

## UNDERSTANDING SKIN CONDITIONS

# Discolouration & Uneven Skin Tone

### MELASMA/PHOTODAMAGE/POST-INFLAMMATORY HYPERPIGMENTATION

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

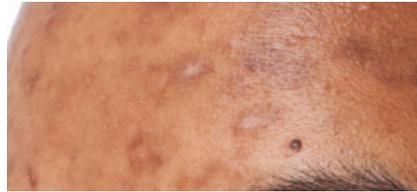
Pigmentation is the natural colour of a person's skin and is related to melanin production. Melanin protects skin cells and their DNA by absorbing the sun's ultraviolet rays (UVR).

Darker skin types, in general, are more susceptible to hyperpigmentation than lighter skin types because their skin can naturally produce melanin more efficiently, as a natural defense mechanism.



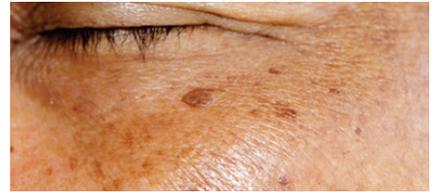
**Melasma**

Linked to the endocrine system (hormones), and genetics.



**Post-Inflammatory Hyperpigmentation**

Linked to trauma, burns, inflamed blemishes, poorly performed treatments.



**Photodamage**

Linked to UVA exposure, and weakened skin defenses.

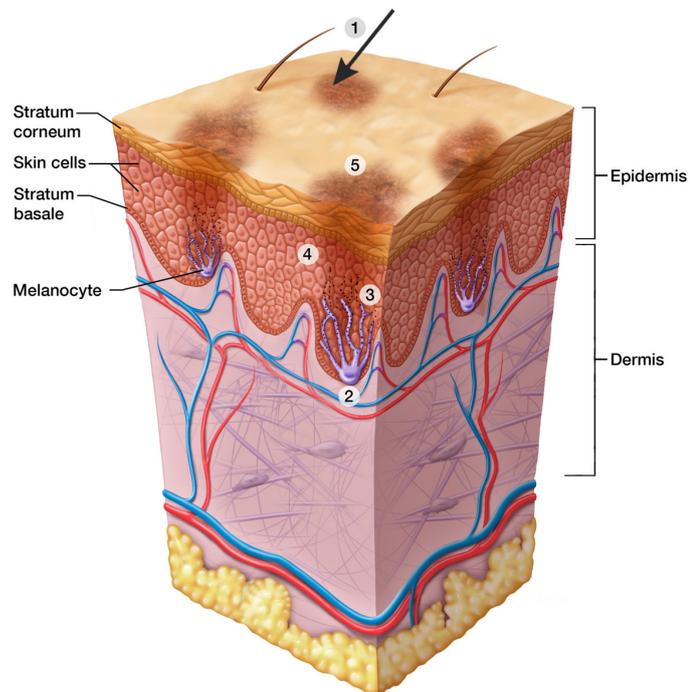
#### Hyperpigmentation Types and Triggers:

1. **Melasma (chloasma):** Appears as symmetrical patches most often on the cheeks, chin, upper lip and forehead. It can be related to genetics, pregnancy, certain medications, and/or hormone imbalances.
2. **Post-Inflammatory Hyperpigmentation (PIH):** Found in areas of the skin that have been subjected to inflammation due to trauma, inflamed blemishes or irritation (eg. fragrances). Inflammation stimulates Langerhans cells (immune cells), which alter the activity of melanocytes (cells that produce melanin), causing increased melanin (pigment) production.
3. **Photodamage:** This type of discolouration can present in the form of freckles, age spots and uneven skin tone. It is caused by prolonged and/or repeated exposure to ultraviolet rays (UVR), whether from the sun or tanning beds.

#### The Hyperpigmentation Process:

1. External aggressors trigger an inflammatory response that activate the cells that produce melanin.
2. Melanin production is executed within the 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. Melanin accumulates on the surface. Skin presents dark spots, darkened patches or becomes uniformly darker (tan).

This process represents the complexity of effectively correcting discolouration and uneven skin tone, while preventing further damage from visibly presenting on the surface.



### TREATMENT PATHWAY

Follow these four steps using the associated ingredients to target discolouration & uneven skin tone:

