



ACNE VULGARIS PATHOGENESIS AND DIFFERENT GRADE OF ACNE

Acne is a disorder with the oil glands and hair follicles (**sebaceous glands**). To keep the skin supple, the sebaceous glands secrete oil (**sebum**). When the glands get clogged up, it can lead to pimples and cysts.

A lot of people get acne. Acne affects people of all races and ages. In fact, it will affect most people in the U.S. between the ages of 11 and 30. Acne can happen to people in their 40s and 50s. But acne usually starts when a person is in their teens.

Androgens, which are male sex hormones, rise in both boys and girls when they reach puberty. The sebaceous glands make more oil because of this.

The sebum produced normally travels through the hair follicles to the skin. However, the follicles can become blocked by the accumulation of skin cells.

A type of skin cell called keratinocytes lines the follicle.

Keratinocytes usually rise to the surface of the skin when skin cells are shed. When someone has acne, the hair, sebum, and keratinocytes all stick together inside the pore. This keeps the

keratinocytes from shedding and stops the sebum from getting to the skin's surface. Because oil and dead skin cells are mixed together, bacteria that normally live on the skin can grow in the clogged follicles and cause inflammation, which includes swelling, redness, heat, and pain. When the wall of a clogged follicle breaks down, bacteria, skin cells, and sebum leak out into the skin around it. This makes lesions or pimples. Most people's acne goes away by the time they are in their thirties, but some people still have it in their forties and fifties.

Who gets pimples?

Acne affects people of all races and ages, but teens and young adults are most likely to have it. When acne shows up during adolescence, it's more common in boys than in girls. Acne can happen to adults, and when it does, women are more likely to have it than men.

TYPES OF ACNE

Different kinds of lesions, or pimples, are caused by acne. Comedones are what doctors call hair follicles that are swollen or clogged. Some kinds of acne are:

Whiteheads are hair follicles that get clogged and stay under the skin, making a white bump.

Blackheads are clogged hair follicles that rise to the skin's surface and open up. The air changes the color of the sebum, which makes the skin look black. This is not because they are dirty.

Papules are small, pink bumps on the skin that are usually swollen and can be painful to touch.

Pustules, or pimples, are papules that are topped by pus-filled white or yellow lesions that may be red at the bottom.

Nodules are large, painful lumps that are deep inside the skin.

Acne that is deep, painful, and full of pus is called cystic acne or severe. nodular acne.

Cystic acne: The most severe form of acne vulgaris, this type can occur anywhere on the face or body and consists of inflammation and large, painful blemishes (or cysts).

Acne can be classified into different grades based on the severity of the condition. The most common grades of acne are mild, moderate, and severe. The grades of acne can also be classified as follows:

- **Grade I:** The mildest form of acne, with blackheads, whiteheads, or milia, and occasionally minor pimples.
- **Grade II:** Moderate acne, with papules or inflamed raised lesions.

- **Grade III:** Moderate to severe acne, with pustule formation due to a Grade 3 acne lesion accumulating puss creating a pustule.
- **Grade IV:** The most severe grade of acne, with numerous papules and pustules, along with occasionally inflamed nodules.

CAUSES OF ACNE.

TESTOSTERONE.

It is thought that acne in teens is caused by the rise in testosterone levels that happens during puberty. The hormone is very important because it helps the penis and testicles grow and develop in boys and keeps the muscles and bones strong in girls. The hormones have a strong effect on the sebaceous glands. It is thought that when testosterone levels go up, the glands make a lot more sebum than the skin needs.

FAMILIES WITH ACNE

Acne can run in families. If your parents had acne, there's a good chance you will too. One study found that if both of your parents had acne, you are more likely to get more severe acne at a young age. It also found that you are more likely to get adult acne if one or both of your parents had it.

ACNE IN WOMEN

Adult acne is more common in women than in men. Many cases of acne in adults are thought to be caused by the changes in hormone levels that many women experience at certain times.

Among these times are:

Some women's acne gets worse right before they get their period. Pregnancy. Many women have acne symptoms during this time, usually in the first three months.

Polycystic ovary syndrome is a common condition that can cause acne, weight gain, and the formation of small cysts inside the ovary.

