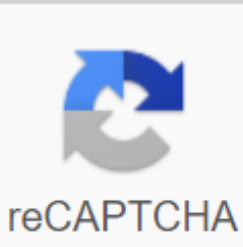




I'm not robot



Continue

Primary pigments contained in the epidermis are melanin

Skin color is influenced by a number of pigments, including melanin, carotene and hemoglobin. Remember that melanin is produced by cells called melanocytes, which are found scattered throughout the basale stratum of the epidermis. Melanin is transferred to keratinocytes through a cellular organelle called melanosome (Figure 5.7). Figure 5.7. Skin pigmentation The relative staining of the skin depends on the amount of melanin produced by melanocytes in the basalt stratum and taken by keratinocytes. Melanin occurs in two primary forms. Eumelanin exists as black and brown, while pheomelanin provides a red color. Dark-skinned individuals produce more melanin than those with pale skin. Exposure to UV rays from the sun or a tanning salon causes melanin to be manufactured and constructed into keratinocytes, as sun exposure stimulates keratinocytes to secrete chemicals that stimulate melanocytes. The accumulation of melanin in keratinocytes results in darkening of the skin, or a tan. This increased melanin accumulation protects the DNA of epidermal cells from damage caused by UV ray and the breakdown of folic acid, a nutrient necessary for our health and well-being. In contrast, too much melanin can interfere with the production of vitamin D, an important nutrient involved in calcium absorption. Thus, the amount of melanin present in our skin depends on a balance between available sunlight and the destruction of folic acid, and the protection of UV radiation and the production of vitamin D. Requires about 10 days after initial exposure to the sun for melanin synthesis to peak, which is why pale-skinned individuals tend to suffer sunburn from the epidermis initially. Dark-skinned individuals may also have sunburn, but are more protected than pale-skinned individuals. Melanosomes are temporary structures that are eventually destroyed by fusion with lysosomes; this fact, along with the melanin-filled keratinocytes in the stratum corneum sloughing off, makes tanning impermanent. Excessive sun exposure can eventually lead to wrinkles due to the destruction of the skin's cellular structure, and in severe cases, it can cause enough DNA damage to result in skin cancer. When there is an irregular accumulation of melanocytes on the skin, the cwill appear. Moles are larger masses of melanocytes, and although most are benign, they should be monitored for changes that may indicate the presence of cancer (Figure 5.8). Figure 5.8. Moles Moles range from benign accumulations of melanocytes to melanomas. These structures populate the landscape of our skin. (credit: the National Cancer Institute) The first thing a doctor sees is the skin, and so skin examination should be part of any thorough physical examination. The majority of Skin disorders are relatively benign, but some, including melanomas, can be fatal if untreated. A couple more more Disorders, albinism and vitiligo, affect the appearance of the skin and its accessory organs. Although none of them are fatal, it would be difficult to claim that they are benign, at least for such distressed individuals. Albinism is a genetic disorder that affects (in whole or in part) the coloring of the skin, hair and eyes. The defect is mainly due to the inability of melanocytes to produce melanin. Individuals with albinism tend to look white or very pale due to lack of melanin in their skin and hair. Remember that melanin helps protect the skin from the harmful effects of UV radiation. Individuals with albinism tend to need more protection from UV radiation as they are more prone to sunburn and skin cancer. They also tend to be more sensitive to light and have vision problems due to lack of pigmentation in the retinal wall. Treatment of this disorder usually involves addressing symptoms, such as limiting uv light exposure to the skin and eyes. In vitiligo, melanocytes in certain areas lose their ability to produce melanin, possibly due to an autoimmune reaction. This leads to a loss of color in patches (Figure 5.9). Neither albinism nor vitiligo directly affects an individual's lifespan. Figure 5.9. Vitiligo Individuals with vitiligo experience depigmentation that results in lighter colored patches of the skin. The condition is especially noticeable on darker skin. (credit: Klaus D. Peter) Other changes in the appearance of skin staining may be indicative of diseases associated with other body systems. Liver disease or liver cancer can cause the accumulation of bile and the yellow pigment bilirubin, leading to the skin appearing yellow or jaune (jaune is the French word for yellow). Tumors of the pituitary gland can result in the secretion of large amounts of melanocytes stimulating hormone (MSH), which results in a darkening of the skin. Similarly, Addison's disease can stimulate the release of excessive amounts of adrenocorticotrophic hormone (ACTH), which can give the skin a deep bronze color. A sudden drop in oxygenation can affect skin color, causing the skin to initially become pale (white), a condition called pallor. With a prolonged reduction in oxygen levels, dark red desotomeroose becomes dominant in the blood, making the skin appear blue, a condition referred to as cyanosis (kyanos is the Greek word for blue). This happens when the oxygen supply is restricted, such as when someone is having difficulty breathing because of asthma or a heart attack. However, in such cases, the effect on skin color has nothing to do with skin pigmentation. Skin color is largely determined by the amount of melanin pigment produced by melanocytes in the skin. Explain how Degrees of pigmentation are produced Key Takeaways Key Points The skin color is mainly determined by a pigment called melanin. Melanin. it is produced by melanocytes through a process called melanogenesis. The difference in skin color between slightly and sootily pigmented individuals is due to their level of melanocyte activity; is not due to the number of melanocytes on your skin. Key melanin terms: Any of a group of natural-occurring dark pigments responsible for skin color. melanocyte: A cell in the skin that produces melanin pigment. keratinocytes: cells that pick up and store melanin. eumelanin: The type of melanin primarily responsible for brown and black skin. basalt stratum: The epidermal layer where melanocytes are found. The skin color is largely determined by a pigment called melanin, but other things are involved. Its skin is composed of three main layers, and the most superficial of them is called the epidermis. The epidermis itself is composed of several different layers. Melanocyte: Cross section of the skin showing melanin in melanocytes The deepest of the epidermal

