



How Your Body Keeps Its Temperature Stable

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Your Body's Perfect Temperature

Your body needs to stay at exactly the right temperature to work properly. That temperature is around **37°C** — whether you're in a freezing snowstorm or a boiling hot desert. Your body is incredibly clever at keeping itself at this sweet spot, and it does this all day and all night without you even thinking about it.

This ability to control your temperature is called **thermoregulation**, and it's one of your body's superpowers. Many other animals can't do this as well as humans — that's why a lizard needs to sit in the sun to warm up, but you stay warm wherever you go.

Think of it like a house with a thermostat. When the house gets too cold, the heating turns on. When it gets too hot, the air conditioning kicks in. Your body does exactly the same thing, but without any buttons or switches!

When You're Too Hot

When your body temperature starts to rise, your body springs into action. First, you start to **sweat**. Millions of tiny sweat glands all over your skin release water, and when this water evaporates, it cools you down — just like how a wet cloth feels cold as it dries.

Your blood vessels also widen, bringing more blood to the surface of your skin. This lets heat escape into the air around you, like opening windows in a hot room. You might also feel like sitting still or moving somewhere shady — your brain is actually telling you to cool down!

When You're Too Cold

When your temperature drops, your body fights back the opposite way. Your **muscles start to shiver** — those tiny, rapid movements create heat energy, like rubbing your hands together quickly when you're freezing. Your body also tightens the blood

vessels in your skin to keep warm blood inside your body and away from the cold surface.

You might also feel goosebumps appear on your skin. These are left over from when our ancestors had fur — they made the fur stand up to trap warm air. Now they don't do much, but your body still tries!

Think of it like wearing a puffy winter coat. When it's cold, you put on the coat to keep heat in. When it's hot, you take the coat off. Your body does this with blood vessels and sweat instead of clothing.

Your Brain is the Boss

A special part of your brain called the **hypothalamus** is in charge of temperature control. It's like a thermostat that constantly checks your body's temperature and decides what to do. When it senses you're too hot or too cold, it sends signals to your skin, muscles, and blood vessels to make adjustments.

This amazing system keeps you healthy and ready for whatever the weather throws at you!