OTHER TRIGGERS

Other things that could cause an acne flare-up are:

SOME COSMETIC PRODUCTS – However, this is less common as most products are now tested, so they do not cause spots (non-comedogenic) (non-comedogenic)

Some drugs, like steroid medicines, lithium (which is used to treat depression and bipolar disorder), and some drugs used to treat epilepsy, can make you more likely to get cancer.

putting pressure on a spot of skin with a headband or backpack on a regular basis smoking, which can cause acne in older people.

ACNE RUMORS.

Even though acne is one of the most common skin problems, it is also one of the least understood. There are many myths and misconceptions about it:

'Acne is caused by a poor diet' – So far, research has not found any foods that cause acne. It's good for your heart and your health in general to eat a healthy, well-balanced diet.

"Having dirty skin and not taking care of it well are what cause acne."

Most of the biological processes that cause acne happen below the skin, so how clean your skin is has no effect on your acne. Washing your face more than twice a day could just aggravate your skin.

"The best way to get rid of blackheads, whiteheads, and spots is to squeeze them."

This could make your symptoms worse and could leave scars.

'Sexual activity can influence acne.'

Having sex or masturbating won't help or hurt acne in any way.

"Sunbathing, sunbeds, and sunlamps are all good ways to treat acne."

There is no solid proof that spending a lot of time in the sun or using sunbeds or sunlamps can help acne. Many medicines used to treat acne can make your skin more sensitive to light.

This means that being in the sun could hurt your skin and make you more likely to get skin cancer.

"Acne can spread."

You can't give someone else acne.

The differences between ACNE AND ACNE VULGARIS.

Acne and acne vulgaris are the same thing. Acne is a **common skin condition where the pores of your skin clog**. Pore blockages produce blackheads, whiteheads and other types of pimples. Pimples are pus-filled, sometimes painful, bumps on your skin. The medical term for acne is acne vulgaris. Acne vulgaris typically involves outer skin blemishes like pimples, while acne inversa affects deeper layers of the skin, leading to painful nodules.

TREATMENT FOR ACNE

Best Treatment for non-inflammatory acne, such as whiteheads and blackheads are –

Salicylic Acid: Gets into pores to dissolve buildup and get rid of bacteria that cause acne.

This ingredient kills the bacteria that cause acne, helps get rid of excess oil, and speeds up the turnover of skin cells. If you have sensitive skin, this ingredient can cause your skin to purge, which can lead to redness, burning, and stinging.

Tea tree oil reduces inflammation and stops acne flare-ups. It's especially helpful when you can feel a pimple coming on under the skin's surface.

Sulfur: Sulfur gets rid of dead skin cells that block pores and helps get rid of too much oil. Products that have sulfur in them can dry out your skin and smell bad.

The best ingredients for Papules, Pustules, and Cysts, which are types of acne that cause inflammation:

Benzoyl peroxide: This ingredient soothes angry, red breakouts and gets rid of the bacteria that cause acne.

It also helps get rid of whiteheads and blackheads and calms down skin inflammation.

Most of the time, benzoyl peroxide comes as a cream or a gel or in cleansers. Either once or twice a day, it is used.

It should be put on all the acne-prone parts of your face 20 minutes after you wash it.

Too much of it can hurt your skin, so you shouldn't use it too often.

It also makes your face more sensitive to sunlight, so stay out of the sun and away from sources of ultraviolet (UV) light, like sunbeds, or use sun cream.

Be careful not to get benzoyl peroxide on your hair or clothes because it can bleach them.

Most of the time, benzoyl peroxide causes: dry and tense skin, a burning, itching, stinging, or prickling feeling. Some redness and peeling of the skin. Most side effects are mild and should go away once the treatment is over.

Isotretinoin

Isotretinoin is a pill that is used to treat severe acne. It's good for a number of reasons: It helps normalize sebum production and reduce how much is made. It keeps follicles from getting clogged. It reduces the number of bacteria on the skin. It makes spots less red and swollen. But the drug can also have a lot of different negative effects. It is only suggested for people with severe acne that hasn't gotten better with other treatments.

Because of the risk of side effects, a specialist doctor is the only one who can give you isotretinoin.

Find out everything there is to know about isotretinoin, like who can take it, what the side effects are, and what the risks are during pregnancy.

