

✦ LUSTRE

ClearSkin

*pure light treatment for acne™*



Combating  
Acne.

WITH SCIENCE.

Blue Light for Acne

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## CHAPTER ONE

# 1 What Really Is Acne? Some Basic Facts.

**A**cne is a common skin problem which affects 90% of teenagers (aged 13-18 years) at some point. Predominately viewed as an adolescent problem, it can persist into adulthood.

There is an estimated global prevalence in those aged 40 years and over ranging from 26% (females) and 12% (males) to over 40% in both sexes. Acne prevalence is higher in Black 37%, Hispanic 32%, Asian 24% communities, which is an estimated 650 million adolescents and adults in the world.

### GENETICS PLAY A ROLE

There is a genetic predisposition **you are more likely to have Acne if your parents had Acne** and it may be that we are inheriting more strains of acne-causing bacteria that induce more inflammation and scarring.



This means the condition can affect many people intermittently for many years during their life. This can have a detrimental effect on self-confidence at all ages.

### A VERY COMMON SKIN CONDITION

This very common skin condition is identified by **comedones** (blackheads and whiteheads) and **pustules** (pus-filled spots).



It usually starts during puberty and can range from a few spots on the face to a more severe spread on the neck, back and/or chest. For most it tends to go away by early or mid-twenties. Acne can sometimes however only develop in the late twenties and beyond.

If you suffer from Acne – you are definitely not alone!



# 2

## CHAPTER TWO

# Causes, Stages and Types of Acne



*Illustration of a sebaceous gland pore opening onto the surface of human skin.*

**O**ur sebaceous (oil producing) glands are affected by our hormones. In people who have Acne, the glands are particularly sensitive even to the normal blood levels of these hormones. **This causes the glands to produce too much oil and grease**, and at the same time the lining of the pores (the small holes in the skin surface) become thickened and the **dead cells are not shed properly**.

Let's have a closer look at what happens next.

A mixture of the sebum and dead cells build up which plugs the pores, producing blackheads and whiteheads. The plug of dead skin cells turns black from exposure to air - not due to dirt.

Acne can be inflamed with spots and pustules or just blackheads and blocked pores.

## The Acne bacteria - now known as Cutibacterium Acnes - live on everyone's skin

Usually causing no problems, for those with Acne the build-up of oil is 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.

**Whiteheads** - overstimulation of the sebaceous glands (no inflammation)

**Blackheads** - open Comedones (no inflammation)

**Pustules and Nodules** - proliferation of Cutibacterium Acnes (formerly Propionibacterium Acnes)

**Nodules and Severe, Deep Inflammation** - risk of permanent scars

The greater the severity the more areas are affected.



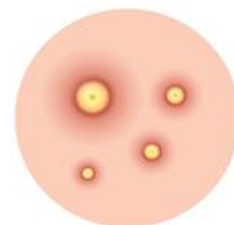
BLACKHEAD



WHITEHEAD



PAPULE



PUSTULE



NODULE



SCAR

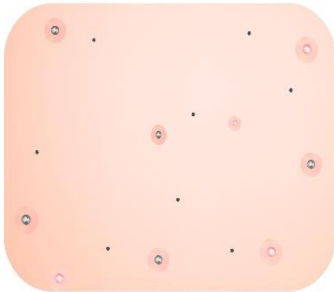


## Severe Acne is often wide-spread and can affect the face and neck or chest or back.

People often don't relate non-inflammatory acne with 'Acne', dismissing the subtler signs of it as temporary breakouts which go away on their own. However, this can progress as a chronic inflammation of the *pilosebaceous unit* which leads to more problematic Acne and even scarring.

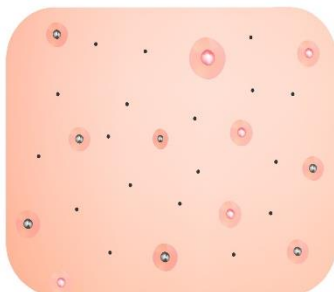


### Stage 1



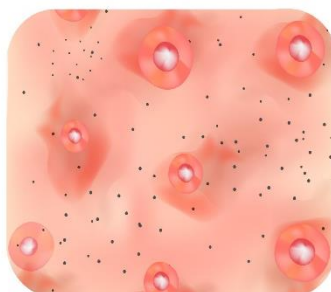
*Oily skin  
Clogged pores  
Slight Acne*

### Stage 2



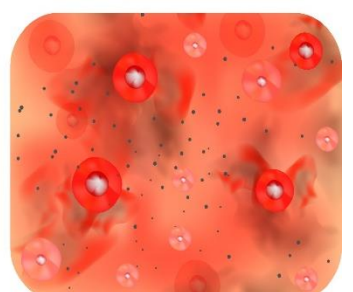
*Oily skin  
Clogged pores  
Lots of Acne*

### Stage 3



*Oily and inflamed skin  
Clogged pores  
Acne, papules and pustules*

### Stage 4



*Oily and very inflamed skin  
Clogged pores  
Severe Acne  
Many papules and pustules*

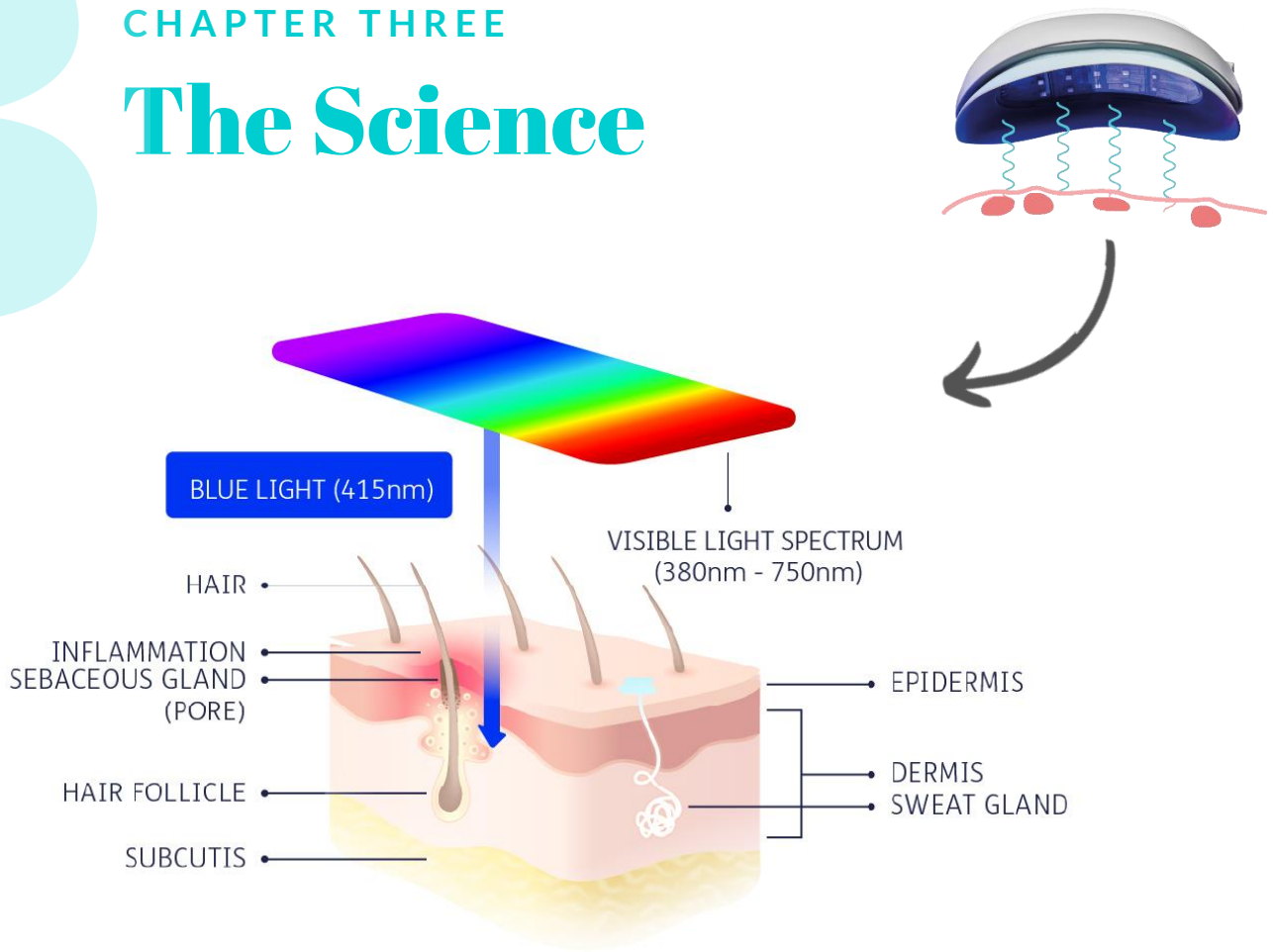
Each progressive stage of Acne manifests a variety of different problems, it can be painful and uncomfortable and may lead to scarring. All of the stages require some intervention to prevent the progression of the condition.

There are also many myths about the causes of Acne and how to manage it. **Our aim is to give you the information to enable you to manage your skin problems in the earlier stages to prevent the more serious side effects of Acne.**

# 3

## CHAPTER THREE

# The Science



Let's start with a bit of blue light basics.

