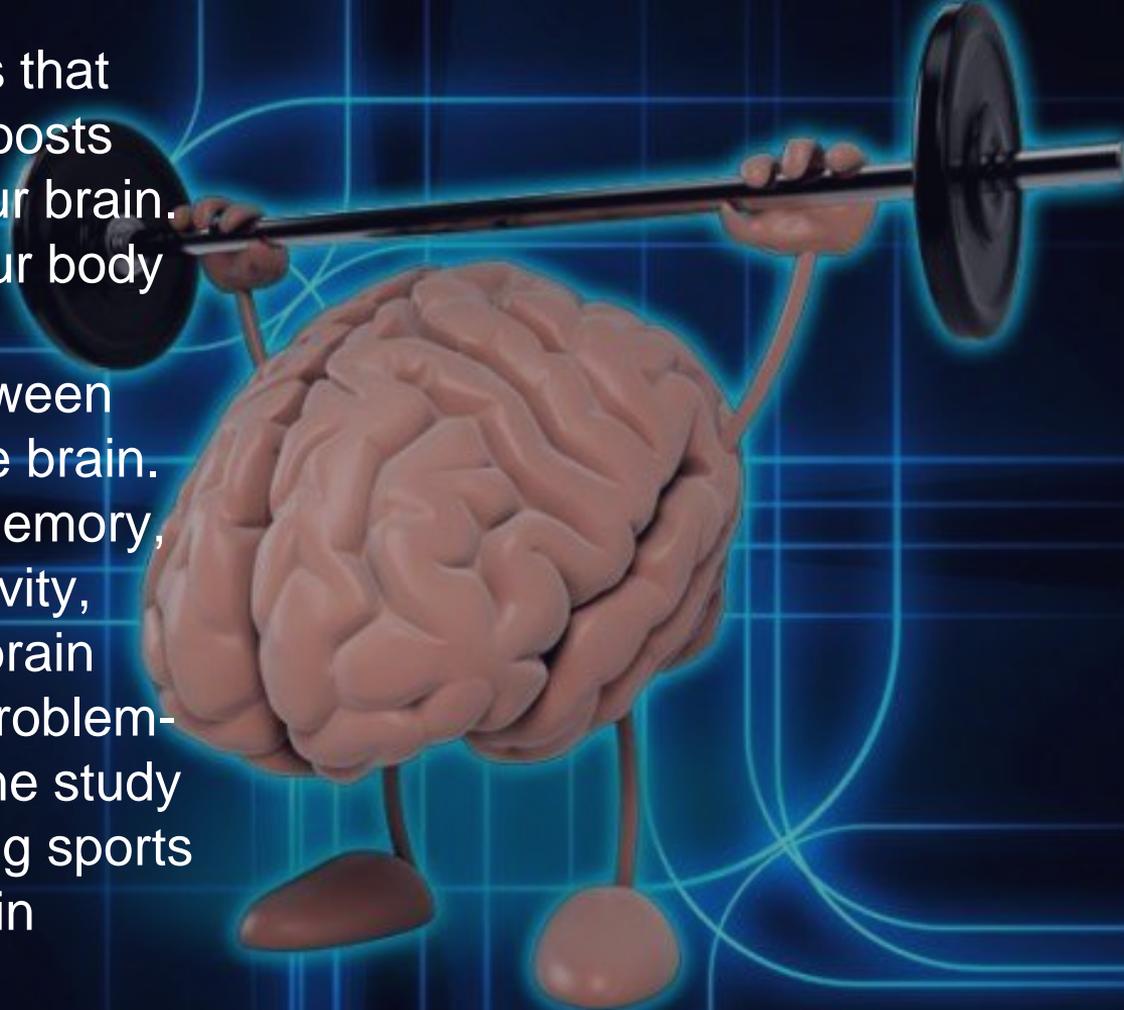
**The
decision**

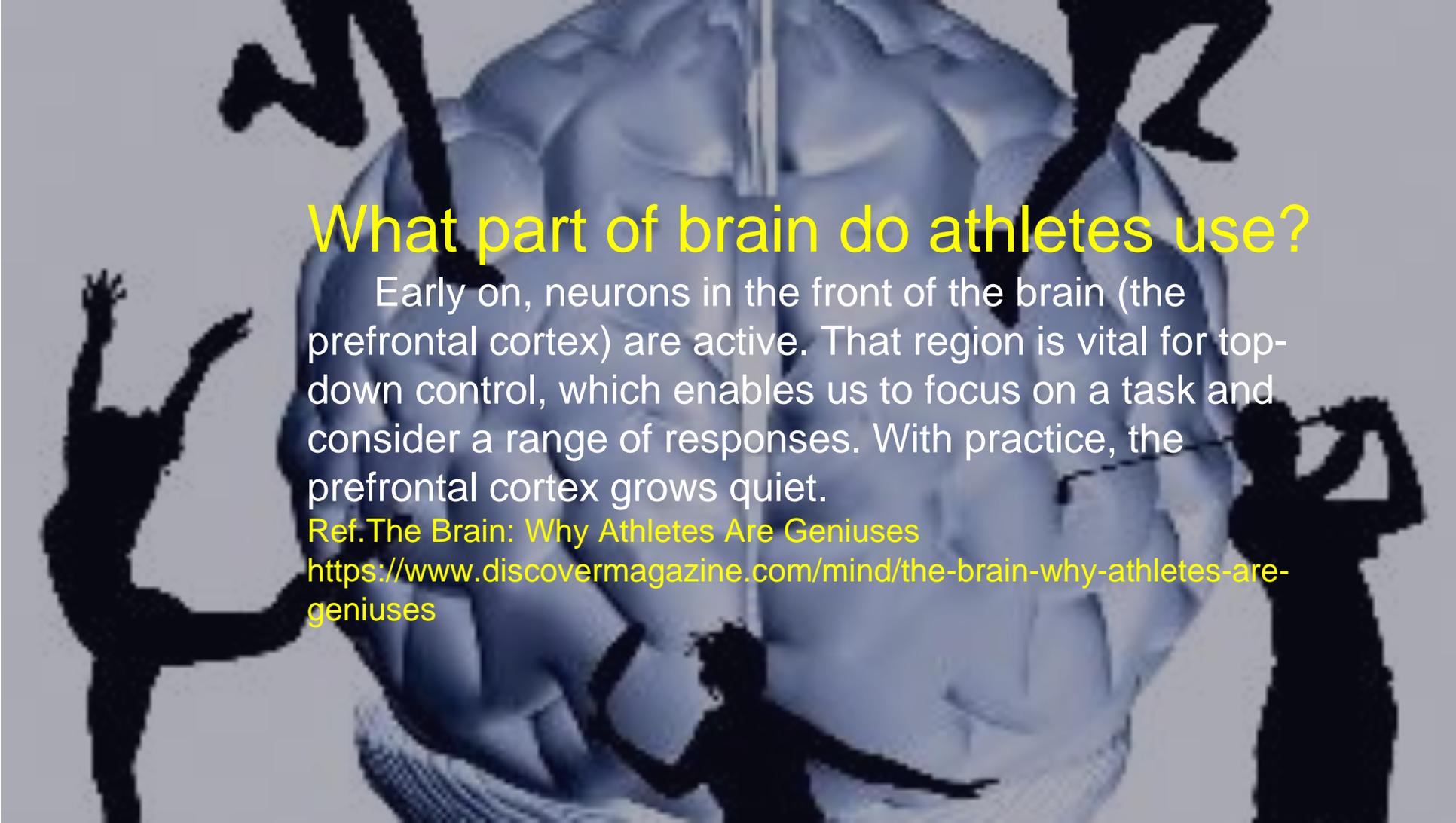
**Immediate
solution**

Creative

Research shows that playing sports boosts blood flow to your brain. This enables your body to build more connections between nerves within the brain. This improves memory, stimulates creativity, and helps your brain develop better problem-solving skills. One study found that playing sports can improve brain function.

www.prevagan.com





What part of brain do athletes use?

Early on, neurons in the front of the brain (the prefrontal cortex) are active. That region is vital for top-down control, which enables us to focus on a task and consider a range of responses. With practice, the prefrontal cortex grows quiet.

Ref. [The Brain: Why Athletes Are Geniuses](#)

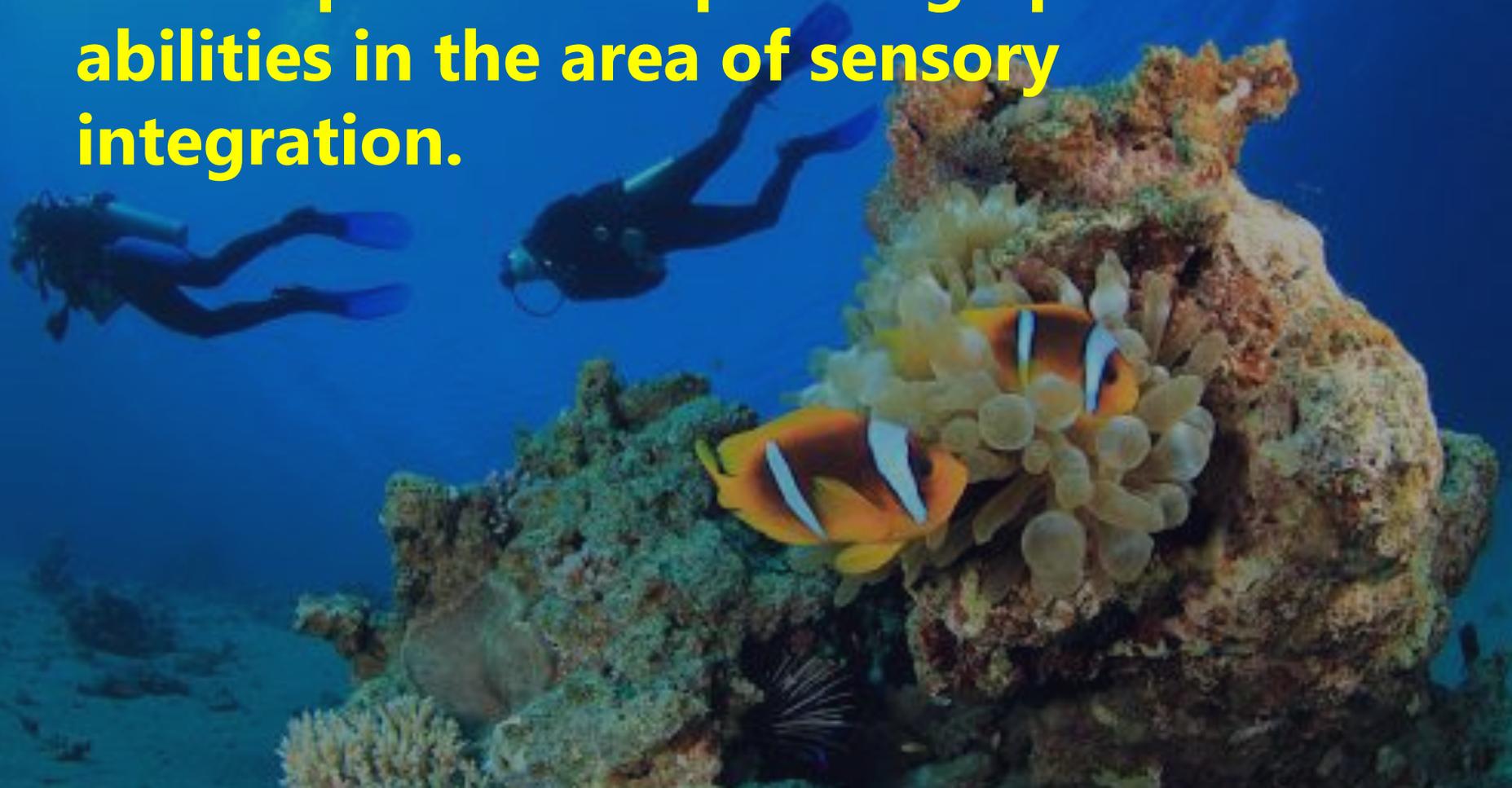
<https://www.discovermagazine.com/mind/the-brain-why-athletes-are-geniuses>

