

celluma



Illuminating Esthetics:

**Advanced Light Therapy
in the
Esthetic Treatment Room**

Learn it! Live it! Love It!

Illuminating Vitality



The Future of Light Therapy

“The day may not be far off when most homes will have a light source (most likely a LED device) to be used for aches, pains, cuts, bruises, joints, and which can also be applied to the hair and even transcranially to the brain”.

Note: this is the closing comment from a collaborative study conducted by researchers at Boston’s Mass General Hospital, the Harvard School of Medicine and the Harvard-MIT Division of Health & Sciences

(Annals of Biomedical Engineering, Feb 2012. The Nuts & Bolts of Low Level Laser (Light) Therapy)



MASSACHUSETTS
GENERAL HOSPITAL

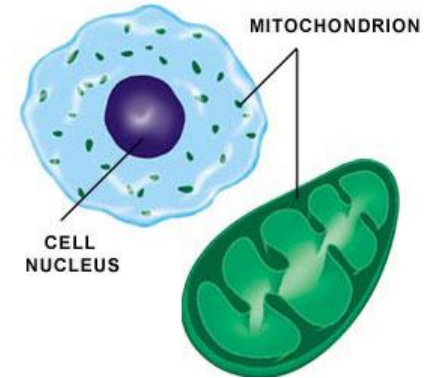


HARVARD
MEDICAL SCHOOL

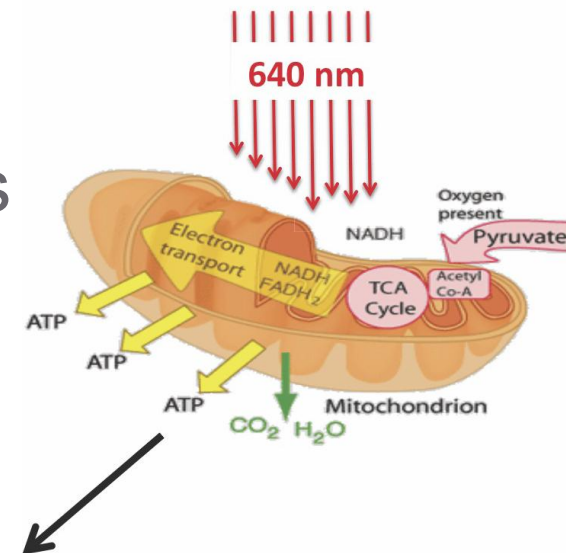
Wellman Center for Photomedicine

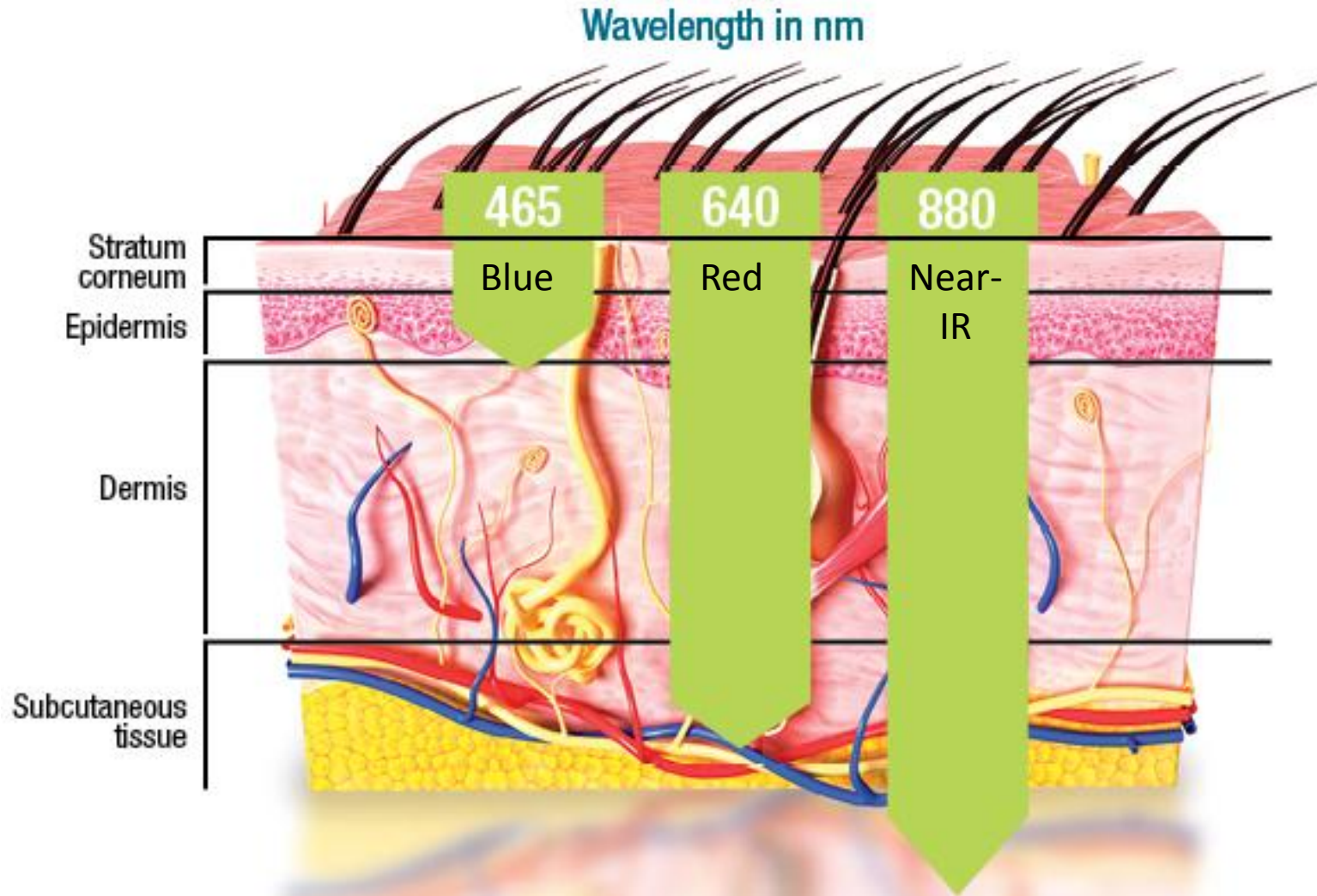
Think of it as a battery charger for *compromised cells* . . .

- Light source emits photons
- Photons are absorbed in the mitochondria and cell membranes
- Causing an elevation of ATP synthesis