### PORPHYRINS

Acne naturally produces **porphyrins**, which make the bacteria visible when we shine a special light called a Woods Light (a longwave UV light). The predominant porphyrin in Acne is Coproporphyrin 3.

**Lustre ClearSkin®**, when applied to spots promotes a natural photodynamic response and produces PpIX (Protoporphyrin IX), which results in a reduction in the bacteria that cause the spots (C Acne).

Simultaneously, there is a stimulation of a peptide LL37.

This cationic peptide that provides an important antimicrobial defence mechanism of damaged skin acts as an anti-infective and an anti-inflammatory. This improves the surface of the skin.

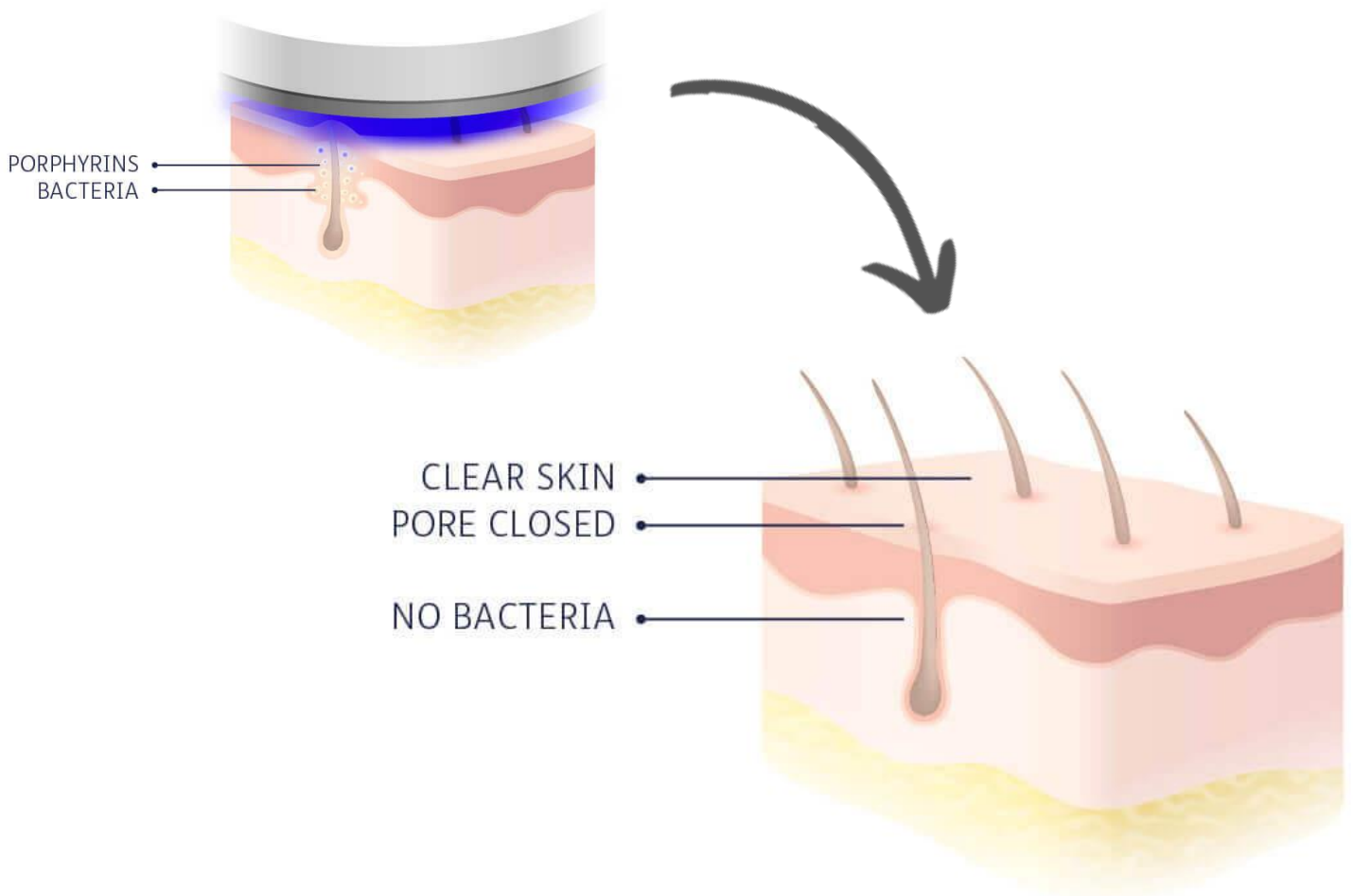
The effects of **Lustre ClearSkin®** are identified by the reduction in the hyperkeratinisation of skin cells found in the surface of the skin following treatment – thus ridding skin of bacteria, inflammation, the appearance of scars, discoloration and unevenness!

