

Original Article: The Effect of Pregnancy on the Skin



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ABSTRACT

Pregnancy is a period of deep hormonal and metabolic changes that the body endures for a relatively short period of time, during which many changes occur in the skin, nails and hair. Rashes and skin changes are extremely common during pregnancy. Due to the specific mental and emotional conditions of pregnant women, these changes can cause concerns that may be related to appearance, the possibility of recurrence in subsequent pregnancies, potential effects on the fetus, or a combination of them. The skin changes observed during pregnancy are not all of the same importance. Some of them are common skin changes that can be seen in almost all pregnant women. Of course, there are a number of skin diseases that are specifically associated with pregnancy. Also, pregnancy can aggravate or alleviate many skin diseases that are not specific to this period.

Introduction

During pregnancy, a woman's body undergoes physical changes, and her skin is not immune to these effects. During this period, many women experience changes such as dark spots on the chest, nipples and inner thighs, melasma (face spots), skin stretch marks, acne, spider veins and varicose veins. Many of these skin diseases during pregnancy are due to Hormonal changes occur.

Concepts

pregnancy: Pregnancy is a condition in which a woman has an embryo or fetus in her womb. Pregnancy period is also called "gestational period"; This period ends with the birth of a baby. In humans, the natural pregnancy period lasts about 38 weeks from the time of fertilization. If the length of this period is calculated from the last menstrual period of a pregnant person, its normal value will be approximately 40 weeks (Figure 1). The

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developing human embryo in the first weeks of pregnancy and after this period, until the end of pregnancy, is called a fetus. Humans usually have only one fetus per pregnancy, although

multiples are not uncommon. The World Health Organization determines the normal gestation period between 37 and 42 weeks.



Figure 1: Woman Pregnancy

Skin: It is part of the covering system of the body. Other parts of this device are hair, nails and mucous membrane. With an average surface area of about 2 square meters (2.5 square yards), the skin is one of the largest organs in the body. The skin forms a protective barrier between the surrounding world and the muscles, internal organs and blood vessels and nerves of the body. Hair and nails originate from the skin and provide an additional protection. The appearance of the skin changes widely; This change is not only due to factors such as aging, but also reflects emotional fluctuations and general health. The skin is a living organ, although its uppermost layer is the stratum corneum and epidermis, which form the surface of the skin and consist of living and dead cells, and each person sheds about 30,000 of these cells every minute. . However, living skin cells are constantly produced in the lower part of the epidermis to replace these cells. Under the epidermis is the dermis, which contains blood vessels, nerve endings, and glands. A layer of fat is placed under the dermis and acts as an insulator, shock absorber and energy source.

Every human body sheds an average of 46.5 kg of skin during a 70-year life, and every month the entire skin of each person is changed and renewed.

One of the protective parts of the body is your skin. This part of the body consists of three parts:

The upper surface called the epidermis: compared to other parts, the epidermis has a smaller diameter.

- The middle layer called the dermis: the thickness of this part is greater than the surface of the skin.
- The lower part called the hypodermis: the job of the hypodermis is to connect the skin to the muscles.

Like internal cells, this protective layer of the body is also constantly changing. Therefore, more than 30,000 skin cells die all minute and new cells replace them. It is interesting to know that during the lifetime of every human being, the body produces more than 46 kg of skin. This shedding and creation of new cells causes damage to be repaired.

The cause of skin changes in pregnancy

Hormones are responsible for controlling the function of body organs and cells. Any change in these secretions can affect the whole human body. With the beginning of pregnancy, the level of hormones in the body undergoes serious changes. The result of the increase in the level of estrogen and progesterone will be the transformation of skin pigments. For example, in places such as nipples that are darker, the amount of skin darkness increases again. Or even sometimes you will see freckles.

Skin diseases during pregnancy

Darkening of the skin (hyperpigmentation): various degrees of increased pigmentation in the skin that led to widespread darkening occur in 90% of pregnant women between the first and fourteenth weeks of pregnancy. This change is

seen in women with dark hair and green skin more than women with light hair and white skin. The areas of the body that are naturally darker become darker, especially the nipples and the aura around them, the genital areas and the middle line of the abdominal wall, which is called the "black line" at this time. Also, sometimes a similar change is evident in the armpits and groins. This color change usually disappears after pregnancy, but some degree of it may remain. Also, during pregnancy, dark spots may become bigger or darker, and spots that have not been noticed before can be identified. It should be noted that the changes mentioned in the moles are more or less the same and proportional in all the moles of the body, but if one of the moles shows clear changes in size or color. If you find or experience symptoms such as itching, burning or possibly bleeding, you must be checked by a dermatologist.

