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How Does the Ozone Layer Act Like Earth's Invisible Sunscreen?



You've probably used sunscreen to protect your skin on a sunny day. But did you know that Earth has its own natural sunscreen high above us? It's called the ozone layer, and it plays a big role in keeping all living things safe from the sun's harmful rays.

The ozone layer is a thin shield of gas found in the stratosphere, which is a layer of Earth's atmosphere. It's made up of ozone, a special kind of oxygen that has three atoms instead of the usual two. Even though it's invisible and far above our heads, it works hard every day to protect life on Earth.

The sun gives us light and warmth, but it also gives off something called ultraviolet (UV) rays. These rays can be dangerous in large amounts. Too much UV exposure can cause sunburns, eye damage, and even skin cancer. It can also harm plants, animals, and even tiny ocean life called plankton. That's where the ozone layer comes in.

Like sunscreen on your skin, the ozone layer blocks most of the sun's UV rays from reaching the ground. It absorbs the strongest rays so they can't hurt us. Without the ozone layer, life on Earth would have a much harder time surviving. But the ozone layer hasn't always been safe. Years ago, people used chemicals called CFCs (chlorofluorocarbons) in things like spray cans and old air conditioners. These chemicals rose into the atmosphere and started to break down the ozone. This caused a hole in the ozone layer, especially over Antarctica.

When scientists discovered the damage, many countries agreed to stop using CFCs. This important agreement was called the Montreal Protocol. Thanks to this action, the ozone layer is slowly healing. It's not perfect yet, but it's getting better.

Just like you protect your skin with sunscreen, Earth needs the ozone layer to stay healthy. By learning about it and making smart choices for the planet, we can help protect our invisible shield in the sky—and everything underneath it.