# Science

C. Acne bacteria produces coproporphyrin III. These endogenous porphyrins absorb blue light at 415nm, initiating photoexcitation process, the porphyrins release singlet oxygen (peroxide). The singlet oxygen destroys the C. Acnes bacteria. This natural chemical reaction is confined to the bacteria – there is NO effect on the surrounding tissue.

## Low level LED light treatment

**Lustre ClearSkin®** uses a specific cumulative dose of light. Over the course of your treatment you'll see the benefits to your skin. We recommend the full course of treatment (12 weeks) to get the best results. It's important to continue with the treatment even if you see results quickly. Our results are proven to last longer if you use the advised treatment protocol.





# 4

## CHAPTER FOUR

# Skincare

Many people spend a lot of money on different types of branded skin care products, and over the counter treatments, which do not have the rigorous medical assessment and license of a Cosmeceutical or a Pharmaceutical treatment.

The media is inundated with products and it's often difficult to make the right choices about the right skincare.



**Not understanding the process of Acne and how to manage it can often lead the sufferer to compound the situation, making their spots worse.**

When sufferers visit their GP, they are usually prescribed topical creams and/or antibiotics, or if you are female, certain types of contraceptives. All of which can have side effects.



Some sufferers are prescribed harsh skin care washes which can irritate the skin and often lead the Acne sufferer to stop using the treatment all together. **This is because the appearance of the skin and the redness often looks worse than the spots.**

Acne sufferers certainly require specific skin care products. All people have different skin care tolerance - therefore, it is important to seek professional advice.

# Skincare

Often, over time the antibiotics stop working and Acne can get worse. It is well documented that antibiotic resistance of Acne (C Acne) has risen dramatically in the last 30 years.

Even though optimised blue-light Phototherapy has been recognised in its success for treating Acne, and more so over the last 20 years, it's not currently offered by the NHS.

However, it can be used as a stand-alone treatment or as a combination therapy with excellent therapeutic results.

**Having a Medical CE is essential for any light-source advertised to treat Acne.**



**Lustre ClearSkin® has a Medical CE and an optimised wavelength of 415nm** which targets the bacteria that causes the Acne. It's easy to use, and its mode of action shows success in the reduction of mild to moderate Acne following a course of treatment.

It's been shown to reduce pore size and even blocked pores and comedones. This is due to the antibacterial effect of blue light on Acne.



# 5

## CHAPTER FIVE

# Before and After

**O**ur Study Patients saw significant improvements in their Acne. There was a 75% reduction in their inflammatory Acne at day 30 of their treatment protocol.

**Our Study Patients** rated an 80% overall reduction in sebaceous oil and tightening of pores at day 90.

**Overall, our Study Patients** rated **LUSTRE ClearSkin®** as 90% effective treatment for all of their skin problems relating to their Acne.

**Our Study Patients** continued to rate their overall result of 90% improvement in the maintenance phase of their treatment which continued up to 120 days after their treatment course was completed.

Joanne Watson



Freyja Powell



Kieran McCahon



Kirsty Richmond



# 6

## CHAPTER SIX

# Maintenance of Clear Skin

**LUSTRE ClearSkin® is a great tool for managing your Acne throughout the year.**

**L**USTRE ClearSkin® can be used whilst carrying on with day to day activities in the confine of your own home and should be an essential tool kit for managing your Acne.

### MAINTENANCE

Due to internal and external environmental factors your skin can change throughout year. Following your course of LUSTRE ClearSkin® you can get continued improvements for some months after.

When you notice the condition of your skin begin to change and an increase in sebum and the odd spot appearing - use your device. This will help maintain your results. The light source is portable and can be easily packed away to take on holiday.

Secondly, take notice of the skincare you use and be mindful of your Acne regimen.





## About the Author

This eBook has been developed in collaboration with LUSTRE Clinic's Scientific Adviser, **Jan Birch**. Jan is a leading authority in the field of Aesthetic Medicine, Dermatology and Clinical Research. She is published in European and International Medical Journals in the use of light therapy for a number of medical skin conditions and photo-rejuvenation. Jan specializes in dermatology and has over 20 years' experience in Nursing and Clinical Research.

Jan continues to undertake research at Blemish Clinic and also evaluates content for the Journal of Aesthetic Nursing. Jan is an expert in the use of Photodynamic therapy for the treatment of skin cancers and cosmetic dermatology. Jan has worked in Europe alongside a team of leading dermatologists and continues to have a keen interest in treating uneven skin tone and pigmentation.



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20 minutes per day.**

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