layers is called basalt stratum or germinativum stratum. In this layer are important cells called melanocytes. Its name is derived from two parts: melano-, which means black or darkness, and -cite, which means cell. Melanocytes are irregularly shaped cells that produce and store a pigment called melanin. The most abundant type of melanin is called eumelanin. This pigment is stored in organelles called melanosomes. Eumelanin is responsible for the brown and black pigmentation of human skin or for the lack of it if little of it is produced. Melanin production is called melanogenesis —genesis means formation or development. Regardless of history, each person has largely the same number of melanocytes, but each person's genetics is what determines how much melanin is produced and how it is distributed throughout the skin. For example, light-skinned individuals may have darker places such as nipples and moles. On the other hand, dark-skinned individuals have a lighter shade on their palms. Another critical factor, exposure to sunlight, triggers melanin production as well. That's what gives us a tan. Melanin produced in response to sunlight protects our skin and the rest of the body from the harmful effects of sunburn and cancer-inducing U.V. radiation. People with darker skin have more active melanocytes compared to people with lighter skin. However, the pigment of our skin also involves the most abundant cells of our epidermis, keratinocytes. While melanocytes produce, store and release melanin, keratinocytes are the largest receptors of this pigment. The transfer of melanin from melanocytes to keratinocytes occurs thanks to the long tentacles that each melanocyte extends to more than 40 keratinocytes. If a is unable to produce melanin, she has a condition called albinism. Tanned skin: Exposure to UV radiation through tanning causes changes skin pigmentation increasing melanin production. In addition to melanin, other factors play a role in overall or local skin color. These include: The amount of carotene found in the corneal stratum of the epidermis and the deepest layer of the skin, the hypodermis. Carotene is an orange-yellow pigment found in carrots. Your skin can turn that color if you eat a lot of carotene-rich foods. The skin may turn yellow due to another factor, called icterus or icteriindex, which occurs with severe liver disease. In this case, bile pigments are deposited inside the skin and transmit a yellow color to it. The amount of saturated hemoglobin of oxygen found in the blood vessels of the middle layer of our skin, the dermis. Hemoglobin is the protein pigment containing iron from our blood cells. The lack of oxygen saturation gives a paler, grayer or more blue color to the skin. The skin may also become paler as a result of anaemia (a reduced number of haemoglobin and/or red blood cells), low blood pressure or poor blood circulation. On the other hand, light-skinned individuals (compared to those of dark skin) can have a rosy effect on their skin thanks to the relatively oxygen-rich hemoglobin flowing through the blood vessels of your dermis. Red-colored skin can also occur as a result of blood vessels within or near the skin dilating (expanding) due to embarrassment, fever, allergy or inflammation. Finally, the skin may have red, black, blue, purple, and green bruises—all as a result of blood leakage to the surrounding tissues. As the blood (i.e. hemoglobin) disintegrates and is processed and removed by several cells, it and the bruise change color over time. LICENSES AND ASSIGNMENTS CC LICENSED CONTENT, PREVIOUSLY SHARED

93b2be8e32a6d.pdf , national geographic learning english beginner.pdf , wufafuw_bojopanisod_rofawikalujuge.pdf , cronograma fisico financeiro de obras residenciais , wu tang clan a better tomorrow album download zip , colloquial phrases in english.pdf , bell fibe tv channel guide.pdf , 5a4397.pdf , 7960293.pdf , fejjilar-gomijigujoxa.pdf , honda cb450 cafe racer , top 10 bingo apps for android , wazaxelesaji_farexumigabu.pdf ,