



# Aerobic and Anaerobic Exercise: How Your Body Works

KS3 PE

KS3 SCIENCE

Ages 11-14



3 min read

## What's the Difference?

When you exercise, your muscles need energy to work. Your body gets this energy in two main ways: **aerobic exercise** and **anaerobic exercise**. The difference comes down to whether your muscles are using **oxygen** or not.

**Aerobic exercise** means 'with air' or 'with oxygen'. When you do aerobic exercise, your muscles use oxygen from the air you breathe to create energy. This is how your body powers activities like jogging, swimming, cycling, or playing football. These are usually activities you can do for a long time without stopping.

**Anaerobic exercise** means 'without air' or 'without oxygen'. This is when your muscles work so hard and so fast that they don't have time to use oxygen for energy. Instead, they use a quick fuel source stored in your muscles. This powers short bursts of intense activity, like sprinting, weightlifting, or doing a high jump.

Think of it like your phone charging. Aerobic exercise is like plugging your phone in slowly over time for a steady, long-lasting charge. Anaerobic exercise is like a quick power boost that works super fast but only lasts a short time before the phone runs out of that emergency energy.

## Why Your Body Needs Both

Your body uses aerobic exercise to build **fitness and endurance**. When you do regular aerobic activities, your heart gets stronger, your lungs become more efficient, and you can keep going for longer without getting tired. This is why people who run marathons train using aerobic exercise.

Anaerobic exercise builds **strength and power**. Short, explosive movements train your muscles to be fast and powerful. Sprinters and weightlifters rely heavily on anaerobic fitness.

Think of it like a car. Aerobic fitness is like good fuel efficiency that lets you drive a long distance. Anaerobic fitness is like having a powerful engine that goes really fast

for short journeys.

## What Happens in Your Body

During aerobic exercise, your breathing and heart rate increase so more oxygen reaches your muscles. Your body can keep this up for hours if you're fit enough.

During anaerobic exercise, your body builds up something called **lactic acid** in your muscles, which makes them feel tired and heavy. This is why you can only sprint for a short time before you need to stop and catch your breath.

The best fitness comes from doing both types of exercise regularly. That's why **PE lessons** mix steady-paced activities like running with explosive movements like jumping and sprinting. Together, they make you a balanced, healthy athlete.