Chapter 1

psoriasis and you

What Happens in This Chapter

- The history of psoriasis
- What psoriasis is, including how it works, where it occurs on the body and what it looks and feels like
- Who gets psoriasis
- What causes psoriasis
- What to expect next

Psoriasis has been around for as long as we have, but the way it's defined, diagnosed and treated has changed dramatically over time. This condition can occur almost anywhere on the body and usually looks like red, raised patches of skin covered with silvery scales. Sometimes it's itchy and sometimes it's painful. Psoriasis affects 500,000 Canadians and is caused by a combination of environmental factors, genetics and the state of someone's immune system. The course of this disease is unpredictable, but with the right medical help, psoriasis can be managed well.

A Bit of History

Psoriasis occurs only in humans and has probably been around for as long as we have. In fact, some scholars think that this condition makes an appearance in the Jewish and Christian Bible. We know for sure that psoriasis was around during the time of the ancient Greeks, who mistook it for a type of **leprosy**.

By the late 18th century, British dermatologists Drs. Robert Willan and Thomas Bateman had realized that psoriasis was different from other skin diseases, referring to it as "Willan's lepra." The term "psoriasis" finally came onto the scene in 1841 when Viennese dermatologists Drs. Ferdinand Ritter von Hebra and Moritz Kaposi renamed this skin condition, using the Greek word *psora*, meaning "to itch."

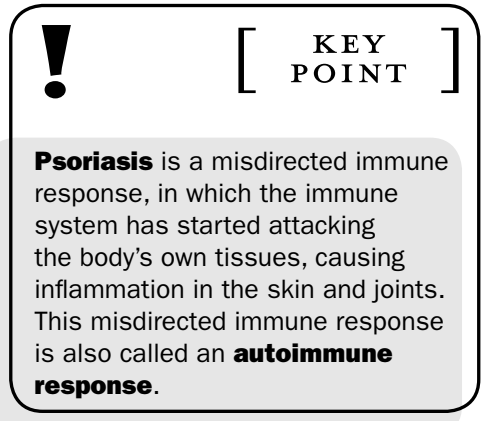
Different types of psoriasis were eventually identified over the course of the 20th century, and as we enter the 21st century, researchers around the world are working to find better ways to manage this life-altering disease.

The What and How of Psoriasis

We now know that psoriasis is:

- Chronic (long-term)
- Recurring (it sometimes goes away, but usually comes back)
- Inflammatory (is caused by inflammation)
- Non-contagious (you can't catch it from anyone or give it to someone else)

Psoriasis is generally not life threatening (that is, it very rarely kills anyone), but it can often be life altering and can affect life span. Extensive lifelong psoriasis can actually shorten someone's life by increasing his or her risk of developing **cardiovascular disease (CVD)**, including heart attack and stroke. Psoriasis is also associated with an increased risk of having a few other medical problems, such as depression, **psoriatic arthritis, Crohn's disease and ulcerative colitis** (see Chapter 3). Fortunately, doctors are becoming more aware of the need to develop ambitious treatment plans that aim for greater skin healing and meeting patients' personal **goals**.



How Psoriasis Works

In order to understand how psoriasis works, you need to know a thing or two about skin. You might be surprised to learn that skin is an organ in its own right—part of a large organ system called the integumentary system, which also includes oil glands, sweat glands, hair and nails.

There are two main layers of skin: the epidermis and the dermis. The dermis is the bottom layer. The glands, hair and nails, as well as blood vessels and nerves, weave throughout the dermis. The epidermis is the outer layer of skin and is divided into five layers of its own. The deepest layer produces millions of new cells every day. These cells are slowly pushed up toward the surface of the skin until they naturally die and flake off. This building or regeneration process gives you a brand new epidermis every 25 to 45 days!

Experts have known for some time that this regeneration cycle goes faster in the **plaques** of a person with psoriasis, creating a buildup of skin cells. With more recent research, these experts now believe that the cell buildup is a reaction to wrong signals from the body's immune system, or defense mechanisms.

Scientists have noticed that the epidermis and dermis of people with psoriasis become flooded with a type of white blood cell called T cells. These cells circulate in blood vessels and are part of the immune system, which allows us to fight off "invaders" such as bacteria and viruses. In a person with psoriasis, these white cells don't do their job properly. Instead, they are misdirected to areas of the skin where they release chemicals that ultimately lead to a plaque forming. T cells jumping into action would be a useful and appropriate response to control a skin infection, but in this case there is no "invader" around to destroy. To make matters worse, special white blood cells that are capable of stopping this kind of misdirected attack appear to be turned off.

It is the combination of the misdirected and the faulty white blood cells that is believed to make psoriasis so persistent and so hard to treat. Therefore, researchers are now focusing much of their efforts on fully understanding why the immune system malfunctions in people with psoriasis and how it can be restored to normal.

What's Happening to Your Skin?

