

Gases can dissolve in fluids. The dissolution of gases in fluid lasts till the state of dynamic balance. The force that tends molecules of a gas to leave the fluid is called tension. The partial pressure is the pressure of one gas in another. In the alveolar air there are 1000 mm Hg of PO₂ and 40mm Hg of PCO₂. In the arterial blood they are 40 mm Hg of PO₂ and 46mm Hg of PCO₂ and in tissues- 60 mm Hg of PCO₂ and 20-40 mm Hg of PO₂.

Conclusions. The respiratory system plays a very important role in human body and it is responsible for obtaining oxygen and getting rid of carbon dioxide and aiding in speech production and in sensing odors.

THE EFFECT OF UV RADIATION ON HUMAN ORGANISM

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Introduction. Ultraviolet (UV) is a form of electromagnetic radiation with wavelength from 10 nm to 400 nm, shorter than that of visible light, but longer than X-rays. UV radiation is present in sunlight, and constitutes about 10% of the total electromagnetic radiation output from the Sun. While it has some benefits for people, including the creation of Vitamin D, it also can cause health risks.

The aim. To study the sources of UV radiation, types of UV radiation, the effect of UV radiation on biological objects.

Materials and methods. As we know that Ultraviolet is a form of electromagnetic radiation with wavelength from 10 nm to 400 nm. And the most important source of this radiation is the sun. Also there are some other *artificial* sources of UV radiation, for example: tanning beds, mercury vapor lighting (often found in stadiums and school gyms), some halogen, fluorescent, and incandescent lights, some types of lasers.

As for types of UV radiation, it is classified into three primary types: ultraviolet A (UVA), ultraviolet B (UVB), ultraviolet C (UVC).

These groups are based on the measure of their wavelength, which is measured in nanometers (nm= 0.000000001 meters or 1×10^{-9} m).

Table 1. Types of UV radiations

Wave type	UVA	UVB	UVC
Wavelength	315-399nm	280-314nm	100-279nm
Absorption level	Not absorbed by ozone layer	Mostly absorbed by ozone layer, but some of it reaches the Earth surface	Completely absorbed by the ozone layer and atmosphere

Research results. All of the UVC and most of the UVB radiation is absorbed by the earth's ozone layer, so nearly all of the UV radiation received on Earth is UVA. UVA and UVB radiation can both affect the human health. Even though UVA radiation is weaker than UVB, it penetrates

deeper into the skin and is more constant throughout the year. Since UVC radiation is absorbed by the Earth's ozone layer, it does not pose as much of a risk.

The effect of UV radiation:

- UV exposure increases the risk of potentially blinding eye diseases, if eye protection is not used.

- Premature aging is side effects of prolonged UV exposure.
- Overexposure to UV radiation can lead to serious health issues, including cancer (Skin cancer).

- Eye diseases.

- Weakening the efficiency of the human immune system.

- UV rays activate the virus that causes AIDS.

Conclusions. Despite these effects caused by ultraviolet rays it has many benefits such as:

- Ultraviolet rays help the body to produce vitamin D by exposure to sunlight.
- Ultraviolet rays are a tool used to sterilize some surgical instruments through special lamps.

- Ultraviolet rays are used by scientists to study the degree of durability of materials before using them in various industries.