

# FACT SHEET

## Pigmentation

The colour of our skin is made of three components – melanin, collagen, and vasculature (blood vessels). The yellow in skin tone is imparted by collagen, and the pink shades by the vasculature. Most pigmentary disorders, however, are associated with excess melanin. Melanin is a brown pigment produced in the skin by special cells called melanocytes. Under the influence of sunlight (UV) and hormonal factors, melanin levels can become uneven across the skin, resulting in blotchiness, brown spots, and more seriously, cancer.

Cosmetically, the most common pigmentary presentations are melasma and Diffuse Sun-related Hyperpigmentation (DSH). Melasma is a condition which usually occurs in younger women, and is influenced by both solar radiation and hormones. DSH is seen more in women over the age of 30, and presents as large slightly ash-brown areas that appear obvious in strong light and gives the forehead a dull, lifeless appearance. Melasma and DSH are caused by skin pigment cells (melanocytes) producing excess pigment (melanin).

Treatment of both these conditions involves:

1. Melanin inhibitors (compounds that prevent the melanocytes producing melanin)
2. Sunscreens (used 365 days of the year)
3. Time (treatment usually takes 6-12 months)

The strongest melanin-inhibiting ingredients are prescription-only products. These include lightening agents such as hydroquinone and retinoic acid. Your doctor will be able to prescribe the correct dosage of these short term therapies for you. The formula may need to be made up for you personally by a compounding pharmacist.

Topical niacinamide has been shown to suppress the distribution of pigment from the cells where it is made to the regular skin cells. Niacinamide is an extremely effective and gentle long-term maintenance therapy for pigmentation, and can also be used in conjunction with hydroquinone to enhance the initial treatment process. It should be used daily under sunscreen.

At night, regular use of a vitamin A compound called retinaldehyde helps to inhibit pigmentation, by blocking pigment-stimulating enzymes.

Sunscreens are vital in the prevention of pigmentation, because solar radiation is essential in initiating pigmentary changes. The most effective sunscreens for preventing pigmentation contain Zinc Oxide and Titanium Dioxide. Layering different kinds of sunscreens provides maximum protection from UV light.

Other intensive short-term therapy courses may also be recommended by your doctor or clinician to fast-track the reduction of your pigmentation. Options include Vitamin A peels, prescription-only retinoic acid/hydroquinone creams, chemical peels, IPL (Intense Pulsed Light), and other laser modalities.

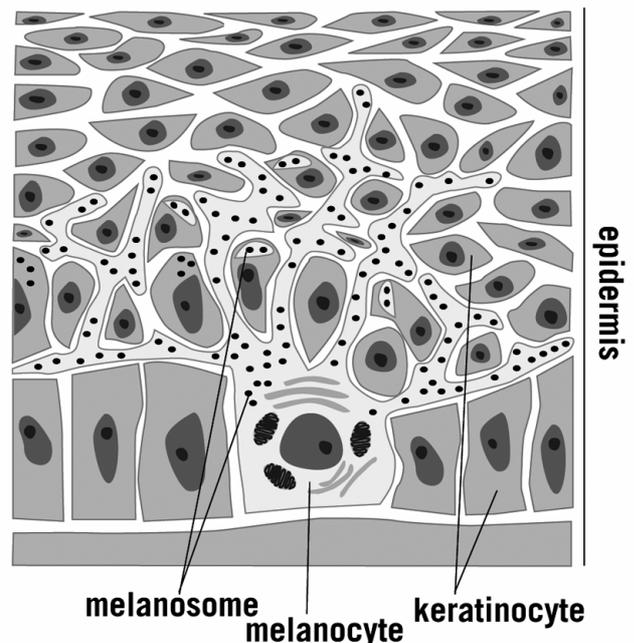
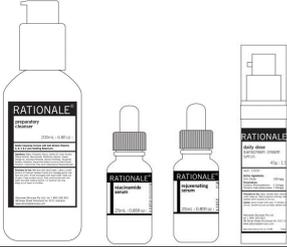


Fig 1. Schematic cross-section of an epidermal melanocyte. Packets of pigment called melanosomes are generated in the melanocyte, and migrate up the arms of the melanocyte into the normal skin cells, called keratinocytes.

## Our T<sub>x</sub> for Pigmentation

<p><b>PROCEDURES</b></p>	<p>IPL (Intense Pulse Light) Laser Resurfacing Prescription Peels Prescription Hydroquinone + Retinoic Acid Creams</p>
<p><b>DAY</b></p>	<ol style="list-style-type: none"> <li>1. Rationale Preparatory Cleanser</li> <li>2. Rationale Niacinamide Serum</li> <li>3. Rationale Rejuvenating Serum</li> <li>4. Rationale Daily Dose SPF 25</li> </ol> 
<p><b>NIGHT</b></p>	<ol style="list-style-type: none"> <li>1. Rationale Preparatory Cleanser</li> <li>2. Rationale Niacinamide Serum</li> <li>3. Rationale Retinaldehyde Serum</li> <li>4. Rationale Skin Refining Serum</li> </ol> 
<p><b>WEEKLY MONTHLY</b></p>	<ol style="list-style-type: none"> <li>1. Procedure microPeel</li> <li>2. Procedure Customised Peels</li> </ol> 