- Increased ATP causes a cascade of metabolic events resulting in biochemical & cellular changes...



Light-Activated Biostimulation

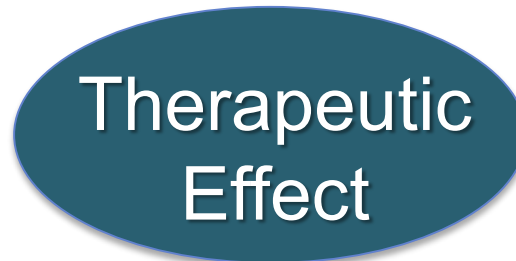




1. Specific Wavelengths



3. Treatment Time



2. Energy Delivered



4. Proximity to Skin

Inverse Square Law: Each time the distance of the light source is doubled from the skin, the ability of the tissue to absorb the light energy is diminished by 4 times.



- **Fibroblast Cells**: (red, a little IR). Produces collagen and elastin fibers in connective tissue.
- **Keratinocytes**: (both red and IR equally). Provides structural strength to the skin, hair and nails. Responsible for skin clarity, tone and texture.
- **Mast Cells**: (red, near IR). Essential for inflammatory reactions.
- **Neutrophil Cells**: (leukocytes): (little red, mostly IR). Are the first line of defense in the inflammatory process. Adequate numbers are important to protect the body from infection.
- **Macrophage Cells**: (leukocytes): (red and IR). Play a vital role in activating specific immune responses.
- **P. acnes bacteria**: (blue) causes bacteria to destroy itself.

