

PowerBright TR_x[™]

brighter skin, without compromise



dermalogica[®]

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introduction



PowerBri

Dermalogica

When it comes to signs of aging, hyperpigmentation is a top skin concern worldwide. Age spots and uneven skin tone (i.e., hyperpigmentation and hypopigmentation) are perceived as “aged skin,” while uniform, even-toned skin is perceived as “healthier and younger.” Unbalanced pigmentation distribution alone can add up to 12 years to a person’s perceived age!¹

These perceptions have led to a dramatic increase in consumer demand for products that treat hyperpigmentation. Unfortunately, many of these products are formulated with ingredients known to be harmful to the skin, frequently causing contact dermatitis, or even permanently damaging the skin’s melanin-producing architecture.

Dermalogica’s new **PowerBright TRx™** is the safer alternative. When integrated with any Dermalogica regimen, it brightens and helps balance skin tone while preserving the quality and integrity of the skin.

1 what causes hyperpigmentation?

PowerBright TRx™



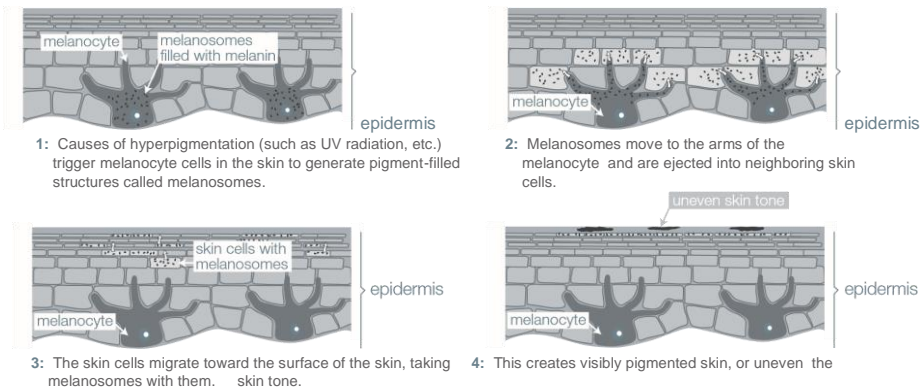
Scan this QR code with your mobile device or visit dermalinstitute.com to watch "Spot Check: Understanding or Treating Hyperpigmentation," featuring The International Dermal Institute's Vice President of Research and Development, **Dr. Diana Howard!**

When treating hyperpigmentation, therapeutic success largely depends on the cause of the discoloration. Is it due to UV exposure? Trauma, acne or hormones? Hyperpigmentation induced by UV rays or injury tends to respond well to treatment if caught early, while melasma and other hormonal influences are more difficult to treat. To better understand the causes of hyperpigmentation, we must understand the delicate biological processes that produce skin color.

Constitutive (“intrinsic”) skin color is the basic melanin content of our skin that is genetically inherited without any influence from sun exposure or hormones. Facultative (“extrinsic”) skin color is the result of other influences, such as sunlight and hormones. When treating unbalanced pigmentation, we are referring to facultative skin color resulting from influences other than genetics.

Melanin, the brown or reddish pigment in skin, is synthesized in dendritic cells called melanocytes. Regardless of race, we all have approximately 800 to 1,000 melanocytes per square millimeter of

Figure 1. how hyperpigmentation develops on skin



3 epidermis. A melanocyte cell looks like an octopus with long arms, or dendrites, extending upward into the stratum spinosum layer. Melanocytes in sun-exposed skin are larger with branched dendritic arms when compared to those found in protected skin.

When exposed to UV light, the pituitary gland in the brain generates a melanotropin called alpha Melanin Stimulating Hormone (α -MSH) or beta Melanin Stimulating Hormone (β -MSH). These melanotropin molecules bind to a specific receptor site (MC1-R) on the melanocyte, signaling melanin formation to commence. This receptor site is also affected by hormones such as estrogen, which accounts for the influence that hormones have on melanin formation. α -MSH not only stimulates pigment formation but also triggers the inflammatory and immune response.

Likewise, inflammatory modulators that trigger the immune response from the skin’s Langerhans cells also trigger melanogenesis. Hence, what was once called an epidermal-melanin unit is now more accurately referred to as the keratinocyteLangerhans-melanocyte complex.

