

SOLAR SPECTRUM

UVB

Stimulates the production of vitamin D, beta-endorphins, and serotonin, improves diversity of the gut and skin microbiome. Vitamin D made in the skin protects skin cells from UV damage, helps prevent cell death, and protects from melanoma.

UVA

Nitric oxide release; Improves diversity of the skin microbiome.

INFRARED

Makes up the majority of the energy from sunlight, stimulates the heat receptors in the skin and penetrates deep into the body, even through clothing; perceived as warmth.

ULTRAVIOLET

VISIBLE LIGHT

INFRARED



BLUE LIGHT

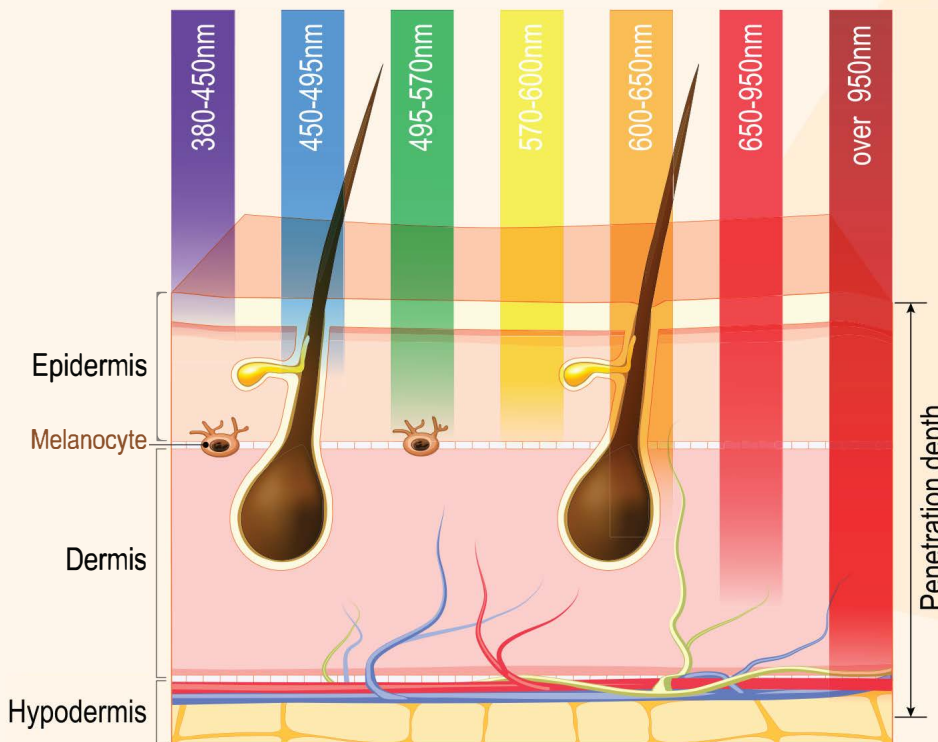
Strongest effect on the regulation of the circadian rhythm, suppresses secretion of melatonin from the pineal gland, reduces depression, increases circulating beta endorphins, decreases systolic blood pressure, has an antibacterial effect.

RED AND NEAR-IR

Melatonin production in the mitochondria with a strong antioxidant effect, has a positive association with improved vitamin D and magnesium levels in the blood.

FAR INFRARED RADIATION

Blood pressure regulation, improved depressive symptoms, endothelial function, microcirculation, formation of new blood vessels, wound healing, and increased flow-mediated dilation of the blood vessels, warmth.



PENETRATION DEPTH

UVB (purple) is very shallow, only penetrates the very surface of the skin. Infrared (red) gets deep into the tissues and cells, into the mitochondria, penetrates through clothing, bone, and into the brain and cerebrospinal fluid



GrassrootsHealth
Nutrient
Research Institute

Moving
Research
Into Practice