Acne

Blue Light Dominant
(465 nm)

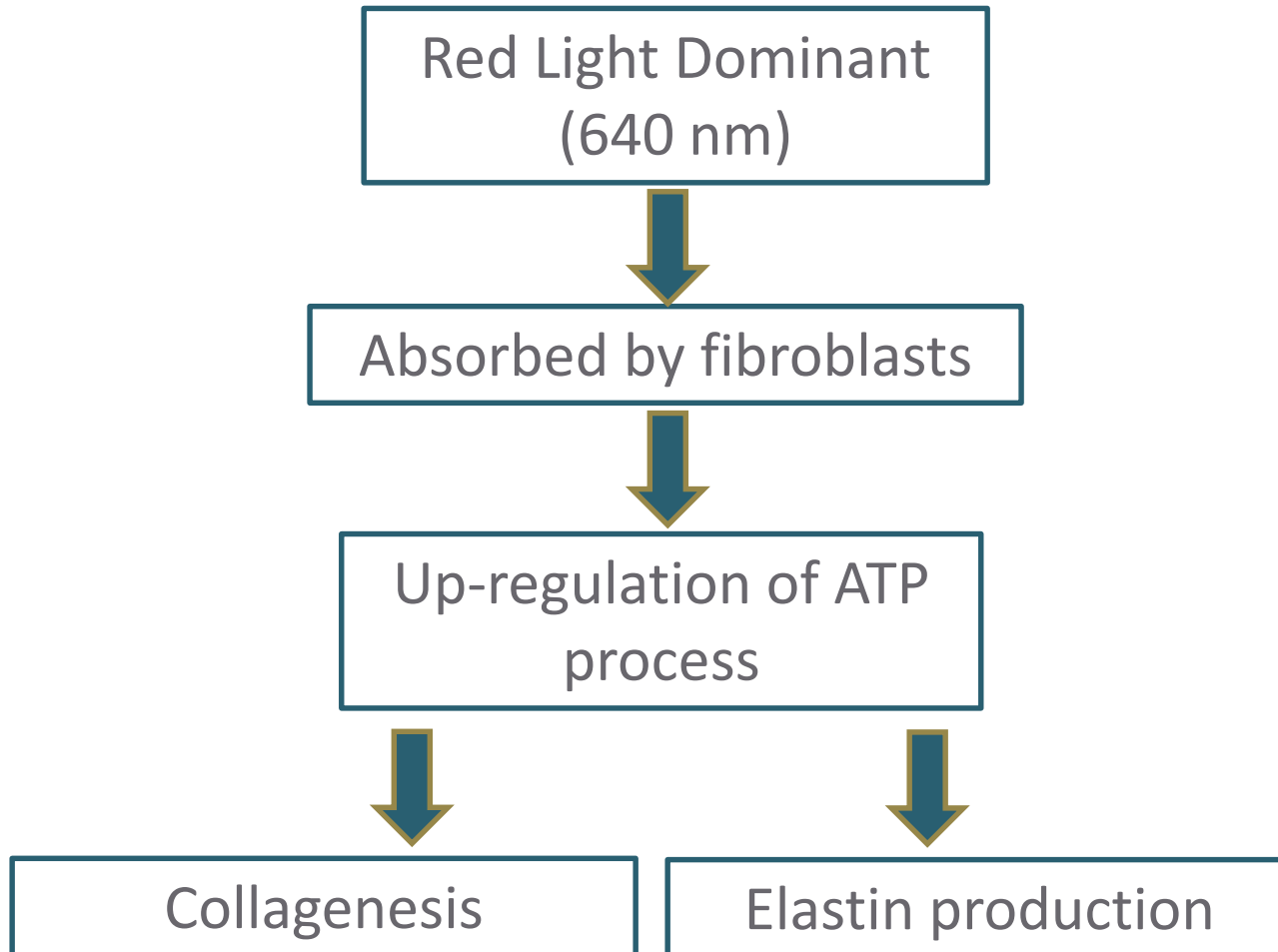


Singlet oxygen is produced



P. acnes self-destruction
A phototoxic reaction caused
by singlet oxygen
(a bacteriacide)

Wrinkles



Pain

Near – infrared dominant
(880 nm)



Creates Angiogenesis



Decrease Inflammation



Pain Reduction

Wound Healing

Red + IR wavelengths
(640 + 880nm)