Once the melanocyte is activated, eumelanin (brown-black melanin) formation commences. The melanin pigment is bound to a protein matrix and contained in an oval-shaped structure known as a melanosome. After the melanosome is produced in the melanocyte, it is transferred to a neighboring keratinocyte cell where it begins its journey through the different layers of the epidermis while contributing to the skin’s color (See Figure 1).

Regardless of skin color, the number of melanocytes does not vary among humans. There is approximately one melanocyte for every 36 keratinocytes found in the epidermis.

The amount of melanin, the type of melanin produced (whether it is eumelanin or yellow-red pheomelanin), the size of the melanosomes and the distribution of melanosomes in the epidermis all contribute to the skin’s color and intensity (the lightness or darkness of the skin). In black skin, we not only see larger melanosomes with more melanin present, but more of them. They are seen as larger, individual, jelly bean-like structures surrounded by a membrane, whereas melanosomes in Caucasian, Asian and Hispanic skin are smaller, vary in size and shape, and have many smaller melanosomes clustered in a single membrane jacket. **UV Exposure**

While the amount of melanin synthesized in our skin is determined by our genetics (constitutive skin color), there is an overriding effect of the environment, such as exposure to UV radiation, which determines skin pigmentation levels (facultative color). Due to the ability of melanin to absorb UV radiation, the primary function of melanin is believed to be to protect the cells/skin from sunlight. Upon exposure to UV radiation, melanin synthesis is stimulated, resulting in a characteristic tan.

Exposure to UV causes melanosomes to cluster, forming a protective cap over the nucleus of the cell. In addition to the development of an overall tan, exposure to UV light may also stimulate hyperpigmentation in specific spots on the hands, face and neck. These dark spots, often referred to as age spots or liver spots, are benign but unsightly.

Age spots usually become evident in the early 40s and become increasingly more evident as people age. By the time they reach 60 years old, 90% of all individuals will have sun-induced age spots, known as lentigines.²

Lentigines are harmless, flat, brown discolorations of the skin that range in size (from 2 mm—30 mm), and are, more than anything else, a factor in the perception of a person's age. They are caused by the skin being exposed to the sun over many years. Unlike freckles, they do not fade in winter. Freckles, also known as ephelides, are flat spots that are red or brown, typically appear during the summer months and fade in winter. They are most often found in individuals with fair skin and are generally a genetic trait.

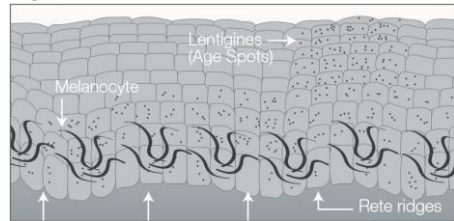


Figure 2. Age spots (lentigines) show flattened rete ridges (fingerlike projections at the dermal-epidermal interface) and a higher population of melanocyte cells.

Both freckles and age spots look very similar to the naked eye. Short of monitoring their color intensity in the summer versus winter months, the only way to distinguish the two is to look at a section of the skin under a microscope (See Figures 2 and 3).

Because light skin has fewer melanosomes, less melanin and lower levels of eumelanin than dark skin, there is less protection against exposure to UV

radiation. Likewise, in individuals with lighter skin, the majority of the melanin is confined to the lower layers of the epidermis; in darker skin, the melanin is evident throughout the layers of the epidermis. The darker the skin, the greater the incidence of melanin in the outermost layers of the stratum corneum.

It is believed that the enzymatic process whereby the usual protein/melanin complex is broken

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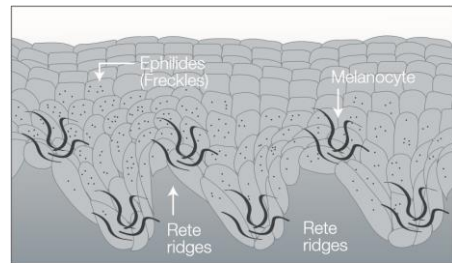


Figure 3. Freckles (ephelides) do not show any change to rete ridges and have a normal population of melanocyte cells. down as it transitions through the epidermis during keratinization is not as active in dark skin. This is most likely part of the protective role that melanin plays in the skin. While it seems logical that darker skin would be easier to treat due to the melanin being closer to the surface of the skin, the overall abundance of melanin in dark skin actually makes it more difficult to treat. Dark skin, even with its

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preponderance of melanin, is also not exempt from the ravages of UV exposure. It may be better equipped to protect itself, but it is still vulnerable to sun-induced hyperpigmentation as well as post-inflammatory hyperpigmentation, photodamage and skin cancer.

