



## **ACNE**

### **What are the aims of this leaflet?**

This leaflet has been written to help you understand more about acne. It tells you what it is, what causes it, what can be done about it and where you can find out more about it.

### **What is acne?**

Acne is a very common skin condition identified by the presence of comedones (blackheads and whiteheads) and pus-filled spots (pustules). It usually starts during puberty. Acne ranges from a few spots on the face, neck, back and chest, which most teenagers will have at some time, to a more severe problem that may cause scarring and reduce self-confidence. 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 in people in their late twenties and beyond.

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

### **What causes acne?**

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. At the same time, the lining of the pores (the small holes in the skin's surface) becomes thickened and dead skin cells are not shed properly. A mixture of the oil (sebum) and dead skin cells builds up and plugs the pores producing blackheads and whiteheads. The plug of dead skin turns black from exposure to air and not due to dirt.

The acne bacteria (now known as *Cutibacterium acnes*) live on everyone's skin, usually causing no problems. In those with acne, the build-up of oil creates an

ideal environment for the bacteria to multiply. This is accompanied by inflammation which leads to the formation of red, swollen or pus-filled spots.

Sometimes acne can be caused by medication given for other health conditions or by certain contraceptive injections or pills. Some tablets taken by body-builders contain hormones that can trigger acne too.

Diet can influence acne. High glycaemic index (GI) diets (e.g. sugar and sugary foods, white bread, potatoes, white rice etc) have been shown to cause or aggravate acne. Switching to a low GI diet may lead to fewer spots. There is also some evidence that consuming milk and dairy products may trigger acne in some people, but this hasn't been studied in as much detail yet.

Most acne sufferers have normal hormone levels if tested; however, acne can sometimes be caused by a problem with the hormones. The most common problem with hormones is polycystic ovarian syndrome in females. If you are a woman and develop irregular periods, unusual hair growth or hair loss or other changes to your body, mention this to your doctor in case it is relevant.

### **Is acne hereditary?**

Acne can run in families, but many people with acne do not have affected people in their family. It is likely that a combination of genetic, hormonal and lifestyle factors (such as diet, stress, skincare products etc) act in combination to cause most acne.

### **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. Affected skin may feel hot, painful and be tender to touch.

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). Acne can also leave discolouration which may be red, hyperpigmented (darker than your usual skin colour) or hypopigmented (lighter than your normal skin colour).

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. For example, severe acne has been shown to be associated with suicidal behaviour. If you are suffering from acne and are feeling depressed, anxious or suicidal, it is important to speak to your doctor about these feelings as soon as possible.

### **How is acne diagnosed?**

Acne is easily recognised by the appearance of the spots and by their distribution on the face, neck, chest or back.

### **Can acne be cured?**

At present there is no 'cure' for acne, although the available treatments can be very effective in preventing the formation of new spots and reducing scarring.

### **How can acne be treated?**

If you have acne but have had no success with over-the-counter products then it is probably time for you to visit your doctor. In general, most treatments take two to four months to produce their maximum effect.

Acne treatments fall into the following categories:

- Topical treatments, i.e. those that are applied directly to the skin
- Oral antibiotics, i.e. tablets taken by mouth
- Oral contraceptive pills
- Isotretinoin capsules
- Other treatments

#### *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 (e.g. erythromycin, tetracycline and clindamycin), retinoids (e.g. tretinoin, isotretinoin and adapalene), azelaic acid and nicotinamide (also known as niacinamide). They should be applied to the entire affected area of the skin (e.g. all of the face) 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, for example using it once or twice weekly, 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 treatment*

Your doctor may recommend a course of antibiotic tablets, usually erythromycin or a type of tetracycline, which is often taken in combination with a suitable topical treatment.

Antibiotics 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. Some should not be taken at the same time as food or can make your skin more sensitive to the sun, so read the instructions carefully. It is also essential to let your doctor know if you are planning a pregnancy as some antibiotics cannot be taken if you are pregnant.

#### *Oral contraceptive treatments*

Some forms of the oral contraceptive pill can be helpful in females who have acne. The most effective contain a hormone blocker (e.g. cyproterone acetate) which reduces the amount of oil the skin produces. It usually takes at least three months for the benefits to show. Although it may not be taken primarily for this reason, the pill also helps to prevent conception. As it inhibits ovulation (release of the egg from the ovary), the pill may be less suitable in young teenage girls where ovulation is not well established. These tablets carry a small risk of blood clots so you must tell your doctor if you have any past history of these. This is a greater risk for people who smoke, are overweight or have others in the family who have had blood clots.

#### *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 a number of serious side effects and can be prescribed only under the supervision of a consultant dermatologist.

Most courses of isotretinoin last for four to six months during which time the skin usually becomes dry, particularly around the lips. Regular application of a lip balm can be helpful. Often, acne becomes a little worse for a few weeks before improvement occurs. The improvement is progressive throughout the course of treatment, so do not be disappointed if progress seems slow.

Isotretinoin can harm an unborn child. The government medicine safety agency (MHRA) has strict rules for doctors prescribing this medicine. Women enrol in a pregnancy prevention programme and need to have a negative pregnancy test prior to starting treatment. Pregnancy tests will be repeated every month during treatment and five weeks after completing the course of treatment. Effective contraception must be used for at least four weeks before treatment, whilst on treatment, and for at least four weeks afterwards.

Since it was first approved for treating acne in the 1980s, concerns have been raised that isotretinoin may cause depression and suicidal feelings. These reports must be considered in the context of elevated rates of depression and suicide in acne sufferers independent of isotretinoin therapy, so this can be complicated. Regulatory bodies, such as the MHRA (and the FDA in the United States) periodically review new data submitted by clinicians, pharmacists and patients. To date, a causal link between isotretinoin and psychiatric adverse effects has not been confirmed. The MHRA are due to meet again in 2020.

As a precaution, any personal or family history of low mood, depression or other mental illness must be disclosed to your dermatologist prior to consideration of isotretinoin therapy and you may be asked to see a psychiatrist before any treatment is commenced to determine if it is safe for you to proceed. Letting close friends and family know about your treatment provides an opportunity to flag any changes in your mood that must be reported to your doctor without delay.

It should be emphasised that many thousands of people have benefited from treatment with isotretinoin without serious side effects.

More detailed information on isotretinoin and its side effects can be found [on the BAD website](#).

#### *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 surgeon. Laser treatment should not be done for at least one year after completing a course of isotretinoin. This is not available on the NHS.

Various other techniques may also be used to improve the appearance of acne scars. These include steroid injections, microneedling and subcision and are also not routinely available on the NHS. Skin camouflage is an inexpensive and

effective method for disguising changes in the pigmentation of the skin which can sometimes remain after acne has been treated.

### **Self care (What can I do?)**

- Try not to pick or squeeze your spots as this usually aggravates them and may cause scarring and infection.
- If your self-confidence has been affected by acne or if you are feeling distressed, it is important to reach out to others for support. This includes friends, family members and support groups. You may also be able to access a counsellor through school, university or work.
- Let your GP or Dermatologist know if your acne is making you feel depressed or anxious. They will be able to speak with you about how you are feeling and help you to form a treatment plan, which may involve input from other specialists, such as psychologists or psychiatrists, if necessary.
- However your acne affects you, it is important to take action to control it as soon as it appears. This helps to avoid permanent scarring and reduces embarrassment. If your acne is mild, it is worth trying over-the-counter preparations in the first instance. Ingredients like salicylic acid or benzoyl peroxide can be helpful. Your pharmacist will advise you.
- Expect to use your treatments for at least two months before you see much improvement. Make sure that you understand how to use them correctly so you get the maximum benefit.
- Some topical treatments may dry or irritate the skin when you start using them. If your face goes red and is irritated by a lotion or cream, stop treatment for a few days and try using the treatment less often and then building up gradually.
- Make-up may help your confidence. Choose products that are labelled as being 'non-comedogenic' (should not cause blackheads or whiteheads) or non-acnegenic (should not cause acne).
- Cleanse your skin and remove make-up with a gentle cleanser and water, or an oil-free soap substitute. Scrubbing too hard can irritate the skin and make your acne worse. Remember blackheads are not due to poor washing.

- Think about whether you get more spots after consuming high GI foods or dairy. If something seems to consistently trigger a breakout, what happens when you don't have that food or drink for a few days, weeks or a month? Discuss with your doctor before permanently cutting any foods out of your diet as this can lead to nutritional deficiencies. Whilst diet may play a role in causing your spots, keeping your skin clear usually requires more than a diet change.

## **Where can I get more information?**

*Web links to detailed leaflets:*

<http://www.acnesupport.org.uk/>

Acne Support provides expert, impartial information from consultant dermatologists on the treatment, causes and prevention of acne, as well as advice on how to access emotional support.

<https://www.nhs.uk/conditions/acne/>

<http://www.pcids.org.uk/clinical-guidance/acne-vulgaris>

<http://www.dermnetnz.org/acne/index.html>

<http://www.skincarephysicians.com/acnenet>

**This leaflet aims to provide accurate information about the subject and is a consensus of the views held by representatives of the British Association of Dermatologists: individual patient circumstances may differ, which might alter both the advice and course of therapy given to you by your doctor.**

*This leaflet has been assessed for readability by the British Association of Dermatologists' Patient Information Lay Review Panel*

**BRITISH ASSOCIATION OF DERMATOLOGISTS**

**PATIENT INFORMATION LEAFLET**

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