Absorbed by epithelial cells



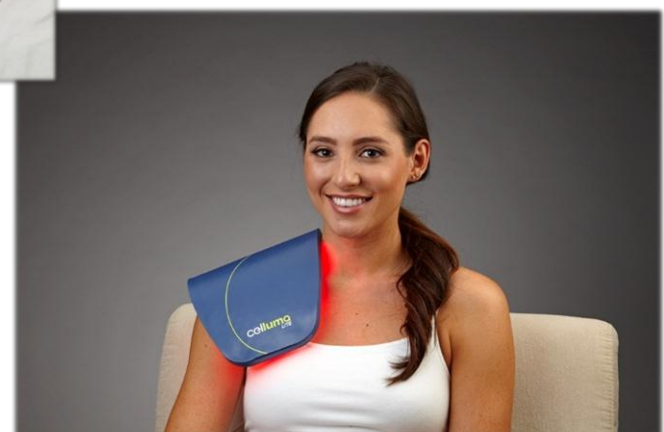
Up-regulation of ATP process – cell migration



Angiogenesis

Perfect Combination of Sophistication & Simplicity







Celluma PRO



Celluma ELITE



Celluma LITE



Before Celluma



8 weeks later
2 x weekly
No other modalities used



Before Celluma



8 weeks later
2 x weekly
No other modalities used



Before Celluma



5 weeks later
2 x weekly
No other modalities
used



Before Celluma



**2 weeks later
2 x weekly
4 treatments total**



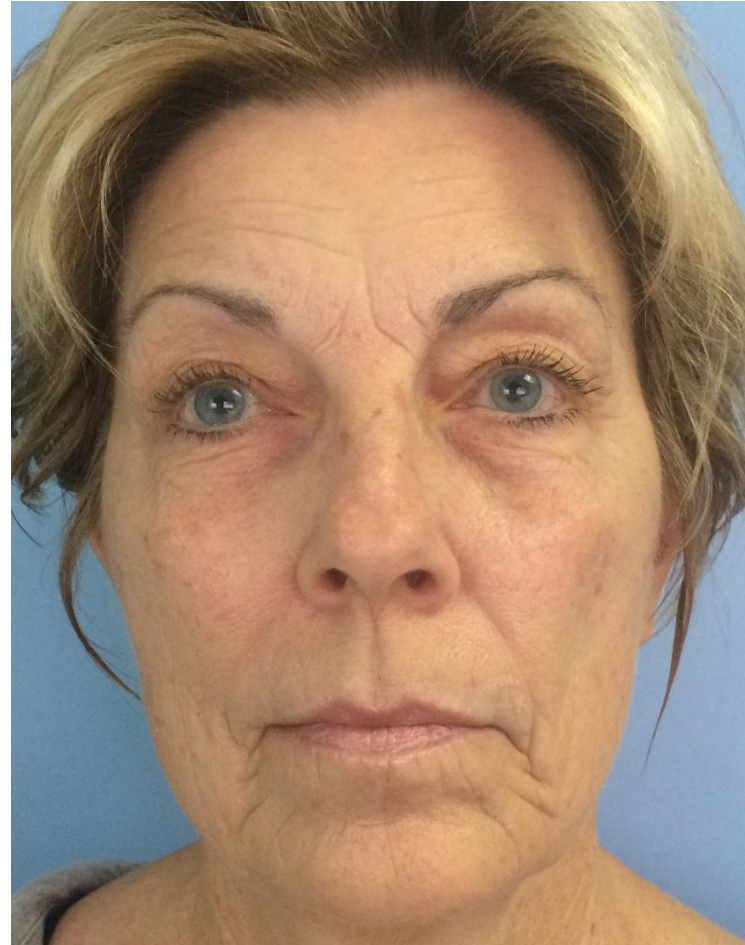
Before Celluma

**2 weeks later
2 x weekly
4 treatments total**





Before Celluma



12 weeks post treatment



Before Celluma



12 weeks post treatment

Firming Skin and Smoothing Wrinkles



4 week treatment - 8 weeks post treatment





Bruise before
Celluma



Bruise after
one 30 minute
Celluma treatment



Arm bruise before Celluma



Arm bruise after 1 Celluma treatment
(20 hours apart)



Bruise before
Celluma



Bruise after
one 30 minute
Celluma treatment

Collaboration with The Semper Fi Fund

- Celluma is provided to Wounded Warriors for pain relief

