

## FAST FACTS

# Red Light Therapy

## *Photobiomodulation (PBM)*

### What

Red light therapy is a form of photobiomodulation that uses red and near infrared light, usually with a wave length between 660nm – 830nm, and is applied using LED lights or in some cases cold laser. At these wavelengths the lights produce little or no heat, therefore red light therapy is often referred to as cold light therapy or cold laser therapy.

### How it works

Red light at these wave lengths penetrates through the skin and into the tissues below. Red light has been shown to penetrate to a depth of around 10mm, whereas near infrared light penetrates deeper to around 50mm. The red light is detected by photoreceptors in the mitochondria of the cells stimulating them to produce more energy. Detection of red light by the cells also causes the release of nitric oxide which dilates blood vessels and improves blood flow.

### Pros

- Stimulates collagen production by increasing fibroblast cell activity.
- Improves scarring, acne, and other skin conditions.
- Improves blood circulation throughout the tissues.
- Reduces pain and inflammation.
- Improves immune cell function.

### Cons

- There are no known side effects of red light therapy however the quality of the light used can affect the results of the treatment.
- Each treatment can take up to an hour, and often several treatments per week are required.



### Contraindications

People who experience sensitivity to red light therapy should discontinue its use.

### Learn more

[Everyday Health Red Light Therapy Guide](#)

[Biohacking with light: The science and benefits of photobiomodulation](#)