

Looking at Acne

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Most teenagers have at least some degree of acne, and most of them are spending too much on medications that do too little. It is estimated that 17 million Americans have acne, including 85 percent of teens aged 15 to 17 years. To understand which treatments are effective, it helps to know something about acne.

Acne is a disorder of an oil gland and a pore with a tiny hair; often the hair itself is hard to see. Certain of those hair follicles on the face, chest, and back are prone to getting acne. Many factors contribute to this “recipe for acne.” Understanding that recipe can help in choosing what to use to treat the acne successfully.

One factor contributing to acne is hormones. Male-type hormones called androgens start to be produced around the age of eight or nine, and after that oil glands in the skin tend to enlarge. Both boys and girls make some of these hormones as they go into puberty. In the teen years, more and more of an oily substance called “sebum” is gradually produced. In addition, the oil in people with acne is different in some ways and may contribute to the plugging of the follicle with both oil and dead skin cells. In fact, some of the tendency to get acne is hereditary.

In acne, old skin cells lining the follicle are not shed properly and stay stuck inside that follicle. Sometimes the follicles widen and have a black color inside (blackheads or comedones). This is not due to dirt but is thought to be due to color changes in the dead skin cells and oil stuck in the follicle. Other times, there may be just tiny closed bumps that are sometimes white and that have smaller openings to the pores. They are also full of the oil and dead skin cells and are called “closed comedones,” a technical term for pimples or zits.

Another ingredient in the recipe for acne is a certain strain of bacteria called *Propionibacterium acnes*. It is a “normal” skin bacteria but is found in larger numbers in people with acne. When these particular bacteria are present in the oil-filled follicles, it causes some of the body’s infection fighting cells to enter the follicles. These white blood cells form pus and also make enzymes that damage the follicle wall. Then the contents of the plugged follicle leak into the tissues around the follicle causing red bumps, pustules, or larger sores called nodules and cysts (which are fortunately less common). The bacteria even breaks down the oil stuck in the follicle, making it even more irritating and possibly blocking the follicle further.

While acne is usually not medically serious, it can cause scarring, and it also affects self-image at a time when teens may be feeling uncomfortable with their changing bodies.

What can be done to treat acne? Here are some of the available treatment options.

Benzoyl Peroxide is effective for acne and is available over the counter. It has some antibacterial effect and is useful in controlling some of the inflammation in acne. It may also reduce some of the oil, helping to “unclog the pores.” The 5 percent strength is usually recommended since the 10 percent strength may be more drying without treating the acne any better. Benzoyl peroxide can be used as a gel applied at night, and it is also offered as a washing lotion. The gel may be more effective, but the wash is easier to use on a large area like the back and may be more easily tolerated by people whose skin feels too dry or is irritated by the gel. (There is also a popular, but expensive, acne product that

only has 2.5 percent benzoyl peroxide; many teens on this need additional treatment to clear their skin.)

Antibiotics are not available over the counter, but your pediatrician can prescribe them. For milder acne, topical antibiotics that are applied to affected skin can be quite effective. When used with benzoyl peroxide, they seem to be even more effective, and there is less development of antibiotic resistance. For more severe acne, oral antibiotics like tetracycline can be used. Remember, the antibiotics help get rid of the bacteria, *Propionibacterium acnes*.

Retinoids, which are available by prescription, include such products as Retin A (Avita), the most commonly prescribed of this group. Retinoids help to unclog the follicles and control the plugging of follicles with skin cells. They are generally effective but can be more drying and can sometimes cause redness, so when they are needed, your doctor will start with the mildest form and will follow your progress, making adjustments if there is too much skin reaction to Avita.

Salicylic acid, available in some over-the-counter agents like Neutrogena's acne wash and Stridex pads, also reduces the formation of plugs in the follicles. While it is less effective than Retin A, it is also less irritating.

Some of the **other prescription medications** for acne include Isotretinoin, a relative of vitamin A, which is useful for severe acne but also has potentially serious side effects. For this reason, it is reserved for serious cases of acne, like those with cysts or many large-sized acne bumps with scars. Also, combined hormonal therapy is sometimes useful in young women with acne. Occasionally acne can be worsened by a truly abnormal hormonal imbalance, and your pediatrician can help determine this clinically.

There are also some **alternative therapies** such as tea tree oil that may have some effectiveness in treating acne. However, this oil may sometimes cause an allergic rash and, when undiluted, may actually cause more comedones, or plugged glands, to form.

Points to Remember

It is important to understand that acne DOES NOT come from dirt, so frequent washing alone will not improve the condition and may even irritate the skin. Washing once or twice a day with mild soap may be sufficient when effective acne medications are also being used. Likewise, foods like chocolate and French fries DO NOT generally cause acne; research has been done to investigate that myth. (One exception is that some people feel that every time they eat large quantities of certain foods, they break out more. If so, it would not hurt to avoid that food.)

It is also important to know that picking at acne generally makes it worse; it becomes more inflamed and is more prone to scarring. Sometimes athletic gear, irritating clothing, and hair gels and pomades will aggravate acne. Many moisturizers, along with some makeup, concealers, and sunscreens, particularly those containing oils, will cause more acne. Look for "oil-free" or "non-comedogenic" on the label of any such products that will be used in patients with acne. To safely reduce dryness, your doctor may actually recommend an oil-free moisturizer while you are on acne medication. However, a little dryness can be expected in the treatment of acne, since in the recipe for making acne, the oilier the skin, the worse the acne tends to be.

Treating acne can be frustrating because results aren't expected for about six to eight weeks, and I have seen young people give up after as few as two applications. No

acne medications, not even the strongest, are effective when they sit on a shelf unused! Daily care—sometimes twice daily, depending on the product—is important to achieving good results.

Feel free to talk to your doctor about the types of acne therapy that would be right for your skin. Your doctor can help you spend your treatment dollar wisely.