Topical antibiotics

Bacteria on the skin that can get into clogged hair follicles can be killed by antibiotics that are put on the skin. They come as a lotion or gel that you put on your skin once or twice a day.

Most of the time, a 6- to 8-week course is suggested. After this, antibiotics are usually no longer given because the bacteria on your face could become resistant to them. This could make your acne worse and lead to more infections. Side effects are rare, but they can include the following: minor skin irritation, redness, burning, and peeling of the skin.

Azelaic Acid

Azelaic acid is often used to treat acne when the side effects of benzoyl peroxide or topical retinoids are too painful or irritating. Azelaic acid works by killing bacteria and getting rid of dead skin. It comes as a cream or a gel, and most people use it twice a day (or once a day if your skin is particularly sensitive). Your skin won't become sensitive to sunlight because of the medicine, so you don't have to stay out of the sun. Most of the time, you'll have to use azelaic acid for a month before it helps your acne. Most of the time, the side effects of azelaic acid aren't too bad.

Side Effect- burning or stinging skin a dry, itchy skin, Skin that looks red

Oral acne medicines, also called oral antibiotics, are often used to treat moderate to severe acne. Some of the medicines that can be taken by mouth are:

- Doxycycline
- Erythromycin
- Tetracycline
- Minocycline
- Trimethoprim
- Sulfamethasoxazole/trimethoprim
- Dapsone

Women can change their hormones with spironolactone or birth control to get rid of acne. Even though acne is often a long-term problem, even if it only lasts through adolescence, it can leave scars that last a lifetime. Scars from acne tend to look like "ice pick" pit scars or craters. Even though the right treatment can help reduce scarring, there are a number of

dermatological procedures that can help reduce acne scars even more, such as:

Dermabrasion: This can be used to get rid of small scars, small bumps on the skin's surface, scars from surgery, and acne scars. It is done by using an electrical machine that "abrades" the skin to take off the top layers of skin. As the procedure heals, the skin gets smoother and looks more healthy.

Photodynamic therapy is a laser procedure that is used to treat acne that is mild to severe.

Chemical peels are often used to get rid of sun damage, uneven pigmentation, and shallow scars. When a chemical is put on the skin, the top layer of skin is taken off. When the top layer of skin is removed, the skin regenerates, which often makes the skin look better.

Dermal filler injections are put under the skin to replace the collagen that the body has lost over time. Dermal fillers that are injected are usually used to treat wrinkles, scars, and lines on the face.

Laser resurfacing is a way to get rid of damaged skin by burning it off with high-energy light. It can be used to get rid of fine lines and scars.

Phototherapy, also called blue light therapy, is the use of a blue light source for phototherapy. It has been shown to reduce the number of bacteria that cause acne with only minor side effects, like dry skin. Blue light therapy doesn't use ultraviolet (UV) light, so it doesn't hurt the skin like other types of light therapy did.

Pulsed light and heat energy (LHE) therapy: It is thought that this type of light and heat therapy works by killing the bacteria that cause acne. It also makes the oil glands in your skin

smaller. An LHE system that uses pulses of green light and heat to treat mild to moderate acne has been approved by the FDA.

Punch grafts: Small skin grafts are used to replace scarred skin with punch grafts. To get rid of the scar, a hole is made in the skin. This is then replaced by skin without scars (often from the back of the earlobe). Deep acne scars can be treated with punch grafts.

Autologous fat transfer: During an autologous fat transfer, fat from another part of your body is taken and injected under your skin. The fat is put under the skin to push up the scars that have sunk down. This method is used to fix deep flaws in the body's shape caused by scars from severe acne. Because the fat may be reabsorbed into the skin over time, you may need to have it done again.

KEY FACTS ABOUT ACNE

- **Acne is a problem that happens when the hair follicles and sebaceous glands get clogged. This can cause zits and cysts.**
- **Acne is a common problem that usually starts when a person hits puberty because of changes in hormones.**
- **Acne can be on the surface or deeper in the skin.**
- **If you don't treat acne, it can leave scars that last a lifetime.**

- **Acne scars can be lessened or stopped by avoiding things that make acne worse and treating acne as soon as possible.**