Post-Inflammatory Hyperpigmentation (PIH)

In addition to genetics and environmental influences, skin pigmentation is affected by endocrine (hormonal) factors, usage of prescription drugs, stress, topically-applied products including cosmetics, and wound healing to the skin tissue. The latter gives rise to post-inflammatory hyperpigmentation, a phenomenon that is more problematic for individuals with darker skin color.

PIH stems from the melanocytes' exaggerated response to injury, however slight, which results in an abnormal distribution of melanin in the tissues. Interestingly, melanocyte activity is stimulated by the same inflammatory mediators that are activated when the skin's immune response is activated. What affects the skin's Langerhans cells generally will stimulate the melanocytes, and vice versa. When inflammation subsides, the inflammatory mediators revert to normal levels, and so does the production of melanin.

In due course, the cells causing hyperpigmentation rise to the stratum corneum and slough off, causing the hyperpigmentation to disappear. Recent studies have shown that depending on the depth of the inflammation or wound, hyperpigmentation will be evident in both the epidermis and the dermis. This may account for the difficulty in treating post-inflammatory pigmentation associated with deeper scar tissue.³

Melasma

Hormonally-induced pigmentation manifests itself in various forms, such as hyperpigmentation spots and melasma, better known as the "mask of pregnancy." Melasma primarily affects women of child-bearing age. Some studies suggest that up to 75% of women may develop melasma during pregnancy and about 33% of women on birth control pills complain of this problem.³

Melasma is more prevalent in women with darker skin color and it is most commonly seen in areas that are exposed to sunlight. Some scientists say UV exposure seems to be a requirement for melasma to develop, which may account for the fact that it is less noticeable in winter months when UV exposure is lower.

Melasma is seen as an irregularly-shaped patch of hyperpigmentation ranging from light brown to dark brown. The most common pattern is

centrofacial: on the chin, upper lip, cheeks, nose and forehead. To a lesser extent, melasma is seen on the cheeks and nose, or on the jawline.

The name "mask of pregnancy" points to the frequent occurrence of melasma during pregnancy or use of oral contraceptives. Estrogen and UV light seem to be the biggest culprits in this condition. The hyperpigmentation may be permanent or disappear and reappear with subsequent pregnancies or use of birth control pills.

Melasma can also appear as the result of some ovarian disorders. It is believed that both estrogen and progesterone influence melanocyte activity, driving the production of melanin. When compared to melanocyte activity that is stimulated by sun exposure, hormonally-induced melanocytes are considered to be hyperactive. Hormonally-induced melanin may be confined to the epidermis but it may also be found in the dermis, making treatment especially difficult. Once hormonal fluctuations subside, such as the end of pregnancy or discontinuance of hormone supplements, or birth control pills, the hyperpigmentation often disappears. However, the condition may persist for up to five years after pregnancy or the stopping of birth control pills.

Unfortunately, once melasma manifests in skin, it is more likely to develop again in the future. To complicate matters, the melanin may reside in both the dermis and the epidermis, which accounts for why it is so difficult to treat (treating the dermal component is practically impossible with topically-applied products). **Pollution**

Recent studies indicate a possible correlation between pigmentation spots on the skin and

contact with pollutants in the air,⁴ adding environmental toxin exposure to the list of likely hyperpigmentation triggers.

quick reference

Causes of Hyperpigmentation	Common Signs
UV exposure	Age spots or liver spots on forehead, upper cheeks, hands and other areas frequently exposed to the sun.
Post-inflammatory hyperpigmentation (PIH)	Discolored marks from breakouts or wounds.
Melasma (hormones, pregnancy, contraceptive pills, ovarian disorders)	Irregularly-shaped brown patches in the centofacial area (forehead, cheeks, nose, upper lip, and possibly chin or jawline).
Other (stress, medication, topically applied products, pollutants)	Vary. Stress-related pigmentation may be visible around temples, jawline and sometimes above eyebrows.

terminology

Melanocyte

Dendritic cells that synthesize melanin, the brown or reddish pigment in skin.

Hyperpigmentation

Facultative skin color or pigmentation that results from exposure to ultraviolet rays, hormones, pregnancy, medications and inflammation. **Post-Inflammatory**

Hyperpigmentation

Hyperpigmentation that appears after inflammation of the tissue. Common causes include wounds, acne lesions or contact dermatitis.

Melasma

Hormonally-induced pigmentation from either pregnancy or birth control pills. Often called “the mask of pregnancy.”

