



EUROPEAN
ACADEMY OF
DERMATOLOGY &
VENEREOLGY

Information Leaflet
for Patients

Psoriasis, a closer look



The aim of this leaflet

This leaflet, the first out of 11 leaflets about psoriasis, is designed to help you understand more about this condition: it tells you what psoriasis is, what causes it and how it is linked to your immune system, and its different forms.

Psoriasis, a closer look



What is psoriasis?

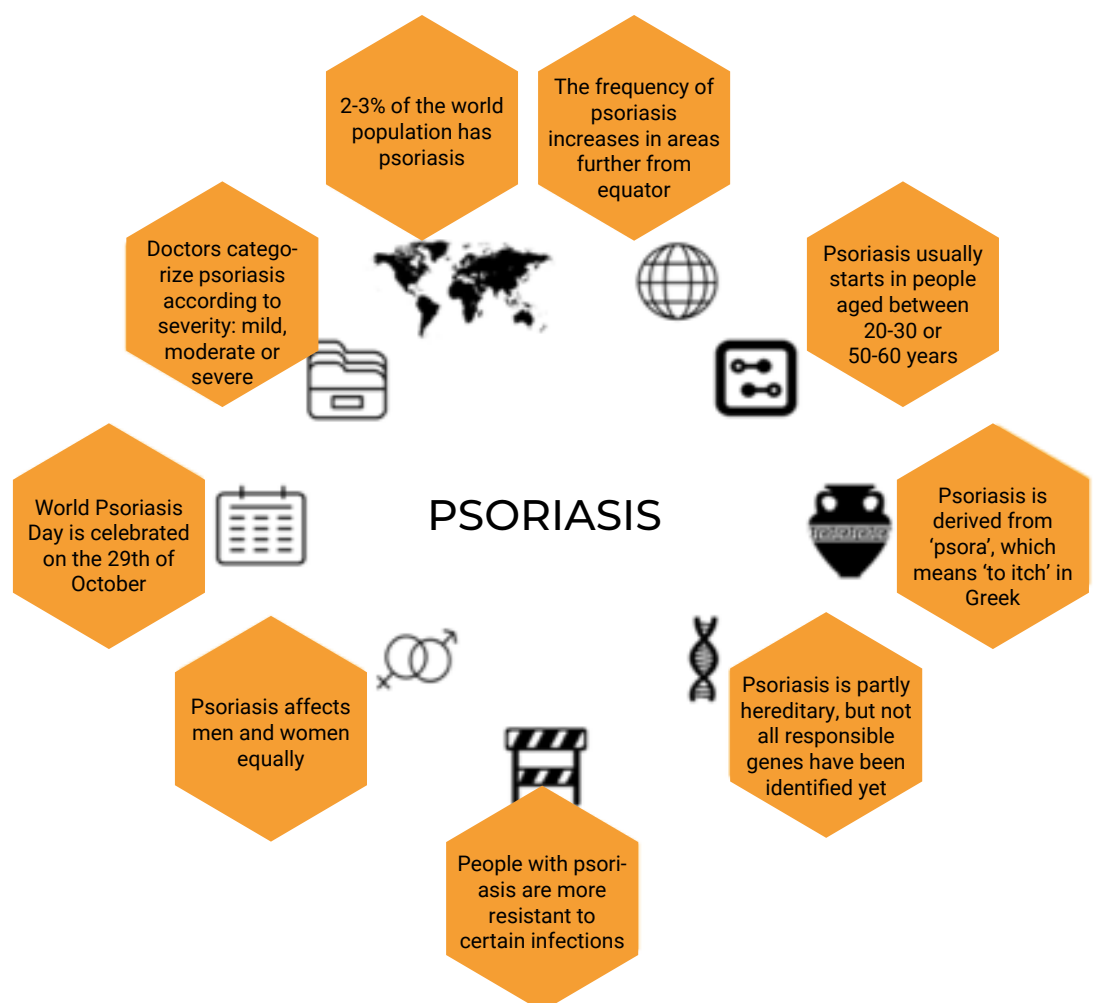
Psoriasis is characterized by red, scaly spots that seem to come out of nowhere and cover your body. It is a chronic skin disease that affects 2-3% of the world's population. Currently, various treatments are available with their own set of advantages and pitfalls, with some treatments being more suitable for you than for someone else. Yet, there's no definitive cure for psoriasis, and due to its chronicity, psoriasis requires lifelong treatment. That's why the diagnosis of psoriasis may be devastating and overwhelming. But that is why it is so important to be well-informed and to have a good relationship with your clinician, who will be your ally throughout this challenge.

