

# Melasma: a common, disturbing and challenging condition to treat



Melasma is a condition where one develops dark brown patches on the forehead, upper lip, nose and cheeks. It can also occur, rarely, on the forearms and neck.

Melasma is very common. Skin discoloration of the face can be very upsetting and can lower self-esteem. I see patients every day in my dermatology clinic with melasma being the sole reason for their visit.

Melasma is a condition that occurs in both men and women. Ninety percent of melasma cases occur in women and about 10 percent of cases will occur in men. It is estimated that melasma affects 10-25 percent of women and two to five percent of men.

Melasma is seen in all skin colors, but it is observed more frequently in persons of color. Melasma can occur after pregnancy or after the use of birth-control pills, prescribed hormones, or, rarely, other medications.

I consider melasma to be a very rapid, uneven suntan.

Melasma is caused by a combination of genetics, hormone exposure (like pregnancy or birth-control pills or certain medications), and sun exposure. Emerging research has also shown that melasma can be caused by (excessive) heat exposure. This heat exposure can be from cooking, relaxing in a sauna, or just sitting in the direct sun (with sunscreen on) or being outdoors during periods of extreme heat.

The cells in the skin that produce color are named melanocytes. As a result of sun or heat exposure, melanocytes residing in the forehead, cheeks and upper lip can become sensitized and release pigment granules (called melanin) that rapidly darken the skin.

Melanin acts like an umbrella to protect the skin from additional sun exposure and damage. The darkening of skin from sun exposure results in what we commonly call a suntan. If you think about it, a suntan is a direct result of ultraviolet damage to your skin. This is why I tell my patients that I view melasma as a rapid, uneven suntan.

“Chloasma” is the old term for the dark patches that occur after pregnancy; some call it “the mask of pregnancy.” The term melasma is now most commonly used instead of chloasma.

## How is melasma diagnosed?

Melasma is diagnosed by a physician after examining the patient's skin and reviewing the patient's medical history, including past pregnancies, medication history, and the timing and location of the dark patches. There is a very rare birthmark

(called bilateral nevus of Ota) that can look and act like melasma. In cases where the diagnosis of melasma is in question or if the area diagnosed as melasma is entirely resistant

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to treatment, a skin biopsy of the involved area may be needed to confirm or explore other diagnoses.

## Can melasma be prevented?

Knowing if one's family history indicates a predisposition for the condition and, as always, implementing proper sun protection are essential. As mentioned earlier, avoidance of heat exposure is vital in preventing melasma. This means minimizing heat exposure when cooking or avoiding prolonged exposure to extreme heat outdoors or any activity that exposes one to significantly high temperatures, such as a sauna.

As far as sun protection, I recommend a sunscreen that is labeled broad-spectrum Ultraviolet protection and an SPF rating of 30. Sunscreens must be applied 30 minutes before going out in the sun, and then reapplied every one to two hours, and more frequently if either perspiring or swimming.

## How is melasma treated?

Melasma is notoriously difficult to treat.

In my experience, 25 percent of the time, even with our very best heroic efforts, we cannot successfully treat melasma to the patient's satisfaction. Fortunately, 75 percent of the time treatments can make a difference.

I use topical medicines either independently or use a combination of them, including hydroquinone, retinol, Kojic acid, anti-inflammatories preparations and vitamin C. In addition to these measures, alpha-hydroxy acid chemical peels, deep arbutin peels, a series of HydroFacial-infusion peels, platelet rich plasma treatments, and the use of a specialized lasers can be helpful.

In a minority of cases, the removal of the causative hormone (birth-control pills) may improve the condition. In the majority of cases of melasma, treatment becomes a lifelong battle.

Sometimes, based on a patient's genetics, the cells that produce color (melanocytes) deposit melanin pigment deep in the skin. The treatments described above can only penetrate so far and may not reach deeply enough for good results in these cases. I caution patients that the treatment of melasma can be extraordinarily complicated, and I don't want a goal of "perfection" to ruin the reality of "very good" results.

Additionally, if we are fortunate enough to successfully treat melasma, without continual and ongoing meticulous sun protection and heat avoidance the melasma can return. In fact, even the amount of sun that touches the skin walking from a car to a store on a cloudy day is enough to trigger the reappearance of melasma in some people!

Ultraviolet lights in buildings and the sun exposure while riding in a car can also be culprits. I tell patients that the treatment of melasma, without sun and heat protection, is like trying to walk up an escalator that is going down. It will be very difficult to make any progress without heat and sun protection.

## Action steps for melasma treatment

- Do not use brightening products purchased at cultural stores that contains clobetasol or other metallic ingredients to lighten the skin. These are both inappropriate and dangerous.
- Talk to your pharmacist about over-the-counter cream treatment options.
- If over-the-counter medications don't work, see a board-certified dermatologist for other treatment options.
- Medications that contain the lightening agent hydroquinone can only be used for a short period. Hydroquinone has the odd side effect (called exogenous ochronosis) that actually causes the skin to become darker if used for too long. Your dermatologist can recommend the appropriate amount of time to use hydroquinone before needing a break.
- Most importantly, if melasma is successfully treated, appropriate sunscreen and heat avoidance must be used meticulously, for a lifetime, to manage this chronic condition and prevent the recurrence of melasma.

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**Dr. Charles Crutchfield III, M.D.**

*Charles E. Crutchfield III, MD is a board-certified dermatologist and Clinical Professor at the University of Minnesota Medical School. He also has a private practice in Eagan, MN. He received his M.D. and master's degree in Molecular Biology and Genomics from the Mayo Clinic. He has been selected as one of the top 10 dermatologists in the United States by Black Enterprise Magazine. Dr. Crutchfield was recognized by Minnesota Medicine as one of the 100 Most Influential Healthcare Leaders in Minnesota. He is the team dermatologist for the Minnesota Twins, Vikings, Timberwolves, Wild and Lynx. Dr. Crutchfield is an active member of both the American and National Medical Associations, and president of the Minnesota Association of Black Physicians.*