α -MSH

Alpha Melanin Stimulating Hormone. Binds to the melanocyte, stimulating melanin formation and the inflammatory and immune response.

β -MSH

Beta Melanin Stimulating Hormone. Binds to the melanocyte, signaling melanin formation.

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how to control and treat hyperpigmentation

Treating hyperpigmentation is a multi-faceted process. Regularly applying a Broad Spectrum sunscreen of SPF50 is critical for preventing new hyperpigmentation as is using a combination of skin-brightening and exfoliating agents, which slough off existing pigmentation spots.

Lightening vs. Brightening — The Trouble with Hydroquinone

In the U.S., products formulated to lighten pigmentation are classified as over-the-counter drugs and must be in compliance with Federal Monographs that dictate what ingredients and claims may be made. Any other ingredient used to combat hyperpigmentation must be referred to as a brightening agent and not a lightener.

One of the most well-known skin-lighteners is Hydroquinone, which is recognized as a lightening agent by the U.S. Food and Drug Administration (FDA). Hydroquinone has been used in many skin-lightening products at concentrations of up to 2% without a doctor's prescription, but it has been banned in most of the world due to widespread concerns regarding its safety. Use of Hydroquinone has been linked to postinflammatory hyperpigmentation (PIH), ochronosis (a bluish-black discoloration of the skin), serious contact dermatitis and other adverse reactions.^{5,6,7} In addition, it is estimated that one-third of the population is allergic to Hydroquinone, and skin may become photosensitized with prolonged use, causing actual darkening of the skin.⁸

Figure 4. melanin chemical pathway

Mercury is another ingredient found in some skin-lightening products. In 2013, the FDA issued a consumer advisory to stop using products containing Mercury, Mercurio, Mercurous Chloride, Cinnabar or Calomel after discovering that several imported, non-FDA-authorized skinlightening products on the market contained toxic, unsafe levels of Mercury.

Fortunately, there are many alternative skinbrightening agents available today to combat hyperpigmentation and fight signs of aging both effectively and safely. Products formulated with these ingredients in effective combinations and concentrations can significantly affect melanin formation and help visibly even skin tone over time, with regular use and sufficient UV protection.

Skin-Brightening Agents

The skin health experts at The International Dermal Institute have long studied various skinbrightening agents and mechanisms known to impact melanin formation. We now know that

we can safely control the melanin production process

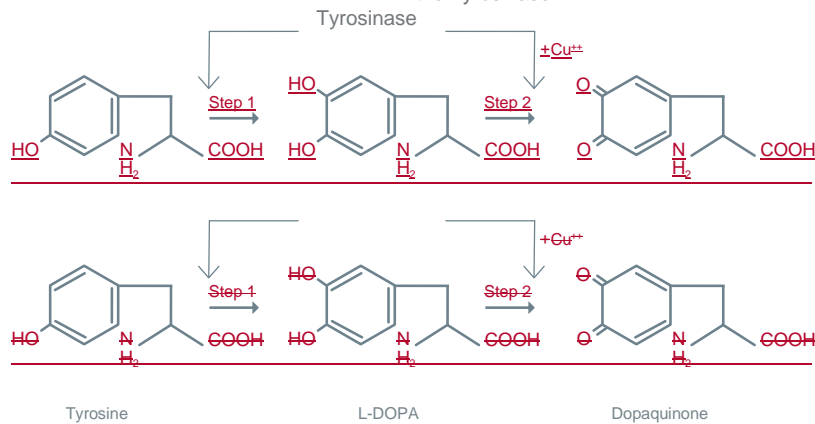
(melanogenesis) by influencing different steps along its biosynthetic pathway.

Perhaps the best-studied step along that pathway involves the Tyrosinase enzyme, a copper-containing enzyme that catalyzes two distinct reactions in the production of melanin. For years, scientists have looked for ways to regulate this enzyme and therefore slow melanin formation. One can regulate Tyrosinase by either slowing down its activity or competing for its substrates, either the amino acid Tyrosine (see Figure 4 step 1 below) or the amino acid L-DOPA (see Figure 4 step 2).

Eumelanin (see Figure 4 step 3) is the most common pigment seen in the skin. The content and intensity of this pigment will give an indication of the degree of photoprotection. Contrarily, Pheomelanin – seen in fair skin and red hair – is less common. It is also less stable to ultraviolet light, oxidizes more readily and offers no photoprotection to the skin.