sport is an effective method of development and improvement of intelligence. Intelligence has specific functions in sports activity; its development relates to a number of complex factors such as problem-solving skills, formation of cognitive skills, social behavior and interpersonal relationships.





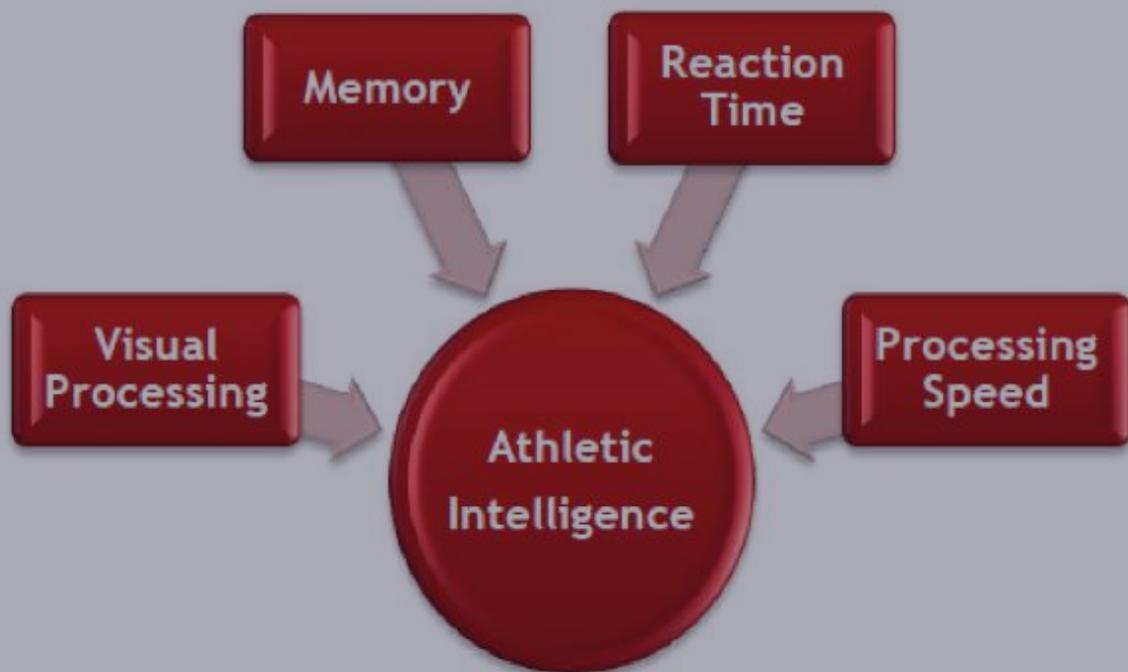
These sports all require high precision abilities in the area of sensory integration.



What is the Athletic Intelligence Quotient (AIQ)?

The Athletic Intelligence Quotient (AIQ) measures intelligence that is *most relevant to athletic performance*. Conventional IQ tests such as the Wonderlic focus on aspects of intelligence that aren't relevant to athletes, while missing the most important cognitive abilities that *determine athletic success or failure*. Plus, the AIQ provides an in-depth and sport specific analysis of each score.

The main components of the AIQ are:





<https://www.youtube.com/watch?v=cTfxennz3xU>