How can the information in the psoriasis leaflets help you?

You need to be in control of your psoriasis so you can live life to the fullest. And though psoriasis is complex and treatment may be challenging and time-consuming, this information is meant to be a guide to find your way through it. Information

has been bundled in different topics across the leaflets, so take your time to scroll through the information. Write down any questions you have so you can ask your clinician during a future consultation.

Hopefully, the information here will empower you to tackle psoriasis in a way that feels comfortable and fits



you. Although psoriasis is a chronic disease, it shouldn't chronically stop you from living your life. In fact, it should only be a small facet of who you are as a human being: it doesn't define you. It partially defines your health, and if left untreated may control your health as a whole, but the information here shows you many ways to address it. Don't let psoriasis control you, your health, or your life. You can still wear funny sunglasses or clothes, find new ways of exercising, connect with your clinician, talk about it with your neighbour who complains about being bald, check out the patient association in your area, have some "me-time" when you're taking care of your skin, etc...

Whatever you do, don't let it define you. Instead, define how you want to live with it. Make every day worth living, with or without psoriasis. Good luck!

What happens in your skin affected by psoriasis?

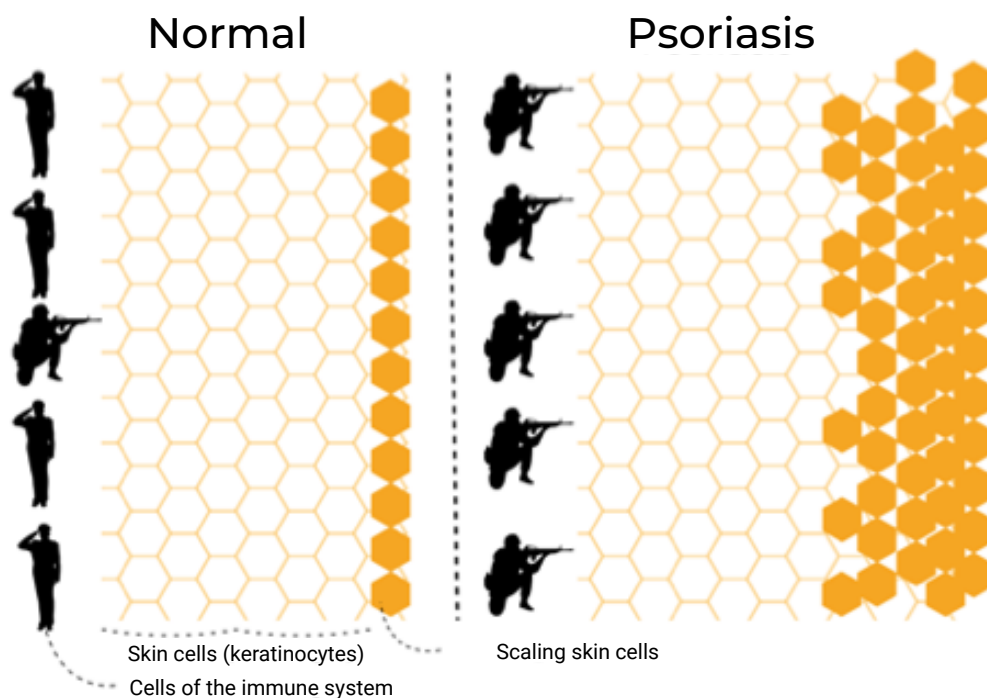
Your skin is a very important organ, protecting you from the outside world, and is in essence the first barrier of your immune system. Inside your skin, your immune system is busy each day trying to make a distinction between what's a part of your body and what's not, such as bacteria, viruses, fungi (plural of fungus), and also objects such as splinters. In psoriasis, it seems that the immune system is confused and is overactive. This explains why psoriatic lesions are typically red, indicating the dilation of your blood vessels which allows your immune system to do its job. Another consequence is the abundance of signals that grant permission to your skin cells to divide much faster than usual. Whereas healthy skin will renew itself every 26-27 days, this only takes 6-7 days for psoriatic skin, which is

4 times faster! That's why psoriatic skin is so flaky and explains the thick psoriatic lesions.

Why does the immune system go haywire?

