

Acne: Hundreds of Treatments, No Cure

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Millions of teenagers and adults wake up every morning, walk to the bathroom, and painfully stare at their reflection in the mirror. Why the bloody scabbing, unsightly bumps, and burning inflammation of their skin? Acne. Acne is a common skin disease that typically affects adolescents and young adults. Hundreds of treatment products exist for clear skin, yet there is still no cure for this ubiquitous disease.

The human skin has thousands of pores. These small openings in the skin produce sebum, a type of natural lubricating oil, which is normally sloughed off along with dead skin. Sometimes, cells form a barrier around the opening of the cell, blocking the flow of oil. Eventually this oil builds, attracting bacteria, which then feed on the oil. Finally, the body destroys the bacteria by forming the small red papules (also called pimples) that are typical signs of acne (“Definition of acne,” 1999).

Acne affects approximately 85% of teenagers and young adults, ages 12 to 24. The disease usually starts in adolescence, with the onset of puberty (“Acne statistics,” n.d.). Acne occurs more commonly on the face, because it is the area with the highest concentration of oil-producing glands. However, it is important to note that acne can occur on the neck, chest, back, arms, legs, and buttocks of the body (Mitchell & Dudley, 2002). Though clogged pores cause acne, there are several reasons why these pores are blocked initially. One explanation for acne is genetics. If a person has acne, it is likely his or her children will also have acne. Stress and physical irritation (rubbing of the affected area and “popping” pimples) are widely believed to exacerbate acne. It is debatable among dermatologists whether diet and exercise affects the condition (“Acne statistics,” n.d.).

Hundreds of treatment products have been developed and marketed for acne. It is estimated that only 30% of sufferers purchase over-the-counter drugs, while an even smaller 20% visit a skin care center (“Acne statistics,” n.d.). Mostly, acne products come in the forms of daily face cleansers and creams, which work to clear the clogged pores from excess dirt and oil. Benzoyl peroxide, a chemical found in most acne products, is in fact a powerful bleaching agent. When used in small concentrations (2.5% – 10%), it removes excess oil and needed moisture from the skin, causing irritation. Typically, lack of moisture in the skin causes drying, peeling, and itching, which even further intensifies acne if one were to scratch or peel off the affected skin (Palmer, 2008).

If common grocery-store cleansers fail, acne sufferers might seek prescription strength medication. Such medications are more concentrated than over-the-counter products. One such medication is Accutane, an extremely powerful and potentially harmful acne medication. Accutane can cause severe, life threatening defects if a pregnant woman takes the medication. Furthermore, women taking Accutane are required to use birth control, due to the known ability of Accutane to affect the ears, eyes, face, skull, heart, and brain of the fetus (“Accutane,” n.d.). Those using Accutane are urged not to engage in sports that could cause a bone fracture, as Accutane is also known to weaken bones. Even the ability to drive is adversely affected because the medicine can blur vision. Numbness and depression can also result, as can thoughts of suicide, hallucinations, and aggressive behavior (“Accutane,” n.d.). Luckily, Accutane is not the only prescription available for clear skin.

Acne research is ongoing, and antibiotics are also highly recommended for acne treatment; although researchers have seen that acne associated with the *Propionibacterium* (bacteria with which most acne is associated) is becoming increasingly resistant to antibiotics. Therefore, researchers are worried that antibiotics will be too weak to fight acne in the future (“Latest acne research,” n.d.). However, British researchers have discovered that the same laser used in wrinkle and scar treatments can be used successfully to eliminate acne. The researchers concluded that one 15-minute laser treatment reduces the overall severity of acne. A placebo experiment was done on separate patients, yielding no positive results, and therefore validating the research (“Latest acne research,” n.d.). A benefit of laser treatment is that it is non-invasive, unlike face scrubs and antibiotics (“Latest acne research,” n.d.).

Scientists at the University of Leeds have found that a bacteriophage (a virus that attacks bacteria) naturally found on the skin destroys the bacteria that cause acne. These scientists hope to use this bacteriophage to attack the acne bacteria (“Latest acne research,” n.d.).

While acne is not life threatening due to the physical effects associated with the disease, the psychological effects are enormous. Acne today has become taboo, and perfectly clear skin is seen as clean and beautiful. Research has shown that depression and anxiety are more frequent in acne sufferers than those with clear skin (“Acne and your self esteem,” 2008). It is also believed that acne lowers self-esteem, and those with the disease usually tend to withdraw themselves from social activities because of the imperfections on their skin.

Acne affects people after they no longer develop problem skin. Cystic or nodular acne (severe acne) develops underneath the skin and is treatable only by antibiotics. However, because these nodules and cysts are found beneath the skin, deep scarring can develop where acne was once present. Scarring can range from mild to severe, however it is almost always psychologically damaging.

Acne is one of the most common diseases, as almost everyone worldwide has acne to some extent during puberty. The effects of acne, including physical and emotional problems, can be very serious. Researchers continue to look for a cure for this ubiquitous disease, such that millions of people can look in the mirror and have a clear face looking back at them.

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