Rice Extract is an example of an agent that controls Tyrosinase activity. The Phytic Acid found in Rice binds the Copper metal ion, slowing down step two of the Tyrosinase-mediated reaction. Kojic Acid and Zinc Glycinate are also examples of agents that chelate Copper to control Tyrosinase activity. Of particular interest is the Zinc Glycinate that stimulates synthesis of an antioxidant protein called Mettallothionein, which binds the Copper, stopping step two in the pathway. In addition, it reduces Tyrosinase synthesis and activity, and suppresses melanocyte growth factors that stimulate melanin synthesis.

Many botanical extracts have also been studied for their ability to inhibit Tyrosinase. These include Dipotassium Glycyrrhizate (Licorice), Palmaria Palmata (Red Algae), Ascophyllum Nodosum and Laminaria Ochroleuca (Brown Algae extracts). While the precise mechanism of how these work is not clearly understood, scientists believe these botanical extracts contain an active agent that competes with Tyrosine for the Tyrosinase



step 1: The amino acid Tyrosine is converted to the amino acid L-DOPA. This step is mediated by the Tyrosinase enzyme.

9 PowerBright TRx™ enzyme's attention. Through a chemical process called competitive inhibition, these extracts prevent melanogenesis.

While hydroxy acids (Lactic Acid, Glycolic Acid and Salicylic Acid) have generally been utilized in skin-brightening products to accelerate desquamation and removal of pigmented keratinocytes, it has been shown that a 5% concentration of Lactic Acid will inhibit the formation of the Tyrosinase enzyme, thereby slowing the process of melanin synthesis.^{3,9} This new approach to affecting melanin synthesis is unique to Lactic Acid and does not occur with other alpha hydroxy acids such as Glycolic Acid or the beta hydroxy acid Salicylic Acid.

Kojic Acid at up to 1% concentrations has also been used to treat hyperpigmentation; its ability to bind the Copper metal and inhibit the Tyrosinase enzyme accounts for its

effectiveness. However, results are obtained in an anhydrous base (no water), which is not generally how it is formulated. Studies on Kojic Acid show that topical application may induce contact dermatitis and that it has a high sensitizing potential; hence it is banned in some countries.¹⁰

Another means to control hyperpigmentation is to control inflammation. Using anti-inflammatory agents such as Dipotassium Glycyrrhizate (Licorice) Root Extract will help address the connection between inflammation and pigment formation. These extracts also act as an antioxidant, slowing down many of the oxidation steps involved in melanogenesis. In addition, Nicotinamide has been shown to stop the transfer of melanosomes to neighboring keratinocytes and is effective for controlling melanin formation in the skin.¹¹

Research also indicates that we can control melanin formation by affecting the signaling process involved in melanin biosynthesis. We can impact the messengers that signal melanin synthesis by using sunscreens and antiinflammatory agents. Proprietary research has shown that ingredients such as Ascophyllum Nodosum and Laminaria Ochroleuca (Brown Algae extracts), and Palmaria Palmata (Red Algae), inhibit/slow Tyrosinase enzyme and melanin activity by impacting the signaling process.

Ascorbic Acid (Vitamin C) has been used for many years to control melanin synthesis. Stabilized derivatives of Vitamin C, including Magnesium Ascorbyl Phosphate (MAP), are also used to control melanogenesis. These derivatives can scavenge free radicals that

step 2: L-DOPA is converted to Dopaquinone, a dihydroxybenzene derivative. This step is mediated by the Tyrosinase enzyme but requires the presence of an enzyme co-factor.
step 3: The biosynthetic pathway splits and several subsequent reactions lead to the formation of black, brown, and yellow-red pigment.

cause erratic melanocyte activity. They also act as antioxidants, inhibiting oxidation steps along the biosynthetic pathway (e.g., DOPA to Dopachinone) of melanin. They have also been shown to inhibit Tyrosinase synthesis and activity.¹²

Finally, the newest and most exciting agents to fight melanin formation are power peptides such as Oligopeptide-34 and the newer Oligopeptide-51. These state-of-the-art synthesized peptides have been shown to decrease α -MSH activity and inhibit Tyrosinase activity. In proprietary lab studies, Oligopeptide-34 significantly reduced melanin production by about 33% and performed better than Vitamin C and Arbutin at reducing pigmentation. Also, clinical studies in which Oligopeptide-34 was applied on 22 Asian individuals twice daily indicated a statistically significant brightening effect on pigmented spots. Similarly, Oligopeptide-51 reduced melanin production by 39% and Tyrosinase activity by 42%.

