

## UNDERSTANDING SKIN CONDITIONS

# Hyperpigmentation

### MELASMA/PHOTODAMAGE/POST-INFLAMMATORY

Hyperpigmentation occurs when excess melanin causes a darkened appearance to the skin in either small or large areas.

Pigmentation is the natural colour of a person's skin and it is related to melanin production. Melanin protects skin cells and their DNA by absorbing the sun's ultraviolet rays (UVR).

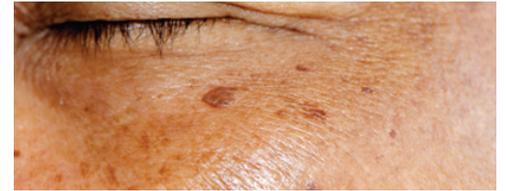
Darker skin types, in general, are more susceptible to hyperpigmentation than lighter skin types because their skin naturally contains more melanin.



**Melasma** Linked to endocrine system (hormones).



**Post-inflammatory** Linked to trauma/ burns/ acne / poorly performed treatments.



**Age Spots** Linked to UVA exposure, pollution and DNA damage.

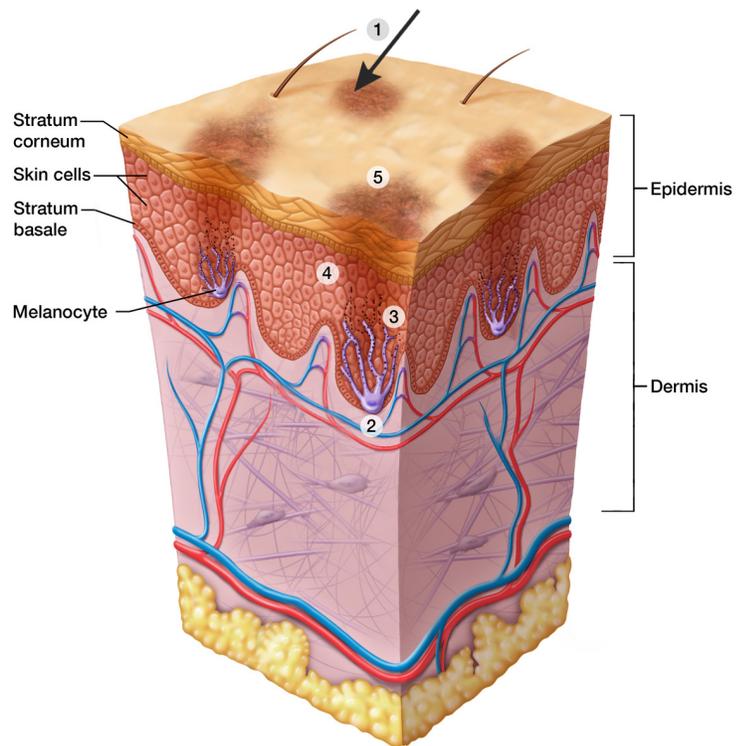
#### Hyperpigmentation Types and Triggers:

1. **UV induced:** This type of hyperpigmentation shows in the form of freckles, age spots and uneven skin tone. It is caused by exposure to ultraviolet rays (UVR), whether from the sun or tanning beds.
2. **Post-Inflammatory Hyperpigmentation (PIH):** PIH is found in areas of the skin that have been subjected to inflammation due to trauma, acne or irritation (eg. fragrances). Inflammation stimulates Langerhans cells (immune cells), which alter the activity of melanocytes (skin cells), causing increased pigment production.
3. **Melasma (chloasma):** Melasma appears as symmetrical patches most often on the cheeks, chin, upper lip and forehead. It can be related to pregnancy, birth control pill, menopause or hormone replacement therapy.

#### The Hyperpigmentation Process:

1. Hyperpigmentation triggers eg. Inflammation, UV rays, hormones.
2. Melanin production is stimulated within melanocytes. Tyrosinase is one of the key enzymes in this process.
3. Melanin is transferred from melanocytes to skin cells.
4. Skin cells are in a constant state of upward motion to the surface.
5. Skin develops dark spots or areas on the surface, or is uniformly darker (as in a tan).

Hyperpigmentation can become darker as the skin cells move closer to the surface. This point is important because with many treatments, hyperpigmentation can darken in appearance before fading.



### TREATMENT PATHWAY FOR HYPERPIGMENTATION

Follow these four steps using the associated ingredients to target pigmentation:

