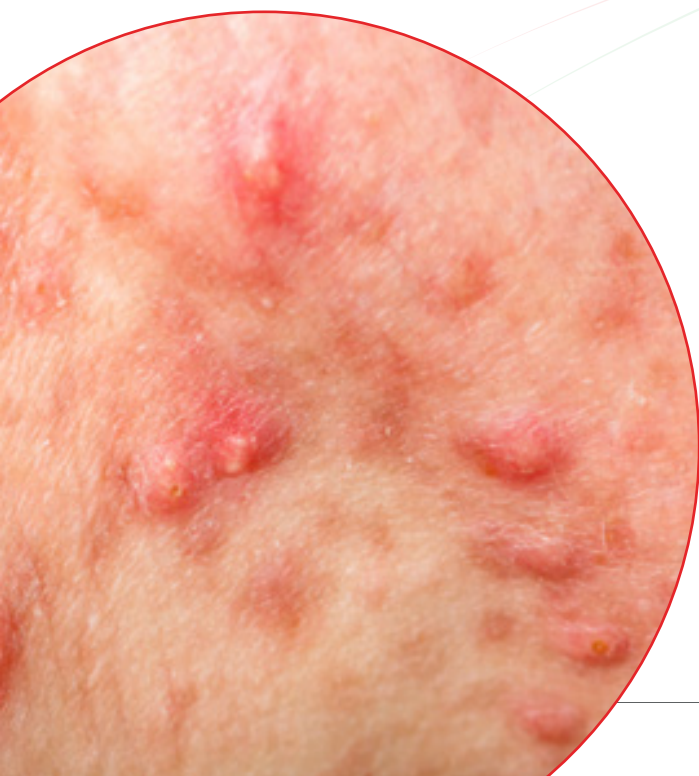




Emirates Dermatology Society

ACNE

- ◆ What causes Acne?
- ◆ Are there external factors that may influence the evolution of your acne?
- ◆ How is acne treated?



ACNE

Acne is a very common skin condition identified by the presence of comedones (blackheads and whiteheads), (Figure 1), papules, pustules, and nodules (Figure 2). It usually starts during puberty. Acne most frequently affects male and female adolescents on the face, chest and back. For most, it tends to go away by the early to mid-twenties, but it can go on for longer. Acne can also develop for the first time at the age of late twenties and beyond.

Occasionally, young children will develop blackheads and/or pustules on the cheeks or nose.



Fig. 1 (A) Open Comedones (“blackheads”) **(B)** Closed Comedones (“whiteheads”)

The inflammatory lesions may be superficial, like papules and pustules, or deep like nodules. Papules are red, raised with respect to the surrounding skin, and less than 5 mm in diameter. Pustules look like papules but are pus-filled (covered by a whitish-yellow collection of purulent material). Their popular term is “pimples.” When the lesions become larger than 5 mm, they are defined as nodules (Figure 2).

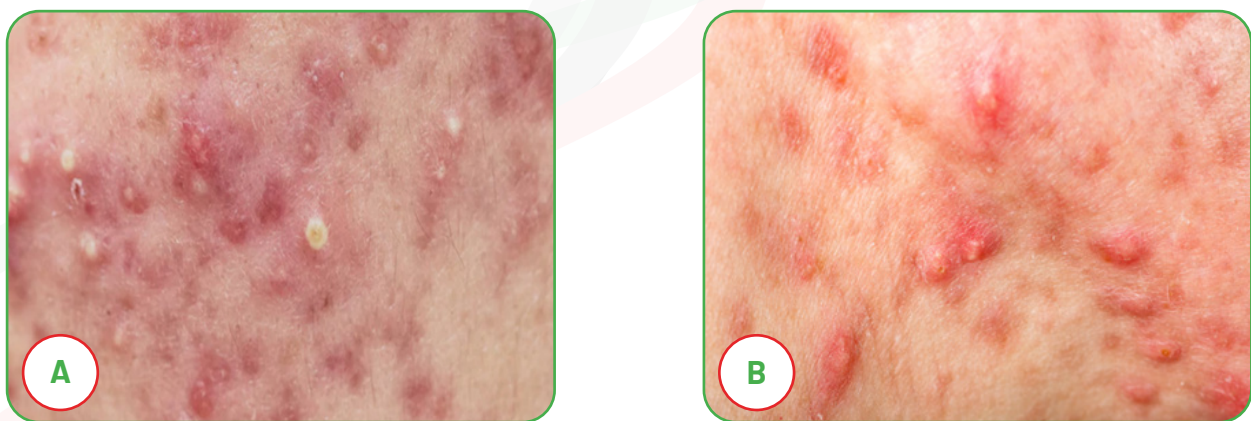


Fig. 2 (A) pustules **(B)** cystic nodules

What causes Acne?

Acne develops when pores of sebaceous glands in the skin become clogged resulting in the formation of Comedones. Our sebaceous (oil-producing) glands are affected by our hormones. In people who have acne, the glands are particularly sensitive, even to normal blood levels of these hormones. This causes the glands to produce too much oil. A mixture of the oil (sebum) and dead skin cells builds up and plugs the pores producing blackheads and whiteheads (Figure 3). The plug of dead skin turns black from exposure to air and not due to dirt. Comedones often get infected by bacteria which result in painful and pus-filled lesion leading to scar formation.

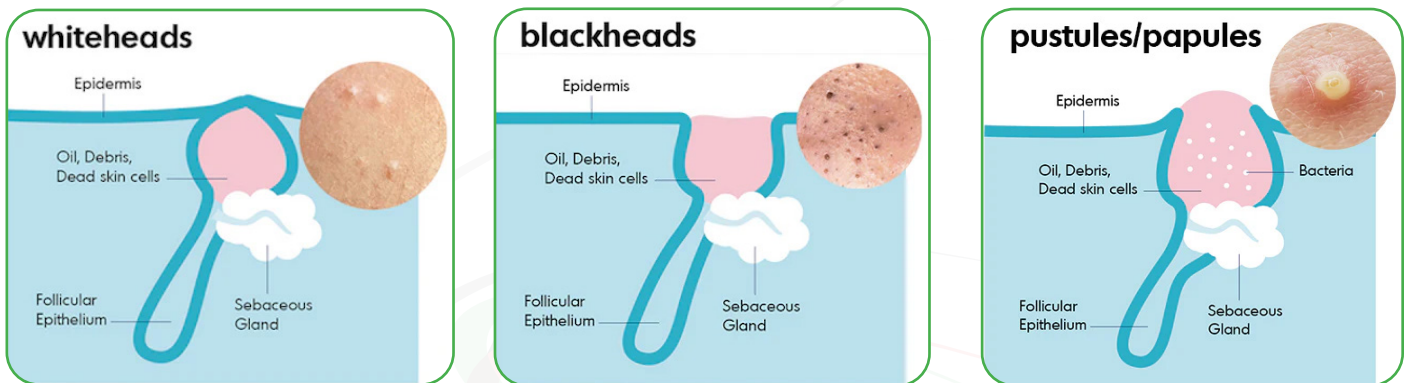


Fig. 3

Are there external factors that may influence the evolution of your acne?

Hormones

The most important hormonal factors in acne are androgens, male hormones that women also produce, although in a lower amount in comparison to men. Androgens are more effective in stimulating sebaceous gland activity and blocking the pilosebaceous unit.

Combined oral contraceptives, and antiandrogens, are effective in female acne patients. Other combined contraceptives contain progestins may induce acne or worsen already existing acne.

Stress

Stressful events, through the release of chemical molecules produced by neural activation, are known as potential triggering factors of acne.

Diet

Controversial data are available in the literature about the relationship between acne and diet. A possible correlation between acne and dairy products may exist, but it is neither confirmed nor widely accepted. In practical terms, it is advisable to follow a balanced diet, meaning all types of food in the right portions.

Sun Exposure

Studies found no convincing evidence that natural sunlight exposure improves acne. In some patients, a moderate level of sun exposure may induce a temporary improvement. The short-term effect of sun tanning is largely related to camouflage. Long-term, strong sun exposure, if associated with erythema, may lead to worsening of acne.

Weather Conditions

Living in very hot and humid conditions may induce an acneiform reaction, characterized by similar, small, red papules, localized on the upper chest, neck, shoulder and face.

Smoking

The relationship between smoking and acne is complex and has been the subject of several studies. While smoking is not a direct cause of acne, it can influence the development and severity of acne.

Cosmetics

Oily, occlusive, and comedogenic cosmetic products may induce or worsen acne, in particular the type with open comedones ("blackheads"). You need to look for the term "non comedogenic" on the package of the right cosmetic to use.

Pregnancy

Acne during pregnancy is a common concern due to hormonal changes that can trigger breakouts, even in women who have never had acne before. Understanding its cause and safe treatment options can help manage pregnancy – related acne effectively

What does acne look like and what does it feel like?

The typical appearance of acne is a mixture of the following: oily skin, blackheads, whiteheads, red spots, and pus-filled pimples. Occasionally, larger, deeper bumps (known as nodules) or cysts (which resemble boils) may develop (**Figure 4**). Affected skin may feel hot, painful and be tender to touch.