Exfoliating Agents

Treating hyperpigmentation in the skin is a multi-faceted process. In addition to using skinbrightening agents that help control melanogenesis

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and inhibit the triggers of pigmentation using antiinflammatory agents and sunscreens, we must also consider how we can facilitate removal of existing melanin in the skin. For this reason, exfoliation is a critical step in the treatment of hyperpigmentation.

In general, chemical exfoliating agents (Lactic Acid, Phytic Acid, Lactobacillus/Pumpkin Fruit Ferment Filtrate, Salicylic Acid, etc.) are excellent for hormonal or sun-induced pigmentation. They will break down and dissolve skin cells, aiding in cell turnover. Chemical peels, which contain stronger concentrations of such ingredients, can also help further accelerate results when used as part of a skin treatment program in conjunction with products that contain exfoliating and skinbrightening agents. Physical exfoliants (Rice Bran, Magnesium Oxide, etc.) are ideal for individuals with no inflammation. They help smooth and polish the skin, and aid in product absorption.

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Electrical Modalities

Ultrasonic, Galvanic Iontophoresis or Microcurrent, using the Specific Iontophoresis setting, can be helpful in treating hyperpigmentation issues. The use of electrical modalities during a skin treatment will assist the penetration of water-soluble substances deep into the skin. Iontophoresis is based on the principle of electricity that like charges repel. The action of positively-charged current being applied upon the skin is an important factor in repelling (pushing) ingredients of the same charge into the skin. This technology can be used in combination with ingredients such as Niacinimide, Vitamin C, Licorice, Oligopeptides and Zinc Glycinate.

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PowerBright TR_X[™] products and key ingredients

A powerful concise range of three leave-on products for the treatment and prevention of hyperpigmentation, **PowerBright TR_X** is the product of several years of research on melanin biosynthesis and skin brightening by the skin health experts at Dermalogica and The International Dermal Institute (IDI). Designed to be layered onto the skin for optimum efficacy and integrated into any existing Dermalogica regimen, these silky-smooth, peptide-rich formulas work around the clock for the brightest, most even skin tone ever.



new! C-12 pure bright serum

description

This potent skin brightening serum helps combat hyperpigmentation

and balance uneven skin tone. [key ingredients](#)

- A proprietary blend of patented Oligopeptide-51 and Oligopeptide-34 helps treat and prevent hyperpigmentation for powerfully enhanced skin brightening.

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- A Palmaria Palmata (Red Algae) and Ascophyllum Nodosum (Brown Algae) complex inhibits Tyrosinase activity and melanin formation, and transfer of melanosomes to cells.
- Zinc Glycinate stimulates the formation of an antioxidant protein that binds Copper, thereby inhibiting the Tyrosinase enzyme.
- Phytic Acid (Rice Extract) chelates Copper, inhibiting the Tyrosinase enzyme to help control melanin formation.

at-home application: daytime and nighttime

1. After cleansing, apply directly to areas of uneven skin tone. For best results, use twice daily.
2. Allow one minute for product absorption, then follow with **Pure Light SPF50** during the day and **Pure Night** at night.

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new! pure light spf50

description

This advanced, medium-weight daytime Broad Spectrum moisturizer treats hyperpigmentation while shielding the skin from pigment-inducing UV light. **key ingredients**



- Oligopeptide-34 helps reduce Tyrosinase activity and melanosome transfer to cells.
- Palmaria Palmata (Red Algae) and Laminaria Ochroleuca (Brown Algae) inhibit melanocyte and Tyrosinase activity to enhance luminosity, refine skin tone and help control melanosome transfer to cells.
- Cross-linked Hyaluronic Acid provides sustained moisture delivery for optimal hydration.
- Oleosome technology boosts sun protection (SPF50) and blends seamlessly into skin while helping to improve moisturization and hydration benefits.
- Niacinamide, Zinc Glycinate and Dipotassium Glycyrrhizate (Licorice) help control transfer of melanosomes to cells, inhibit the Tyrosinase enzyme and fight melanin formation to control hyperpigmentation in the skin.
- Lactobacillus/Pumpkin Fruit Ferment Filtrate helps exfoliate surface cells to

smooth skin, enhance skin tone and help eliminate dark spots. **at-home**

application: daytime

1. Apply **C-12 Pure Bright Serum** and wait one minute for product absorption.

what is oleosome technology?