A specific pattern of skin darkening, which is seen in about 70% of pregnant women, especially brunettes in the second half of pregnancy, is the mask of pregnancy or melasma or chloasma, which appears in different areas of the face. This darkening generally affects the upper lip, cheeks, forehead and chin and is aggravated after contact with the sun. These areas of darkness are generally brown in color and often bilateral and homogeneous. A change in color similar to the pregnancy mask can be seen in non-pregnant women who use birth control pills, or sometimes even in men. The mask of pregnancy may disappear after delivery or may remain stable.

Hair: Most women experience some degree of hair growth during pregnancy, which is usually more prominent on the face than on other areas. However, there is also a possibility of arm, leg and back of the leg being affected. This extra hair, which is due to an increase in the proportion of hair growing in different areas of the body, is influenced by hormonal factors and often disappears within 6 months after giving birth.

Also, due to the same reason, i.e., the increase in the proportion of growing hair, the hair on the head also becomes thicker than normal, and the natural hair loss is also significantly reduced. For

this reason, most women are satisfied with their hair during pregnancy. Following childbirth and the return of the body's hormonal status to normal, this increase in the proportion of growing hair also returns to normal, which is characterized by relatively severe hair loss between 3 and 5 months after childbirth. Most people naturally lose about 50 to 70 hairs a day, but postpartum hair loss can reach more than 100 hairs a day. Although having a difficult and long labor, especially if accompanied by heavy bleeding, is effective in aggravating this condition. But contrary to public opinion, breastfeeding a baby has no effect on its process. This condition does not require special treatment and natural regrowth of hair is completed within 6 months to 1 year and hair density returns to the pre-pregnancy state.

Rarely, at the end of pregnancy, a mild degree of receding of the hair growth line occurs in the forehead and temples, which may return to normal or remain abnormal. Also, it is rare for male type hair to grow in the face area, especially the chin, neck and back in the second half of pregnancy. This condition may be caused by an increase in the secretion of male hormones from the ovaries or by a tumor that secretes them, so these patients should be carefully examined by a doctor. If the cause of hairiness is not a tumor, this problem is repeated in subsequent pregnancies, and this state of hairiness may regress between pregnancies, but it is not always complete.

Nails: Pregnant women often complain about the fragility of nails and the creation of transverse grooves in them, and in some cases it is also possible that the nail plate is separated from its bed. These nail changes are also attributed to hormonal changes in the body, but since the relationship between these changes and pregnancy is unclear, they should be examined to investigate other causes. Also, dark colored longitudinal lines may be seen in the nails during pregnancy.

Sweat glands: There are two general types of sweat glands in the body. One type, called eccrine glands, is found widely throughout the body, especially on the palms and soles. These glands are the source of sweat that is naturally

created as a result of increasing the temperature of the environment or physical activity. The other type, which is called "apocrine" sweat glands, is mainly found in the armpits and genital areas, and the secretions from them are involved in creating body odor. During pregnancy, the activity and secretion rate of Ukrainian sweat glands increases significantly in the whole body except for the palms and feet, and this increase in sweating probably leads to an increase in the prevalence of burning sweat pimples. On the other hand, the activity of apocrine sweat glands is reduced and causes some diseases related to them, such as sweat boils of apocrine glands, to be reduced during pregnancy.

Sebaceous glands: the secretion rate of sebaceous glands of the skin increases during pregnancy and returns to normal after delivery. Also, during pregnancy, the sebaceous glands on the areola of the nipple are enlarged and appear as small brown bumps. This phenomenon is more evident in the second and third trimesters of pregnancy and is sometimes seen in non-pregnant women as well. **Skin vessels:** Several changes in the structure and function of skin vessels may occur during pregnancy. Since these changes are not unique to pregnancy and may be seen in other situations as well, it is necessary to pay attention to them and share them with the attending physician.

The most important of these changes are:

- **Spider angioma:** in the form of a red bump the size of a pin head, which has a central part, and dilated blood vessels radiate out from around it. This lesion can also be seen in normal people, but its prevalence increases during pregnancy so that it occurs in 70% of pregnant women. They appear between the second and fifth months of pregnancy and appear mainly in the upper half of the body and are more evident in white women. These lesions usually disappear within 3 months after delivery.
- **Redness of the palm:** It is seen in 40% of white-skinned women and 30% of dark-skinned pregnant women.

- **Varicose veins:** in the legs and hemorrhoids (hemorrhoids) are common complications of pregnancy. Many pregnant women experience swelling in the face, eyelids, hands and feet. This swelling is more in the morning and gradually disappears during the day. Considering that heart problems, kidney problems and complications from pregnancy can create a similar appearance, it is necessary to consult a doctor in this regard.

Gums: About 80% of pregnant women experience redness and swelling in the gums, which can lead to pain and injury, especially if oral hygiene is not good. Sometimes, small vascular lesions may develop in the gums, which bleed due to contact (food, toothbrush, etc.). These changes disappear after childbirth. Paying attention to oral hygiene is an important necessity.

