

Acne

Acne

Overview

Acne is an outcome of several factors such as hormones, skin oils, and bacteria causing the inflammation of skin pores and usually appears on areas of the face, temple, shoulders, upper arm, back, and chest. While it affects mostly teenagers, people of all ages can still be affected including adults and in some cases infants. Acne results when a dried sebum (an oily substance secreted by sebaceous gland), dead skin cells, and bacteria clog the hair follicles then blocking the sebum to exit the pores. A blackhead or open comedones appears if the blockage is incomplete and the whitehead develops if the blockage is complete. Several treatment options are available, but acne can be persistent, and pimples (an inflamed whitehead) can heal, although it may go away others can cause temporary or permanent scarring.



© MAYO FOUNDATION FOR MEDICAL EDUCATION AND RESEARCH. ALL RIGHTS RESERVED.



© MAYO FOUNDATION FOR MEDICAL EDUCATION AND RESEARCH. ALL RIGHTS RESERVED.

Symptoms

Symptoms of acne include whiteheads, blackheads, and pimples. Sometimes it may even cause painful lumps due to the accumulation of pus in the pores; painful small lumps are called papules. Severe forms of acne may also develop into larger lumps beneath the surface of the skin called nodules and painful cystic lesions which are pus-filled lumps beneath the surface of the skin.

Causes and Triggers

There are four major causes of acne such as

- Excess oil (sebum) production
- Hair follicles clogged by oil and dead skin cells
- Bacteria
- Excess activity of a particular type of hormone (a distinct chemical in the body with specific function) like androgens .

Pimple/comedones appear when the oil glands or the pores in the skin get blocked. The hormones like androgen increase the production of more oil (sebum) in the oil glands, if the pores become clogged, the combination of oil builds and bacteria irritates the skin causing infection and inflammation. Bacteria further multiply in the clogged pores resulting in redness, swelling, and tenderness of pimples.

Treatment and Management

Acne of any severity tends to heal on itself without any treatment by the early to mid-20s, but it may take people some time especially women to lessen the symptoms of acne until the age of 40s. Mild acne may not leave scars, but moderate and severe acne regularly causes scars. Self-care for acne starts with good hygiene; it is recommended to use a mild soap to wash the affected areas once or twice a day and avoid using strong soaps and abrasive products as it may irritate the skin and might aggravate the acne further. It is also recommended to use water-based or non-comedogenic forms of cosmetics rather than greasy and oily cosmetics such as hair gels, sunscreens, and concealers. Over the counter acne products such as those containing benzoyl peroxide may promote peeling and controlling oil production, but it may take some weeks to notice any improvement.

Doctors may prescribe topical (applied on the skin) medications such as antibiotics (clindamycin with benzoyl peroxide or erythromycin with benzoyl peroxide), retinoids and retinoid-like drugs such as tretinoin adapalene, and tazarotene. Salicylic acid and azelaic acid which have antibacterial properties can help prevent plugged hair follicles.

Oral medications may also be recommended such as antibiotics, commonly used are doxycycline, minocycline, tetracycline, and erythromycin. For most severe forms of acne, oral isotretinoin can be given by the doctors. It is a very potent remedy for acne although it can carry several side effects and should not be used when pregnant. Drugs to control hormones such as pills and oral contraceptives can also help in the management of acne.

FAQs

- What factors can make acne worse?
 - Hormones such as androgens can aggravate acne; androgens are hormones that increase in teenagers during puberty making them more prone to pimples because it causes the sebaceous glands to enlarge and produce more sebum. Low levels of androgens in women's blood can also worsen acne
 - Certain drugs including corticosteroids, lithium, anticonvulsants, barbiturates, androgenic steroids, DHEA, and drugs that contain bromides or iodides (cough medicines) can cause true acne. Lithium is used to treat bipolar disorders while some people use DHEA as an anti-aging hormone
 - Certain dietary products such as dairy-rich foods like skim milk, cheese, ice cream, and yogurt may make acne worse. Eating chocolates may also make acne worse; even eating 100% cocoa may not be better. At present, research shows no correlation between eating greasy foods and acne because it is the overactive sebaceous glands that cause oily skin and not the fat and oil in the food
 - Increased stress can result in new outbreaks and worsen the symptoms of acne. It is thought to be due to the relationship between stress and the production of

stress hormone “cortisol.” Stress surges the level of cortisol in the body while the cortisol increases oil production that can stimulate acne

- What over the counter acne products are safe to use for acne?
 - Acne products might cause various responses because the reaction of the skin depends on the skin type, severity of acne, and skin care preferences. Here are some of the tips for choosing over-the-counter acne products.
 - It can start by buying products with benzoyl peroxide, start with toners or creams with the low concentration of benzoyl peroxide, use it for a few days before expecting noticeable improvements. Around 2.5 percent of products may be enough because it works as well as compared to stronger concentrations with fewer side effects.
 - Start with lower concentration acne products; this can help the skin adjust with the acne medications thus minimizing the side effects such as redness, dry skin, and other skin problems such as allergic reactions. Concentrations and frequency of use can be increased slowly depending on the tolerance of skin, and the allowed dosage of over the counter products.
 - Take time to wait, using over the counter medications results are gradual and might not be apparent in the first few days of use. Patient must be practice and not immediately shift to other over the counter products as it may cause reactions and will worsen the appearance of acne.
 - Acne face wash with salicylic acid is advisable for mild acne; it helps to remove oils and clear the pores.
 - It is recommended to use the same products for at least 2-3 months before switching to other OTC products. Unless there are particular intolerable side effects such as allergies, irritations, and burns, it is advisable to continue using the same products.