

ACNE

Definition

An inflammatory skin condition characterized by superficial skin eruptions that are caused by plugging of the skin pores.

Causes, incidence, and risk factors

Acne is most common in adolescent boys, but it can occur in both sexes and at all ages. There seems to be a familial tendency to develop acne. The condition usually begins at puberty and may continue for many years. Three out of four teenagers have acne to some extent, probably caused by hormonal changes that stimulate the sebaceous (oil producing) skin glands. Other hormonal changes, such as can occur with menstrual periods, pregnancy, use of birth control pills, or stress, also aggravate acne.

Acne is caused when sebaceous glands within the hair follicles (pores) of the skin become plugged, because secretion occurs faster than the oil and skin cells can exit the follicle. The plug causes the follicle to bulge (causing whiteheads), and the top of the plug may darken (causing blackheads). If the plug causes the wall of the follicle to rupture, the oil, dead skin cells, and bacteria found normally on the surface of the skin can enter the skin and form small infected areas called pustules (also known as pimples or "zits"). If these infected areas are deep in the skin, they may enlarge to form cysts. A sebaceous cyst forms when the sebaceous gland continues to produce oil. Instead of rupturing the follicle wall, the follicle continues to enlarge and form a soft, pliable lump (known as a cyst) under the skin. The cyst is usually not painful or discolored unless it becomes infected. Acne commonly appears on the face and shoulders, but may extend to the trunk, arms and legs.

Acne is not caused by dirt or by masturbation or other activities, but dirt and oil on the face can aggravate the condition. Other factors that increase the chances of acne are hormonal changes, exposure to weather extremes, stress, oily skin, endocrine disorders, and the use of certain drugs (such as cortisone, testosterone, estrogen, and others). Acne is not contagious. A tendency to have acne may persist through ages 30's to early 40's.

Prevention

The tendency to develop acne is inherited. Although acne cannot be prevented, careful cleanliness can help to lessen the effects.

Symptoms

- skin rash or lesion on the face, neck, chest, back, or other area
- comedones (whiteheads or blackheads)
- pustules
- cysts
- nodules
- redness (erythema) of the skin lesions or skin around a lesion
- inflammation around the skin eruptions
- crusting of skin eruptions
- scarring of the skin

Signs and tests

Diagnosis is primarily based on the appearance of the skin. No testing is usually required.

Treatment

Treatment is designed to prevent formation of new lesions and aid the healing of old lesions.

Topical medications that dry up the oil and/or promote skin peeling may contain benzoyl peroxide, sulfur, resorcinol, salicylic acid or tretinoin, or retinoic acid (Retin-A).

Antibiotics (such as tetracycline or erythromycin) may be prescribed if the skin lesions appear infected.

Topical antibiotics (applied to a localized area of the skin) such as erythromycin or clindamycin are also used to control infection. (Oral tetracycline is usually not prescribed for children until after they have all their permanent teeth, because it can permanently discolor teeth that are still forming.)

Synthetic vitamin A analogues (isotretinoin, Accutane) have been shown to be of benefit in the treatment of severe acne. (Pregnant women and sexually active adolescent females should not take this medication). Other medications may include topical or injected forms of cortisone.

Surgical intervention may include professional (chemical) skin peeling, removal of eruptions or scars (dermabrasion), or removal and/or drainage of cysts.

A small amount of sun exposure may improve acne. However, excessive exposure to sunlight or ultraviolet rays is not recommended because prolonged exposure increases the risk of skin cancer.

Home treatment may lessen the effects of acne:

- Clean the skin gently but thoroughly with soap and water, removing all dirt or make-up. Wash as often as needed to control oil, at least daily and after exercising. Use a clean washcloth every day to prevent bacterial reinfection.
- Use steam or warm, moist compresses to open clogged pores.
- Shampoo hair daily when possible. Use a dandruff shampoo if necessary.
- Comb or pull hair back to keep hair out of the face.
- Use topical astringents to remove excess oil.
- Don't squeeze, scratch, pick, or rub lesions. These activities can increase skin damage. Wash your hands before and after caring for skin lesions to reduce the chance of infection.
- Don't rest your face on your hands. This irritates the skin of the face.
- Identify and avoid anything that aggravates acne. This may include foods, lotions, make-up, and so on. Avoid greasy cosmetics or creams, which can aggravate acne.
- Acne often improves in the summer, so some foods that aggravate acne may be tolerated in the summer but not in the winter.

Prognosis

Acne is usually chronic from puberty to adulthood, but eventually lessens. Acne generally responds well to treatment after a few weeks, but may flare up from time to time. Acne is not medically dangerous except for untreated, severe infection. Scarring may occur if severe acne is not treated.

Complications

- cyst
- skin abscess
- permanent facial scars
- keloids
- skin pigment changes
- psychological damage to self-esteem, confidence, personality, social life
- side effects of Accutane (including liver damage and damage to the fetus)
- side effects of other medications

Calling your doctor

Call your doctor if there are signs of complications, if acne is severe and progressively worsening, or if new symptoms develop, including large or painful cysts.