



## ACNE

### What is acne?

Acne is an inflammatory skin disease of the oil glands and hair follicles that is marked by the eruption of blackheads, whiteheads, pustules, cysts, scarring, and, in the case of dark skinned patients, unsightly dark spots.

Acne affects almost everyone — more than 90% of all adolescents, nearly 50% of all adult women and 25% of all adults. Crossing gender lines as well as national borders, it's one of the most widespread medical conditions in the world. Yet there's still no cure.

But there is hope. Acne is not curable, but it is treatable. We know more about controlling this condition than ever before. The secret to managing acne is prevention. Once a treatment has been found that works, it's important to stick with it. Even after pimples disappear, you may need to continue treatment to keep new blemishes away. It's also crucial to begin treatment as soon as the first signs appear, because the sooner you address your acne, the less likely you are to experience permanent damage to your skin. Of course, in order to stop acne, we must first find out how it starts.

### What causes acne?

One of the most important things you can learn about acne is this: It's not your fault. Contrary to popular belief, acne is not caused by anything you're doing — what you eat, how often you wash your face or work out — but by a combination of factors at work far beneath the surface of your skin.

### A healthy follicle

A blemish begins approximately 2–3 weeks before it appears on your skin's surface. It starts in your sebaceous hair follicles — the tiny holes commonly called pores. Deep within each follicle, your sebaceous glands are working to produce sebum, the oil that helps keep your skin moist and pliable. As your skin renews itself, the old cells die, mix with your skin's natural oils, and are sloughed off. Under normal circumstances, these cells are shed gradually, making room for fresh new skin. But sloughing is different for everyone. Some people shed cells evenly; some don't. Uneven shedding causes dead cells to become sticky, clumping together to form a plug — much like a cork in a bottle. This plug, or comedo, traps oil and bacteria inside the follicle.

### A plugged follicle

The plug traps oil and bacteria within the follicle, which begins to swell as your skin continues its normal oil production. Your body then attacks the bacteria with a swarm of white blood cells. The whole process takes 2–3 weeks, culminating in a pimple.

### An inflamed acne lesion

Why me? There is no one simple "cause" of acne — the condition is influenced by many factors, many which are out of your control. The regularity with which you shed skin cells can change throughout your life. Your hormone balance affects the rate at which you produce sebum, which is often in flux — especially for women. Research has also shown that genetics play a big part in the development and persistence of acne, so your family history is a valuable prediction tool as well.



One of the best weapons in the fight against acne, however, is knowledge; if you know what causes it, it's easier to formulate a good plan of attack. There are five primary culprits contributing to this process. Each of these factors may vary dramatically between individuals. While you don't have control over these factors, understanding them can help you in your search for the proper treatment.

**Acne culprit #1:**

**Hormones.** For the majority of acne sufferers, the trouble begins at puberty, when the body begins to produce hormones called androgens. These hormones cause the sebaceous glands to enlarge, which is a natural part of the body's development. In acne sufferers, however, the sebaceous glands are over stimulated by androgens, sometimes well into adulthood. Androgens are also responsible for acne flare-ups associated with the menstrual cycle and, on occasion, pregnancy.

**Acne culprit #2:**

**Extra sebum.** When the sebaceous gland is stimulated by androgens, it produces extra sebum. In its journey up the follicle toward the surface, the sebum mixes with common skin bacteria and dead skin cells that have been shed from the lining of the follicle. While this process is normal, the presence of extra sebum in the follicle increases the chances of clogging — and acne.

**Acne culprit #3:**

**Follicle fallout.** Normally, dead cells within the follicle shed gradually and are expelled onto the skin's surface. But in patients with overactive sebaceous glands — and in nearly everyone during puberty — these cells are shed more rapidly. Mixed with a surplus of sebum, the dead skin cells form a plug in the follicle, preventing the skin from finishing its natural process of renewal.

**Acne culprit #4:**

**Bacteria.** The germ *Propionibacterium* (pro-pie-on-oh-back-tear-e-um) acnes, (*P. acnes* for short) is a regular resident of all skin types and is part of the skin's natural sebum maintenance system. Once a follicle is plugged, however, *P. acnes* bacteria multiply rapidly, creating the chemical reaction we know as inflammation in the follicle and surrounding skin

**Acne culprit #5:**

**Inflammation.** When your body encounters unwanted bacteria, it sends an army of white blood cells to attack the intruders. This is called the inflammatory response. This is what causes pimples to become red, swollen and painful. The inflammatory response is different for everyone, but studies have shown that it is especially strong in adult women.



## Myths About Acne

### **Myth:** *Acne is related to diet*

Reality: Prevailing wisdom in the dermatology community is that diet and acne are not related. Of course science is never a 100% reliable enterprise. But at this time, there is no evidence that chocolate; sugar, oil, milk, seafood, or any other food causes acne. Some people absolutely insist that a certain food causes acne for them, or that a specific acne diet works for them. In this case, doctors sometimes recommend that they avoid that food or follow that diet. Regarding chocolate specifically, several studies have been performed, and the answer to “does chocolate cause pimples?” is a resounding “No”.

### **Myth:** *Washing your face more often will help clear up acne*

Reality: Facial blemishes are not caused by dirt. Contrary to what you may have seen in commercials, pores do not get blocked from the top down. Rather, an entire pore collapses from deep within the skin, starting acne formation. Frequent washing does nothing to prevent this. Over-washing is actually irritating, and excess irritation can worsen acne. A washcloth can aggravate this situation further. Use bare hands to wash and only wash twice a day.

### **Myth:** *Stress causes acne*

Reality: Stress is not a very important factor in acne despite what you may have heard. Drugs that treat severe stress may have acne as a side effect. However, acne may flare under circumstances of severe emotional or physical stress. Your time is better spent determining the right course of acne treatment rather than feeling guilt about stress.

### **Myth:** *Masturbation or sex causes acne*

Reality: This antiquated notion, originating as early as the 17th century to dissuade young people from having premarital sex, is just plain wrong. Don't believe the hype.

### **Myth:** *The sun will help get rid of acne*

Reality: The sun may work in the short-term to hasten the clearing of existing acne while reddening your skin, thus blending your skin tone with red acne marks. However, a suntan is actually skin damage. Sun exposure causes irritation, which can make acne worse. The sun is a short-term band-aid, which will often bite back with more acne in the weeks following exposure.

Polley Clinic can help with your Acne. You have many options when treating your acne. The first step is to contact our office to schedule an appointment. Our highly trained providers will diagnose your specific type of acne and give you various treatment options. Once you have found a treatment that helps, it's important to stick with it.