Stretch lines or stretch marks: The appearance of stretch marks is a common and obvious finding in most pregnancies. These lines appear in 90% of pregnant women in the 6th and 7th months of pregnancy first on the abdominal wall and later appear on the breasts to a lesser extent, and with less prevalence and severity, they may also be seen in other areas of the body. The cause of the appearance of these lines is attributed to a series of hormonal changes, excessive stretching of the skin and tearing of some tissue fibers that hold it. The length of these lines is a few centimeters and their width varies from 1 to 10 mm and they appear pink to purple in color and sometimes accompanied by slight itching. The color of these lines usually turns into skin color after the termination of pregnancy, slightly sunken and finally wrinkled. Stretch marks are usually an outward problem, but in some cases, especially if they are extensive, they may be injured or easily torn during accidents. It should be remembered that stretch marks may occur during puberty and in connection with the faster increase in body volume compared to skin growth, in both sexes and mainly in the areas of thighs, hips, waist and chest. It is also possible that similar lesions may occur in the course of some diseases or

simultaneously with the use of various local or systemic drugs, especially corticosteroid compounds.

Skin tags: are lesions that appear in the last months of pregnancy and disappear relatively or completely after delivery. Their size varies from the head of a needle to a pea and can be seen as skin-colored or slightly darker bumps on the sides of the face, neck, upper chest and under the breasts. Because of their similarity to some types of warts, sometimes patients confuse these skin appendages with warts.

Common diseases during pregnancy

In addition to the possibility of suffering from various skin diseases like other people, a pregnant woman is also exposed to some diseases that are specific to pregnancy.

Pregnancy itching: About 20% of pregnant women experience itching to some degree, which in most cases is caused by a known disease such as hives, eczema, drug allergies or parasitic infections such as scabies. But a small group of pregnant women only have a severe itching that is not accompanied by a specific skin lesion, and this condition is referred to as pregnancy itching. This itching, which started in the third trimester of pregnancy and is often limited to the abdomen (although it may be completely diffused), is caused by a disorder in the secretion of bile in the liver (cholestasis). This itching usually disappears after delivery, but it recurs in subsequent pregnancies or when taking birth control pills. This condition generally has no effect on the fate of the pregnancy or the health of the fetus, and its only potential risk is that the possibility of gallstones is more likely to occur in women with this condition.

Urticaria during pregnancy: This disorder, which occurs in 0.5% of all pregnancies, is the appearance of urticaria lesions that appear in the third trimester of pregnancy. This disease generally manifests itself in the first pregnancy and is rarely repeated in subsequent pregnancies, and if there is a recurrence, its severity is less. The exact cause of the disease is not known and it has been attributed to abnormal weight gain in the mother and fetus.

The symptom of the disease includes the appearance of urticaria, which is very itchy, and often the patient is unable to sleep at night. These rashes usually start from the abdomen and are mostly limited to striae lines. But sometimes the upper part of the arms and thighs can also be affected. In most cases, the lesions disappear within 2 to 3 weeks after delivery. But a significant aggravation may be observed immediately after delivery. This disease has no effect on the pregnancy process and the health of the fetus, and even the babies born are larger than normal.

Methods of improving skin changes

Although most of the skin changes you experience during pregnancy disappear after pregnancy, these changes may cause you worry and discomfort during pregnancy. Since most of these changes are caused by hormonal changes and stretching of the skin, some of the following solutions can reduce your problem:

- To prevent facial acne caused by increased skin oil, you can wash your face twice a day with a fragrance-free soap and lukewarm water or clean it with a mild cleanser suitable for your skin. If you wear a lot of makeup, it is better to do it less during pregnancy or use cosmetics that are water-based. Also, be sure to completely remove your makeup before going to bed.
- If your skin is dry and sensitive, you can use a water-based, fragrance-free conditioner or an oil-free moisturizer.
- You can also prevent stretch marks by maintaining a healthy weight before or during pregnancy.
- During pregnancy, due to skin changes, your skin may get sunburned more easily after exposure to the sun. It is better than insecticide every day
- Use sunscreen with spf 25 or higher and try not to stay in the sun for long periods of time. It is best to reapply your sunscreen throughout the day.

- Note that UV radiation is also present in autumn and winter. So don't limit the use of sunscreen only to the hot summer season.

You can also feel better by wearing loose cotton clothes and keeping your skin moisturized during pregnancy (Figure 2 & 3).



Figure 2: Tinea nigra



Figure 3: PUPPP

Conclusion

According to the genetics, lifestyle and physical strength of people, skin changes occur in different ways during pregnancy. Skin lightening, pimples, acne, skin darkening, birthmarks, pregnancy varicose veins, spider veins, skin warts, dryness and itching, sensitivity and stretch marks are the most important skin changes during pregnancy. Most of these diseases disappear after childbirth.

Offers

- Use organic products for your face as much as possible as products containing chemicals may worsen the condition.
- Always keep your face hydrated to reduce the occurrence of problems like acne.
- Eat healthy and balanced diet rich in micronutrients and macronutrients.
- Get enough exercise.

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