

Acne

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What is it?

Acne, also known as *acne vulgaris*, is a variety of skin lesions ranging from *comedones* (*blackheads* or *whiteheads*) to red bumps (*papules*), and even large *cysts*. The condition mainly affects the face, but may appear also on the shoulders, back and chest.

What causes it?

Most people who get acne start in the early teen years. This is when the oil glands in the skin start making more *sebum* under the influence of sex hormones. Some people also have too many "sticky" skin cells made with *keratin* which mix with the oily sebum and plug up the *hair follicles* in the skin.

These plugs trap bacteria called *Propionibacterium acnes* in the follicles which lead to swelling and *inflammation*. Tender red bumps are the result. In acne, what start as small red bumps can develop into *papules*, *pustules* (pimples), *nodules* and even *cysts*.

Who gets it?

Both men and women get acne. More than 17 million people have some degree of acne making it the most common skin disorder treated by physicians in the United States. About 90% of teenagers will have at least some acne at some time. Adults can also experience

some degree of acne. In fact, 8% of adults 25-34 and 3% of adults 35-44 have acne. It may be worse in men because they have more skin oils. Other things also affect how bad acne gets.

Heredity plays a role. If your mother and father had bad acne, you may too.

Your immune system also plays a role. Some people are extra sensitive to the bacteria that get trapped in the hair follicles. This can cause bad acne.

Foods don't seem to be related to acne. But, if you feel that some foods make your acne worse, you may want to avoid those foods.

What are the symptoms?

A *whitehead* results when the follicle is plugged with sebum and skin cells. If this plug reaches the surface of the skin and the air touches it, it turns black and is called a *blackhead*. A blackhead is not caused by dirt.

If the wall of the plugged follicle breaks, the area swells and turns into a *papule*. If the follicle wall breaks near the skin surface, the bump usually becomes a *pimple*. If the wall breaks deeper beneath the skin, acne *nodules* or *cysts* can form. This is called *cystic acne*. It is the type most likely to lead to scars. You should know acne does not involve any internal organs and never turns into cancer.

Things that often make acne worse

- Oil-based makeup, suntan oil, hair gels and sprays, and oils from machinery or cooking
- Stress and strong emotions like guilt, anxiety and fear
- Menstruation in women
- Squeezing or picking at blemishes
- Scrubbing the skin hard

Things that don't cause acne

- Masturbation
- Sexual activity
- Diet (like chocolate or fatty foods)
- Dirt

How do you prevent it?

You can't. Acne is caused by a combination of sebum, skin cells, bacteria and hormones - all of which are normal parts of our bodies. The best a person can do is avoiding the things that make acne worse. Acne can not be cured. It can only be controlled.

Can it be treated?

Acne can be treated in different ways. Basic treatment for all acne should include washing the skin twice daily with a mild soap (Cetaphil) and shampooing the hair daily. The main thing to remember is that it will take about two months of treatment before your skin starts to look better. If the treatment doesn't help by then or is overly irritating, get advice from your doctor.

- **Benzoyl peroxide** (5% or 10%) clears up acne for many people. You can get benzoyl peroxide without a prescription. It comes in cream, lotion, gel, or pads. You spread it over the whole area where you have blemishes (not just dabbing it onto each blemish).

Benzoyl peroxide works by peeling the top layers of skin and slowing the *P. acnes* bacteria. Initially, it may bring a new crop of pimples to the surface, but once clear the skin should remain clear with continuous use.

When starting benzoyl peroxide, begin with a 5% preparation. Use it once a day at bedtime. Before using it, gently wash the skin with soap and water, then allow the skin to completely air dry for 15-30 minutes. Eventually you may find using it two times a day or using 10% is more effective, but can be more irritating.

- **Azelaic acid** (Azelex) is about as effective as the other topical (applied to the skin) medications, but possibly better tolerated. It works like benzoyl peroxide. It is usually most effective applied twice a day. It is very useful in people who develop dark spots after acne heals. A small number of people will have itching, stinging and redness after application.

- **Retinoids** tretinoin (Retin-A, Avita) and adapalene (Differin) can be highly effective, especially for comedones. They are usually rubbed onto the skin once daily at bedtime, typically beginning with the mildest cream strength and progressing to higher concentrations, depending on the effectiveness. The face should be gently washed, dabbed with a towel, and then allowed to air dry for 20-30 minutes before application since moist skin may absorb retinoids too quickly causing additional irritation. A pea-sized dose is spread evenly over the entire face until it becomes

invisible. Be sure not to get it near the eyes, mouth or area under the nose. It may seem at first that the retinoid is making your acne worse. Give it several weeks to start working.

If you use retinoids, you must avoid the sun or use a strong sunscreen. They increase your risk of getting very bad sunburn. Other side effects include peeling, burning, dryness, itching, and redness of the skin.

- **Antibiotics** work by killing the bacteria in the follicles. To begin with, topical antibiotics like erythromycin or clindamycin are applied alone or in combination with one of the above medications. Again, be sure to apply the lotion, cream or gel over the whole area where you have blemishes. Since antibiotics do not peel the skin, they do not affect old pimples but help to prevent new ones. Oral antibiotics can be used for more severe acne often taken long term.

- **Birth control pills** with the newer hormone agents are now approved specifically for female acne and work by reducing the amount of sebum produced.

- **Isotretinoin** (Accutane) may be needed to treat severe acne. It can be highly effective in treating cystic acne and preventing scars. It is taken once a day by mouth for 15 to 20 weeks. Total cost for the drug and required blood tests is approximately \$2000.

Isotretinoin can cause serious side effects. It has been connected with serious birth defects and miscarriages. It should never be taken during pregnancy or even one month before pregnancy. If you're a woman, you must use birth control while you take isotretinoin, starting one month before you start and ending one month after taking it.

What can be done about scars?

Scarring may disappear to a surprising extent simple with the passage of time. You can help reduce scarring by not squeezing or picking at blemishes. Also avoid scrubbing your skin hard.

In summary

- Eat what you like, but eat sensibly
- Use a water-based facial cosmetic. Wash gently, do not scrub - twice a day.
- Do not pick or squeeze pimples
- And remember - acne improves slowly. With patience and continued treatment your complexion will gradually get better.