The Four Building Blocks Your Body Gets from Food

KS4 BIOLOGY Ages 11-14 ⏰ 3 min read

What Are Biomolecules?

Every time you eat a meal, you're not just filling your stomach—you're giving your body **biomolecules**. These are special molecules made from **carbon**, **hydrogen**, and **oxygen** that do all the work keeping you alive. There are four main types, and each one has a different job in your body.

Think of it like building blocks: just as a builder needs different materials like wood, metal, and plastic to construct a house, your body needs different biomolecules to build and run everything.

Carbohydrates: Your Body's Fuel

Carbohydrates are your body's favourite energy source. When you eat bread, pasta, rice, fruit, or sugar, you're eating carbohydrates. Your body breaks them down into a simple sugar called **glucose**, which your cells use to power everything you do—from running and thinking to growing.

There are two types: **simple carbohydrates** (like sugar in sweets) give you quick energy, and **complex carbohydrates** (like the starch in potatoes) release energy slowly and keep you fuller for longer.

Proteins: The Builders and Fixers

Proteins are made from smaller units called **amino acids**. Your body uses proteins to build and repair muscles, skin, hair, and bones. You get proteins from meat, fish, eggs, beans, nuts, and cheese.

Think of it like Lego: amino acids are individual bricks, and proteins are the structures you build when you click them together in different combinations.

Lipids: Energy Storage and Protection

Lipids are what we usually call fats and oils. They store much more energy than carbohydrates and help your body absorb important vitamins. Lipids also protect your organs and make up part of every cell in your body. You find them in butter, olive oil, nuts, avocados, and fatty fish.

Nucleic Acids: Your Instruction Manual

Nucleic acids like **DNA** carry the instructions for building and running your body. They tell your cells how to make proteins and pass information from your parents to you. You get small amounts from all foods, but they're especially important in cells from plants and animals.

Think of it like a recipe book: nucleic acids are the instructions that tell your body how to do everything.

Your body needs all **four biomolecules** to stay healthy, grow, and have energy. That's why eating a balanced diet with different foods—proteins, carbs, healthy fats, and plenty of vegetables—is so important!