Although science already understands a great deal about psoriasis, it is still not clear why some people get psoriasis, whereas others don't. The causes are multifactorial, meaning its development is dependent on various factors: genetic predisposition (psoriasis occurs more frequently within families), geographic location (the further from the equator, the higher the prevalence), occurrence of other diseases and risk factors (comorbidities or "related" diseases, as they often appear together), and so on.

In psoriasis, the immune system is overactive. To understand what is going on, imagine our immune system as an army, consisting of



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various levels with each having its own task (see the figure below). For instance, one part of the army is responsible for fighting off bacteria, while another one fights the viruses, and another one takes on invading parasites. Psoriasis can be seen as an exaggerated reaction of our immune system to an intruder, such as a virus or a fungi, and afterwards forgetting to turn off the defense system. At the same time, this makes people with psoriasis less vulnerable to certain skin infections compared to people without psoriasis, because the army is always ready for attack. In other words, the army remains alarmed and builds a “fort,” resulting in the typical psoriatic lesions, also called plaques.

And just like the army, our immune system listens to commands. These commands can be “shouted” by one cell to another cell. Some commands mean “attack” and are interpreted as pro-inflammatory; they drive inflammation (war). TNF (or) is a very famous command to destroy in your body. Other commands mean “stand down” and are seen as anti-inflammatory signals, and thus suppress inflammation. Corticosteroids are well-known anti-inflammatory commands, a hormone that we produce ourselves and is often used to reduce inflammation. When we look at psoriasis lesions in detail, we observe an abundance of pro-inflammatory commands compared to healthy skin. Based on this finding, treatments called “biologicals” were introduced on the market in the early 2000s. These biologicals silence certain commands, and can thus selectively and specifically interfere with the commands of our immune system.

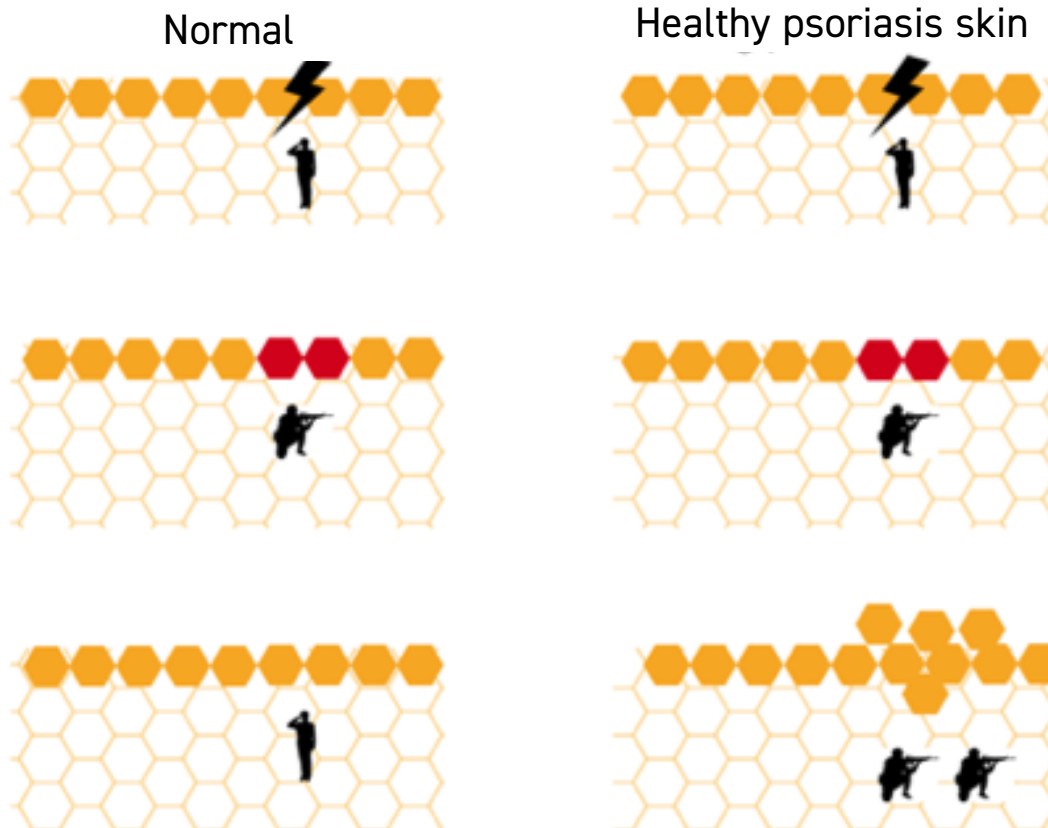
Why is it not just a skin disease?

