

All about acne

Minneapolis dermatologist **Charles Crutchfield MD** explains that acne is a complicated disease process. Lise Taylor investigates acne and how it can be treated.

Many of us complain at times about our 'acne'. But what most of us are experiencing is simply an annoying pimple or two. Real acne can be a debilitating problem that can leave a sufferer emotionally and physically scarred.

Dermatologist Charles Crutchfield MD, Clinical Associate Professor at the University of Minnesota Medical School, describes acne as a complicated disease process that is driven by both genetic and hormonal influences.

He says that acne is, essentially, a disorder of the pilosebaceous unit. 'What this means is that the human body, through evolution, is covered with millions and millions of hairs. These hairs come out of a follicle. Over time, these hairs have become miniaturized. Some are so small you can't see them, but you certainly can see the follicles in the skin where the hairs protrude. These are commonly referred to as pores.

At the bottom of the pore, there is an oil gland called a sebaceous gland. The pore itself is like a tube, and the hair comes out of it. Sebaceous glands are found in high concentrations on the face, chest, shoulders, and back. These are the most common areas where acne can occur.'

Over time, he explains, the cells that line the follicular tubes where the hairs come out don't behave properly. This usually occurs under hormonal influence. Hormonal changes occur during adolescence, and that's the reason why acne tends to occur at the beginning of adolescence.

'The skin cells in the pores will stick together and form clumps. These are often known as comedones, or whiteheads. Sometimes the material in the clump will oxidize and become dark. These are known as blackheads. When

the oil tries to escape from the follicle but can't because there is a plug in the way, it will build up and form a nodule. Bacteria that live in the skin migrate into the area and use the sebum as a food source. By-products of this bacterial presence will often cause inflammation. Inflammation brings in white cells that eventually die and turn into pus,' explains Dr. Crutchfield.

'This is why acne is really a wide variety of disease states, from small bumps to nodules to red inflammatory nodules and pustules,' he says. 'As you can see, acne is a very sophisticated disease and different components of the pathway are present to different degrees in different people. That's why there's rarely a one-size-fits-all approach to the treatment of acne.'

Many of the treatments used to treat acne are designed specifically to address different stages in this pathway, causing the skin cells to mature properly, addressing the bacterial component with antibiotics, addressing the anti-inflammatory component, and addressing the production of oil in the skin.

'I tend to be very aggressive in my acne treatments. My philosophy is, if you are going to spend the time, effort, energy, and money to treat a condition, let's use the best possible tools to get the best results,' he says. 'I tend to have the best results when I design an overall program that encompasses many smaller treatments that will work together in a synergistic manner. I use a combination of these treatments that normalize the way the skin matures under the influence of hormones. I also use treatments that will break up any of the newly forming plugs and comedones, attack the bacterial presence in the area, address the inflammation, and sometimes treatments

that will calm down the oil production in the patient's skin.'

In designing an individual's acne treatment program, Dr. Crutchfield looks at patient distress, how long they have had the acne, what effective treatments they have tried in the past, whether they are starting to form acne scars and whether they have a family history of acne. 'I also evaluate the type of acne that they have, be it comedonal, papular, inflammatory/pustular, or nodulocystic. This will assist me in selecting the right combination of therapies to treat them.'

He adds that because everyone's skin chemistry is different, it's important that a board-certified dermatologist manages the treatment of complicated acne. 'Patients' responses need to be monitored carefully and medicines need to be adjusted accordingly. Because medications can have side effects, it is important to balance the positive and negative to make sure that the benefits of acne therapy and the results outweigh the risks of treatment. Some of the common side effects with these treatments can be irritation, sun sensitivity, mild stomach upset, yeast infections and dry skin.'

The newest technology Dr. Crutchfield recommends for acne treatment is the Aramis laser. 'This is a glass erbium laser that has FDA approval to treat mild to moderate acne. The mechanism of action is to interact with the oil glands in the skin and suppress oil production. Usually treatments can take place anywhere from once a week to once a month, usually with six to 10 treatments needed to be effective. I find this works in the vast majority of patients and I use it as a component in our overall acne treatment program,' he says.

'Patients have responded well to the Aramis. I also like it because it is completely painless as opposed to some of the other laser options that tend to hurt quite a bit. It is far superior to any other light or laser system that is designed to treat acne.'

What can be done about acne scarring? Dr. Crutchfield says he is often confronted with distressed patients who ask for help with their acne scarring. 'Unfortunately, when I look at their face, in addition to seeing acne scarring, I will often find active inflammatory acne. I explain that my approach is to first clear up any acne; otherwise, we will end up chasing our tail. If we treat the scars and the patient develops new ones at the same time because their acne is not addressed, our efforts will have minimal results,' he explains.

Dr. Crutchfield's protocol in such a case would be to start with an aggressive anti-

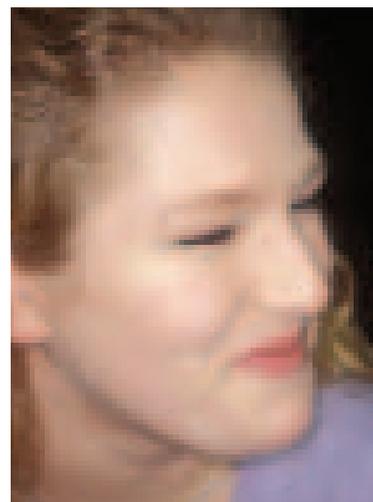
acne treatment program and then address any residual scars. He says that it is also important to note that many patients believe they have acne 'scars' when really what they have is what is called post-inflammatory hyperpigmentation. 'To me, a scar is a permanent change in the skin with fibrosis. I explain to patients that a scar can never be changed back into normal skin. The approach is to make the scar look as close to normal skin as possible so the contrast is not as great. The best way I can treat acne scarring is to prevent it.'

As for future treatment options, Dr. Crutchfield expects to see a lot of new combination products that will include both a benzoyl peroxide and topical antibiotic. 'This is great for addressing both the bacteria and the anti-inflammatory component of acne with a mild ability to break up the comedonal plug'.

The experience of the doctor in treating acne and the extensive range of treatments that are now available are having a significant impact on the quality of life for many acne sufferers. **cbm**



BEFORE



AFTER acne treatment by Dr. Crutchfield



BEFORE



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