PHOTOBIOMODULATION

Just as our human cells need nutrients from food, light is also a necessary nutrient for our cells to function well and be healthy. Most people's light exposure habits are the equivalent of eating an all McDonalds diet all day, everyday, which is linked to several health problems. Different types of light are "bioactive" in humans, meaning they affect the functioning of human cells. Our health is largely influenced by the dosage of these different types of light that we get each day. It turns out, we NEED red and near infrared light to function optimally.

Red Light Therapy affects numerous physiological and biochemical mechanisms, but we will focus on the two key mechanisms:

1. Increased Mitochondrial Energy Production
-These wavelengths of light penetrate the cells 15cm and stimulate ATP production through interacting with a photo receptor called Cytochrome C Oxidase. This means more cellular energy inside the cell, which allows the cell or organ to work optimally (eg muscles, brain, heart, liver, skin, etc)

2. Reduced Inflammation and Enhanced Cellular Resilience by creating a temporary, low dosemetabolic stress (like exercise) that ultimately builds up the anti i nflammatory, anti oxidant and cell defence systems of the cell (known as hormesis). This creates lasting adaptations at the cellular level that lead to more resilience against stressors and a greater capacity to produce energy.