Psoriasis is not only present in the skin, but also elsewhere in your body. This can lead to comorbidities: other diseases that are more likely to develop when you have psoriasis. It is believed that this is due to the low but chronic state of inflammation throughout the body. So, it is very important to have your psoriasis under control to avoid the development of comorbidities. If present, those comorbidities pose a heavy burden on your health and require additional treatments. Although psoriasis itself is not deadly, severe and uncontrolled cases of psoriasis have been associated with a reduced life expectancy of up to 10 years! As such, the diagnosis of psoriasis is much more than just treating the skin lesions... It also requires a good and stable approach to tackle the disease, which is a task to be tackled together with your clinician.

What is the “Koebner phenomenon” and why is important to protect your skin?

Perhaps your clinician may mumble something about a “Koebner” phenomenon when he/she is examining you. What they actually mean to say is that damage (trauma) to the skin may be a trigger for a psoriatic lesion to develop. This may occur through an injury, a surgical cut, or even tattoos. This phenomenon was first described by a German dermatologist named Heinrich Koebner. Indeed, the psoriatic lesions may actually follow the shape of the skin trauma. Naturally, this phenomenon is rather bothersome to people with psoriasis, complicating life once more for them. It is therefore essential to carefully protect your skin and avoid skin damage. Note: very dry skin is also a form of skin damage, so keep your skin hydrated!

Koebner phenomenon: from skin injury to psoriasis



Is it simple to diagnosis psoriasis?

Psoriasis is a collective term for various forms of skin diseases driven by inflammation. The most common and well-known form is psoriasis vulgaris, also known as plaque psoriasis. However, other forms exist as well. Fortunately, they are not all present in one person, although it is possible to have more than one form of psoriasis.

The difficulty in psoriasis is to distinguish it from other skin diseases. Oftentimes the physician will be able to recognize psoriasis by examining your skin closely, but sometimes a small piece of skin (biopsy) may be needed in order to examine it in greater detail under a microscope. Unfortunately, not all general

practitioners are familiar with the various forms of psoriasis, and often-times a dermatologist is needed to confirm the diagnosis. All this adds up to the fact that it may take some time to correctly diagnose psoriasis. Sadly by then, you may have already faced various diagnoses, treatments, and a lot of frustration.

What are the different forms of psoriasis?

- **Plaque psoriasis:** elevated red lesions with silver-white flakes that may loosen. Lesions may cover the entire body, but are most likely to occur on the elbow, knees, back, and scalp.
- **Psoriasis of the scalp (*capitis*):** ranging from mild (light scaling) to severe (thick crusts covering the entire scalp), and appears behind the hair line, forehead, neck, and behind the ears.
- **Psoriasis guttata:** small, red spots with scales that may appear over the entire body. This form is often associated with a *streptococcal* throat infection and may evolve into *plaque psoriasis*.
- **Psoriasis pustulosa:** *pustules* (pus-filled bumps) on the hand and feet; usually acute.
- **Inverse psoriasis (psoriasis in the folds, also called *flexural psoriasis*):** bright red and smooth spots that are mainly found in the armpits, groin, under the breasts and other skin folds (e.g. around genitalia and the *intergluteal cleft* or groove between the buttocks). At the edge of the lesions, skin can be cracked.

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- **Nail psoriasis (*psoriasis unguum*):** abnormality of nail(s) that may occur on fingers or toes. Abnormalities include thickening of nail, change in colour or shape, “oil drop” (yellow-orange spots in the nail bed), ridges or grooves in the nail, loosening of the nail from the skin, nail pitting, *pustules* in the nail plate, and redness and swelling where the skin and nail meet (*paronychia*).
- **Psoriatic arthritis:** this is a very special, yet not uncommon form of psoriasis where the joints are affected as well. It is characterized by swollen, painful joints and affects about 30% of people with psoriasis. All joints can be affected, including tendons and ligaments.

Can psoriasis be easily solved?

In reality, our immune system is very complex, making it much more complicated to understand what is precisely going on during psoriasis. In addition, the itch and pain that are typically associated with psoriasis render the picture much more complex. Itch and pain are part of our nervous system, signalling to our immune system with different commands. All these signals complicate our understanding, and scientific research is still currently investigating how both systems communicate with each other. There are already a lot of treatments on the market, but no cure yet.

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.