

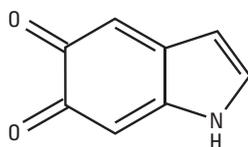
▶ diseases and disorders

▶ Vitiligo

The pigment found in the skin, retina, and hair of human beings is called melanin and is produced in melanocyte cells. If these cells die or cannot form melanin, the result is a skin condition called vitiligo, in which the skin becomes lighter or completely white in patches, usually on the face, lips, hands, arms, legs, and genital areas. Because of the social effects of the change in appearance, it is considered by many to be a skin disorder that has more societal than medical significance.

Medical researchers are not sure what causes vitiligo, but some believe it originates from both genetic and environmental factors. Vitiligo sometimes runs in families, and one study conducted by the University of Florida College of Medicine (*Genes Immun.* 2003, 4, 492–499) found that 20% of the relatives of vitiligo patients also have the disease—suggesting that some people are born with genes that make them more likely to develop vitiligo. Environmental factors such as traumatic skin injury, sunburn, or stress also appear to influence the likelihood that an individual with those “susceptibility genes” will develop vitiligo. Some researchers believe the body develops an allergy to its own pigment cells, while others think that the cells may destroy themselves during the process of pigment production. In some patients, disease progression appears to involve inappropriate activation of an immune response against melanocytes; therefore, vitiligo is considered to be an autoimmune disease. Research on the cause is ongoing.

Vitiligo is also known as leucoderma, which means white (leuco) skin (derma). It is also medically known as achromia, which means loss of color. The ailment affects 1–2% of the world’s population, roughly 40–50 million people, but the degree of pigment loss varies between individuals and even within each vitiligo patch. There may be different shades of pigment in a patch, or a border of darker skin may circle an area of light skin (see illustration). People with fair complexions usually notice the contrast between areas of vitiligo and sun-tanned skin, but for the most part, vitiligo is more obvious in people with darker skin. Individuals with severe cases can lose pigment all over the body, and there is no way



Melanin.

Conditions similar to vitiligo

- ▶ **Albinism**—the result of altered genes that cause a defect in melanin production, which results in the partial or full absence of pigment from the skin, hair, and eyes.
- ▶ **Atopic dermatitis**—commonly referred to as eczema, a chronic skin disorder characterized by scaly and itchy rashes.
- ▶ **Discoid lupus erythematosus**—a chronic, inflammatory, autoimmune disorder that may affect many organ systems, including the skin, joints, and internal organs.
- ▶ **Lichen planus**—a disorder of the skin and mucous membranes resulting in inflammation, itching, and distinctive skin lesions.
- ▶ **Seborrheic dermatitis**—loose, dry or greasy, white to yellowish scales with or without associated reddened skin. Cradle cap is the term used when seborrheic dermatitis affects the scalp of infants.
- ▶ **Tinea versicolor**—a chronic fungal infection of the skin.

to predict how much pigment an individual will lose. Its incidence is higher in people with thyroid conditions and some other metabolic diseases, but most patients are in good health and suffer no symptoms other than areas of pigment loss.

The first cases of vitiligo were recorded in religious texts such as the Bible and the Koran.

There are several treatment options for the disease. The easiest is disguising the patches with makeup, self-tanning compounds, or skin dyes, which is considered a safe, albeit temporary, way to make the patches less noticeable. In small areas of vitiligo, repigmentation therapy is an alternative. This consists of applying topical corticosteroid creams, which can be effective in returning pigment to small areas; and they can be used with other treatments. Although effective, these agents can thin the skin or even cause stretch marks in certain areas.

Treatment with psoralen and ultraviolet A (PUVA) is another form of repigmentation therapy. The skin is treated with a special type of ultraviolet light, and the psoralen is applied to the vitiligo areas. Psoralen is also given in pill form. Treatment with PUVA has a 50–70% chance of returning color on the face, trunk, and upper arms and legs, and a year of twice-weekly treatments is required. Side effects include sunburn-type reactions. When used long-term, freckling may result, and the risk of skin cancer increases.

Another form of treatment, perhaps the most drastic, is depigmentation therapy. This consists of removing the remaining pigment from normal skin and making the whole body an even white color. The procedure is done with a chemical called monobenzyl ether of hydroquinone. The therapy takes about a year to complete and is permanent. The National Vitiligo Foundation, among others, is diligently searching for an exact cause and, eventually, a cure.

For more information

American Vitiligo Research Foundation; www.avrf.org. Medline Plus; www.nlm.nih.gov/medlineplus/vitiligo.html.

—FELICIA M. WILLIS ■



1803 engraving of man with vitiligo.