Fig. 4 Nodules



Boils

ACNE

Acne can leave scars or marks on the skin, particularly in the presence of nodules and cysts. These may be raised and lumpy (known as hypertrophic or keloid scars) or indented (known as pitted or atrophic scars) (**Figure 5**).



Fig. 5 Hypertrophic or Keloid scar



Hypertrophic or Keloid scar

Acne can also leave discoloration which may be red, hyperpigmented (darker than your usual skin color) or hypopigmented (lighter than your normal skin color) (**Figure 6**).



Fig. 6 Hyperpigmentation post acne

Not all spots are acne, so if there is something unusual about the rash it is advisable to consult your doctor. One important aspect of having acne that doesn't get talked about very much is the effect on mood and self-esteem. Many studies have shown that acne itself has a negative psychological impact.

How is acne treated?

If you have acne, it's probably time to see your doctor. Most therapies take two to four months to achieve their full impact.



Acne treatments depend on the severity of the acne and fall into the following categories:

- ◆ Topical treatments
- ◆ Oral antibiotics
- ◆ Oral contraceptive pills
- ◆ Isotretinoin capsules
- ◆ Other treatments

Maintaining clear skin starts with the right skincare routine, focusing on cleansers and moisturizers. The goal of a cleanser is to remove dirt, oil, and impurities without stripping the skin of its natural moisture. For acne-prone skin, choose a gentle, non-comedogenic cleanser that won't clog pores. Many people with acne-prone skin avoid moisturizers, fearing they will cause more breakouts. However, moisturizing is essential to maintain a healthy skin barrier and prevent dryness caused by acne treatments. Furthermore, Sun protection is crucial, especially for those with acne-prone skin and sun protection should be non-comedogenic, and oil free consistency (gel or fluid).

Topical treatments

These are usually the first choice for those with mild to moderate acne. There are a variety of active anti-acne agents, such as benzoyl peroxide, antibiotics, retinoids, and azelaic acid. They should be applied to the entire affected area of the skin and not just to individual spots, usually every night or twice daily depending on the treatment. Some topical treatments can be irritating to the skin, so it may be advised that the treatment is initially used on a small area of affected skin for a few applications before being applied to the entire affected area. It may also be recommended to gradually increase the use of the treatment, progressively building to regular daily use if tolerated. Consult your doctor if the treatment causes irritation of the skin. Some topical treatments, such as retinoids can lead to the acne getting worse for a few weeks before it gets better.

Oral Antibiotic

Your doctor may recommend a course of Antibiotic tablets, which is often taken in combination with a suitable topical treatment. Antibiotic need to be taken for at least two months and are usually continued until there is no further improvement. Typical courses last three to six months. It is also essential to let your doctor know if you are planning a pregnancy as some Antibiotic cannot be taken if you are pregnant.

Oral Contraceptive pills

Acne is often influenced by androgens (male hormones like testosterone), which stimulate oil (sebum) production in the skin. Excess oil clogs pores, leading to inflammation and breakouts. Oral contraceptive pills (OCPs), which contain synthetic estrogen and progestin, help regulate hormone levels, thereby reducing acne.



Oral Isotretinoin

This is a highly effective treatment for severe or persistent acne and the improvements can be long-lasting in those who complete a course of treatment. It does, however, have the potential to cause several serious side effects (Mainly Teratogenicity in females during childbearing period) and can be prescribed only under the supervision of a consultant dermatologist.

New lesions usually appear in the first few weeks of treatment, which is normal. During treatment, the skin usually becomes dry, particularly around the lips. Regular application of a lip balm can be helpful. The improvement is progressive throughout the course of treatment, so do not be disappointed if progress seems slow. It should be emphasized that a lot of people have benefited from treatment with isotretinoin without serious side effects.

Avoid Certain Skin Treatments during isotretinoin treatment:

◆ Chemical Peels, Laser Treatments, and Microdermabrasion:

- These procedures can cause significant irritation, scarring, or hyperpigmentation while on isotretinoin.
- **Wait 6-12 months after completing treatment** before considering these treatments.

◆ Waxing or Hair Removal:

- Avoid waxing on the face and body as isotretinoin makes the skin fragile, increasing the risk of tearing and scarring. Use gentle methods like threading or shaving instead.

Other treatments

There are many forms of light and laser therapy for inflammatory acne, but these types of treatment have given mixed results when studied and are usually ineffective in the treatment of severe acne. Laser resurfacing of facial skin to reduce post-acne scarring is an established technique requiring the skills of an experienced laser dermatologist. Laser treatment should not be done for at least 6 to 12 months after completing a course of isotretinoin.

While every effort has been made to ensure that the information given in this leaflet is accurate, not every treatment will be suitable or effective for every person. Your own clinician will be able to advise in greater detail.