Facing Facts About Acne

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Though it's often portrayed as a scourge of the teen years, acne can affect people of all ages. According to the National Institutes of Health (NIH), about 80 percent of people between the ages of 11 and 30 have outbreaks of the skin disorder at some point.

"Many see their acne go away by the time they reach their 30s," says Jane Liedtka, a medical officer at the Food and Drug Administration's (FDA) Center for Drug Evaluation and Research (CDER). "But for some, acne persists into their 40s and 50s."

Spurred by inflammation of skin glands and of tiny, narrow canals in the skin known as hair follicles, acne is marked by pimples and other lesions. It commonly appears on the face, neck, back, chest, and shoulders.

Acne is not usually a serious health condition. "But it can cause significant emotional distress, as well as permanent scarring of skin tissue," says Liedtka, who has 15 years of clinical experience treating acne. She now works in CDER's Division of Dermatology and Dental Products.

A Disease of the PSUs

Clinically, acne is described as a disease of features known as pilosebaceous units (PSUs). Found just under the skin, PSUs are numerous on the face, upper back, and chest, and contain sebaceous glands that are connected to hair follicles. The sebaceous glands produce sebum, an oily substance that empties onto the skin via the hair follicle.

Liedtka explains, "it is known that acne is partly the result of the action of hormones on the skin's oil glands and the hair follicles," she says. "The earliest lesion of acne is a plugging of the pores of the skin."

Factors believed to be related to acne formation include

- increases in sex hormones called androgens that occur in both boys and girls during puberty. Androgens cause sebaceous glands to enlarge and make more sebum in hair follicles
- hormonal changes related to pregnancy or to starting or stopping use of birth control pills
- genetics

Beware of Myths

"There are many misconceptions out there about how acne forms, as well as on how to treat the condition," says Liedtka.

Here are some facts about acne:

- There is no known way to prevent the development of acne.
- Acne is not caused by poor hygiene, sweating, or not washing. "These factors do not cause the clogged pores that contribute to acne development," says Liedtka. While medicated washes containing benzoyl peroxide, resorcinol, salicylic acid, and sulfur are one form of treatment for acne, simple soap and water does not treat the condition, she adds.
- Acne is not caused by diet. No scientific connection has been

found between diet and acne. No food—not chocolate, fries, pizza, or any other food—has been shown to cause acne.
- Acne does not need to be allowed to run its course. "The condition can be treated," says Liedtka. "There are prescription and over-the-counter (OTC) products for it. If products you have tried haven't worked, consider seeing a dermatologist."

Types of Acne

Every mark on the skin produced by acne is a type of lesion. The mildest cases of acne produce blackheads and whiteheads. (The color of these is determined by whether the plugged follicle remains open or closed. If it is closed, it is a whitehead.)

More troublesome acne lesions include
- papules – inflamed lesions that usually appear as small, pink bumps on the skin and can be tender to the touch
- pustules (pimples) – white or yellow pus-filled lesions that may be red at the base
- nodules – large, painful, solid lesions lodged deep within the skin
- cysts – deep, painful, pus-filled lesions that can cause scarring

Treatments

The type of treatment people with acne get depends on the severity of the outbreak. "There are OTC products for mild cases, while a visit to a health care professional such as a dermatologist may be in order for the more stubborn cases," says Liedtka.

Acne treatments are regulated by FDA under the same provisions of the Federal Food, Drug, and Cosmetic Act covering prescription and nonprescription (or OTC) products.

Topical OTC medicines are applied to the skin and come in many forms, including gels, lotions, creams, soaps, and pads. Typical OTC treatments for mild acne include benzoyl peroxide, resorcinol, salicylic acid, and sulfur.

"It is best to read the labels or talk to your health care professional before you use any of these products, so that you know which is right for you, what if any side effects may occur, and when you can expect to see results," says Liedtka.

Types of prescription topical medicines used to treat acne include antibiotics, benzoyl peroxide, azelaic acid, dapsone, and vitamin A derivatives known as retinoids.

People with moderate to severe inflammatory acne may be treated with prescription topical or oral medicines, alone or in combination. And people with nodules or cysts should be treated by a dermatologist.

Caution with Isotretinoin

Patients with severe nodular acne that does not improve with the use of other treatments may be prescribed isotretinoin, which is sold under the brand names Accutane, Sotret, Claravis, and Amnesteem.

Isotretinoin is a vitamin A derivative that is taken orally once or twice a day with food for 15 to 20 weeks. It reduces the size of the oil glands so that less oil is produced.

Although effective, isotretinoin is associated with serious side effects, especially for pregnant women. According to the medication guides for these products, isotretinoin can cause serious birth defects in the developing fetus of a pregnant woman. It is vital that women of childbearing age are not pregnant and do not get pregnant while they take isotretinoin, or for 30 days after completion of treatment.

Because isotretinoin can cause birth defects, it is only for patients who can understand and agree to carry out all of the instructions in iPLEDGE, a mandatory distribution program intended to prevent the use of the drug during pregnancy due to the high risk of birth defects.

Products containing isotretinoin may cause serious mental health problems in persons taking the drug. Other side effects include dry eyes, mouth, lips, nose, or skin; itching; nosebleeds; muscle aches; sensitivity to the sun; poor night vision; changes in the blood, such as an increase in fats in the blood; and changes in liver function.

Keeping Acne in Check

Meanwhile, it helps to know what can cause or worsen an outbreak. According to the National Institutes of Health, these factors can make acne worse:
- changes in hormone levels in adolescent girls and adult women 2 to 7 days before their menstrual period starts
- oil from skin products (moisturizers or cosmetics) or grease encountered in the work environment (for example, a kitchen with fry vats)
- pressure from sports helmets or equipment, backpacks, tight collars, or tight sports uniforms
- environmental irritants, such as pollution and high humidity
- squeezing or picking at blemishes
- hard scrubbing of the skin
- stress

The Web site KidsHealth.org suggests that if you use skin products, such as lotions or makeup, look for ones that are noncomedogenic or nonacnegenic, which means that they don't clog pores.

"Acne can cause a lot of distress," says Liedtka. "But consumers have treatment options. Just remember to learn as many facts as possible, and to disregard the myths. And do not hesitate to talk to a health care professional about your treatment options." FDA

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