Oleosomes are naturally-occurring plant-oil capsules that act as emulsifiers.

Oleosome technology involves using these capsules to help increase the SPF performance of a product without adding more chemical sunscreens. The result is a product that is more wearable and less likely to cause sensitivity.

PowerBright TRx™

new! pure night

2. Smooth a generous amount of **Pure Light SPF50** to face and neck, avoiding the eye area, preferably 30 minutes prior to sun exposure.

description

Nourishing overnight treatment cream hydrates while helping to restore skin luminosity, control hyperpigmentation and maximize **PowerBright TRx™** results. **key ingredients**



- Oligopeptide-34, a proprietary peptide, helps reduce Tyrosinase activity and melanosome transfer to cells.
- Magnesium Ascorbyl Phosphate (MAP), a stable form of Vitamin C, treats hyperpigmentation while helping to stimulate collagen synthesis. This powerful antioxidant also scavenges free radicals that cause erratic melanocyte activity, and helps inhibit synthesis of the Tyrosinase enzyme.
 - Zinc Glycinate stimulates the formation of an antioxidant protein that binds Copper, thereby inhibiting the Tyrosinase enzyme.
 - Niacinamide helps control transfer of melanosomes to cells.
 - Lactobacillus/Pumpkin Fruit Ferment Filtrate helps exfoliate surface cells to smooth skin, enhance skin tone and help eliminate dark spots.
 - Strelitzia Nicolai (Giant White Bird of Paradise Seed Extract) helps increase skin luminosity while improving skin smoothness and hydration.
 - Vigna Aconitifolia (Moth Bean Seed Extract) fights signs of aging by

strengthening dermal collagen and stimulating cell turnover, resulting in brighter and smoother skin. **at-home application: nighttime**

1. Apply **C-12 Pure Bright Serum** to cleansed skin and wait one minute for product absorption.

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professional recommendations

As a professional skin therapist, it is important to set reasonable expectations with your clients and outline a precise treatment regimen, both in the treatment room and at home. Be sure to express the following points to your clients:

2. Smooth a generous amount of **Pure Night** to face and neck.

1. For successful results, your clients must follow a strict brightening regimen every day and night for at least eight weeks. Results will take time, as it will take about 45 days for existing melanosomes to naturally slough off the skin. It's important that your clients not get discouraged, and stick with their treatment plan.
2. UV exposure during any hyperpigmentation treatment plan can cause discoloration or spots to reappear. Ask your clients to use a teaspoon (5 milliliters) of SPF50 on the face and neck, and/or an ounce (30 grams) on the body – even on cloudy days. If they are following the **PowerBright TRx™** regimen, they will be protected with **Pure Light SPF50**, but ask them to reapply every two hours if in direct sunlight. A wide brim hat and sunglasses are also recommended for added protection.
3. Remember, the depth and length of time the condition has been present will dictate the results when treating hyperpigmentation. Dermal pigmentation is more difficult to treat than epidermal pigment. Hormonally-induced pigmentation and deeper, post-inflammatory hyperpigmentation are often harder to treat than sun-induced pigmentation. In general, newer spots are easier to treat than older spots.

¹⁷ PowerBright TRx™
You should perform a **Face Mapping skin analysis**. Assess specific zones for hyperpigmentation to help determine possible causes. For example:

4. **Stress** is a common trigger for hyperpigmentation. Stress can affect the skin's ability to repair itself, leading to increased melanin production. Discuss with your clients the importance of stress management and how it can affect their skin. Encourage them to take breaks, exercise, and practice relaxation techniques. When describing **PowerBright TRx** or recommending professional treatments, your first step should always be the **Face Mapping Consultation**. Consider how long it has been present. Ensure you look at all possible trigger factors using **Face Mapping skin analysis**, educate your client about all the potential causes and trigger factors, and the importance of reducing or eliminating these factors. This is important to the success of daily sunscreen protection with your clients.
 - If stress is the main cause, discuss ways to decrease stress levels along with following the visible signs of the skin. Wood's lamp of your skin or skin imaging device that changes the pigmentation or contrast of your client's pigmentation. Treating the skin may be subject to variations. You'll need to discuss light. For hyperpigmentation, the contrast is less pronounced (lighter); this is an indicator that the pigmentation may be more difficult to treat. For epidermal pigmentation, the contrast is more pronounced (darker); this pigmentation is easier to treat successfully.

