

## Skin Cancer and the Ozone Layer

The rates of skin cancer are on the rise. Every year, tens of thousands of new diagnoses are made, with many patients having recurring diagnoses. There are several factors that can contribute to the onset of skin cancer, including heredity and skin type, but the undisputed heavyweight of skin cancer causes is still the sun's ultraviolet rays. So, one can only assume that the increased number of cancer patients is directly related to an increased exposure to the sun. This is not only the fault of the people, but also the fault of the planet.

The Ozone layer is a crucial element of our atmosphere. It helps keep us safe by protecting us from the sun's natural radiation. Consisting of triple bonds of oxygen, the Ozone layer envelopes the planet, decreasing the amount of ultraviolet rays that reach our surface.

Ironically, human beings have slowly been destroying this very layer that was meant to protect us and ensure our survival. Scientists are concerned because pollution and climate change have effectively eliminated as much as fifty percent of the higher layers of the Ozone layer. Approximately thirty percent of the crucial layer in its entirety has already been destroyed.

The depletion of the ozone layer has reached epic proportions, and more and more cases of skin cancer are being diagnosed. The United Nations' Environment Program has estimated that for every one percent of the ozone layer we lose, there will be a two to three percent rise in the average person's chance of getting skin cancer. This serves as further proof that each one of us must take every precaution when exposing ourselves to the increasingly dangerous rays of the sun. When you venture outside in the sun, cover up as best you can. Wear a wide-brimmed hat to protect your head and face, and apply sunscreen with a high SPF factor to any exposed skin. Thin layers of light, loosely woven clothing do little to prevent the transmission of UV rays. Instead, choose tightly woven clothing, or look for fabrics specially designed to block UV rays.

Humans are not the only living creatures feeling the effects of our shrinking ozone layer. Other animals and even plants are experiencing the negative effects of increased ultraviolet rays. Scientists in Tierra del Fuego conducted tests, and found that plants receiving higher levels of ultraviolet exposure faced an increased level of DNA damage.

So, how can we help to undo the damage we've done? Is it possible to prevent further depletion of the ozone layer? If only it were easy enough for one person to fix.

More than a decade ago chlorofluorocarbons, or CFCs, caused the initial damage to the ozone layer. These chemicals have since been banned, severely easing our individual contributions to the destruction of the ozone layer. In fact, most of the damage currently affecting the ozone layer is due to the illegal use of stockpiled CFC products and equally destructive HCFC products, both of which will be phased out by most nations by 2015.

The ozone layer may begin to mend itself, but this is not expected to happen for the next 10 to 15 years, if at all. In the meantime, all we can really do is protect ourselves from the sun's rays, and hope that corporations begin to take responsibility for their destructive actions.

If we work together, we may be able to save the planet that gives us all life.