Because treating hyperpigmentation is progressive, exfoliation is one of the most

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important steps you can take. It helps slough off the layers of keratinocytes that contain excess melanin pigment. While **PowerBright TRx** already contains powerful exfoliating agents, you may want to prescribe an additional series of chemical peels or professional exfoliation treatments, as well as **MicroZone® Treatments**, to help remove existing melanin and improve penetration of melanin-controlling actives. Consider a series of three or six monthly treatments, or six treatments once a week for six weeks, depending on each client's concerns.

When performing a professional skin treatment, consider using Ultrasonic, Galvanic Iontophoresis or Microcurrent with Specific Iontophoresis over the acid portion of some peels as well as with serums such as **C-12 Pure Bright Serum**. This can help deliver the active ingredients further down to the melanocyte at the base of the epidermis.

Prescribe **PowerBright TRx** as a powerful leave-on system that can be integrated into any Dermalogica regimen.

active ingredients	C-12 pure bright serum	pure light	pure night
--------------------	------------------------	------------	------------

questions | answers

Should my clients replace their current skin care regimen with PowerBright TRx™? **PowerBright TRx** is designed to be integrated into your clients' existing Dermalogica regimen, not replace it. However, your clients can replace their daytime moisturizer with **Pure Light SPF50** and their nighttime moisturizer with **Pure Night**. Be sure to recommend applying **C-12 Pure Bright Serum** after their regular cleansing and toning regimen, but before moisturizing.

How soon will clients see a result in their skin from the PowerBright TRx system? It is

important for you and your clients to set realistic goals about treating hyperpigmentation. Begin by educating clients on the fact that it takes 45 days for existing pigmentation to naturally desquamate from skin, meaning results are not instant. Also, their pigmentation may appear temporarily darker as it rises to the surface. This is applicable to every brightening system on the market. To expedite results, prescribe a series of professional treatments based upon each client's **Face Mapping® skin analysis** and in conjunction with a complete **PowerBright TRx** home-care regimen. (See Professional Recommendations for more information.) Clients should begin to notice results in about 30 days. Each week, all-over skin evenness and brightening will progress. ¹⁹ PowerBright TRx™

How important is applying an SPF when treating skin with PowerBright TRx?

Wearing a Sun Protection Factor (SPF) of 50 is required when treating hyperpigmentation. Treating hyperpigmentation without the daily application of sun protection will counteract any brightening regimen. Advise your clients to use and reapply **Pure Light SPF50** daily. And remember, one teaspoon (5 milliliters) is

• Oligopeptide-34	X	X	X
• Oligopeptide-51	X		
• Phytic Acid (Rice Extract)	X		
• Ascophyllum Nodosum (Brown Algae)	X		
• Palmaria Palmata (Red Algae)	X	X	
• Zinc Glycinate	X	X	X
• Lactobacillus/Pumpkin Fruit Ferment Filtrate		X	X
• Raspberry and Cranberry Seed Oils			X
• Strelitzia Nicolai			X
• Vigna Aconitifolia (Moth Bean) Seed Extract			X

• Magnesium Ascorbyl Phosphate			X
• Niacinamide		X	X
• Dipotassium Glycerrhizate (Licorice)		X	X
• Laminaria Ochroleuca (Brown Algae)		X	
• Oleosomes and sunscreens		X	
• Hyaluronic Acid		X	

PowerBright TRx contains a powerful combination of skinbrightening agents, to help safely control the melanin production process (melanogenesis), and exfoliating agents, to help facilitate the removal of existing melanin in the skin.

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Dermalogica and The International Dermal Institute (IDI) offer multiple classes on successfully treating, controlling and preventing hyperpigmentation for brighter, more luminous skin. The latest is Dermalogica's PowerBright TRx Workshop. To learn more and register, visit education.dermalogica.com or dermalinstitute.com.

ays.

Can PowerBright TRx be prescribed for treating other areas prone to hyperpigmentation, such as the décolleté, hands and shoulders? Yes. **PowerBright TRx** can be used to successfully treat hyperpigmentation on these areas of the body. The same disciplined regimen of SPF application applies. **Take**

the PowerBright TRx™ workshop!

Why is Hydroquinone not one of the ingredients used in PowerBright TRx?

While Hydroquinone may be an effective pigment lightener, there are many concerns regarding its safety (see page 8). Because Dermalogica is first and foremost dedicated to delivering skin health, we opted for a safer, effective method of brightening skin without Hydroquinone.

dermalogica[®]

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