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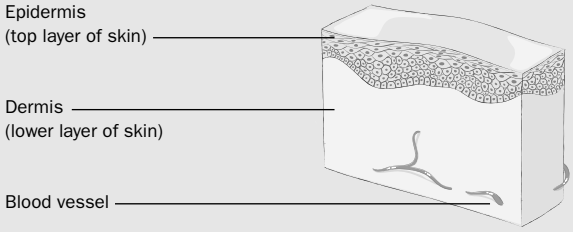
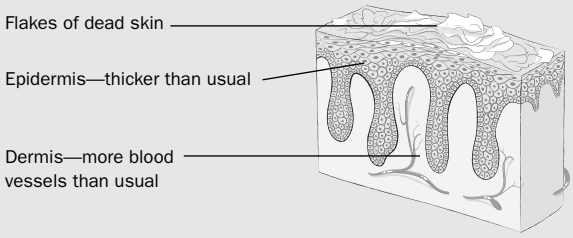
Healthy skin



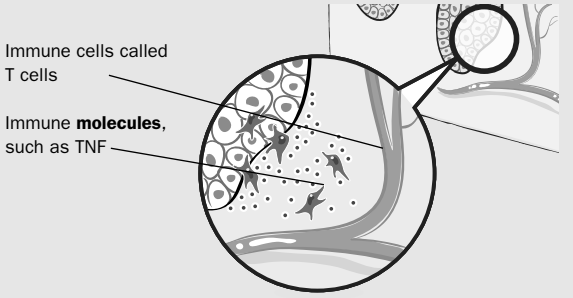
Skin has two layers: the epidermis (the top layer, which is exposed to the air) and the dermis (the lower layer, which contains blood vessels).

Skin in a psoriasis plaque



In a psoriasis plaque the top layer of skin is much thicker because the cells multiply faster than in healthy skin. There is also a lot of dead skin at the top, which comes off as flakes. The skin looks red because there are many more blood vessels running through it. These blood vessels come up close to the surface, so it's easy for the plaque to start bleeding if you scratch the flakes away.

What's going on in your plaques?



Plaques develop because of immune cells that enter the skin from your blood stream and send the wrong "signals" to the skin cells. These chemical signals, such as a molecule called TNF, cause the skin cells to divide too quickly. They also cause blood vessels to increase in number and branch up towards the surface of the skin.

What Does Psoriasis Look Like?

Psoriasis usually looks like red, raised patches of skin covered with white, silvery scales, called "plaques." Psoriasis **lesions** are irregular in shape and their size can vary from person to person. They may be as small as 1 mm (1/16 inch) across, or they may cover your entire body. They also tend be symmetrical (e.g., often, if the left knee is affected, so is the right, and the plaque on the left may be roughly the size and shape of the one on the right).

"It was weird—if you had a spot on your left leg, you had a spot on your right leg in the same place. It almost mirrors itself."

CHRIS

When a lesion is less than 0.5 cm (1/4 inch) in diameter, it is called a **papule**; a lesion that is larger than 0.5 cm in diameter is called a plaque. The scales on these lesions flake or peel off in small pieces or sheets.

When psoriasis affects the nails, it can take the form of nail pitting, discoloration, thickening, denting, roughness and separation from the nail bed. Psoriasis can also appear as small blisters called "pustules." Don't be confused by this name, though. Psoriasis pustules are sterile, meaning they don't contain live or dead bacteria. This is because psoriasis (unlike, say, acne pimples) is not caused by a bacterial infection in your skin. For a more thorough discussion of the different types of psoriasis, read Chapter 2.

What Does Psoriasis Feel Like?

Psoriasis pustules and plaques can be painful or burn. In some people, psoriasis can also itch. With a doctor's guidance, people with psoriasis usually experiment to find out what works best to make them feel comfortable. However, if the pain and itching are out of control, it's a sign that better treatment is needed.

Where Does Psoriasis Occur on the Body?

Psoriasis can occur anywhere on the body, from head to toe. It can show up on the scalp, under the nails, on the genitals, on the back, on the chest, on the eyelids, on the tongue and gums, and in areas where skin folds (e.g., elbows and knees). Where lesions appear will depend on individual physiology and the type of psoriasis (see Chapter 2).

Psoriasis Statistics: Who Has It and When It Starts

There are 500,000 Canadians with psoriasis. About 40,000 of them are over the age of 70, and 20,000 are children. The first signs of psoriasis usually occur between the ages of 15 and 35 years. Psoriasis affects both men and women. Most people develop **symptoms** before they hit age 30, but there are often hints of psoriasis earlier, even in infancy, that can go unnoticed or misdiagnosed.

Treating psoriasis in the very old and very young can be especially challenging—see Chapters 12 and 13 for information on how to deal with this condition if you or someone you know fits into these age groups.

"It started in my early 20s with just very small spots, and then progressively it would get worse, and it's never really gone away since."

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The Causes of Psoriasis: A Perfect Storm

There is no known single cause of psoriasis. Experts believe that three main factors contribute to someone developing this condition—a so-called perfect storm that can lead to a change in health: genes, environment and the configuration of a person's immune system.

There are many different psoriasis risk genes, and they all influence the odds of developing the condition. A lot of the variation in psoriasis (how, where and when someone gets it, which other diseases come along with it, and how someone responds to different treatments) is probably explained by the complexity of psoriasis genetics.

Some of these genes have been discovered in recent years, and one is linked specifically to people of Asian and Caucasian descent. Most people with psoriasis are Caucasian, and 2.5 percent of Caucasian Americans have the disease. Psoriasis is relatively uncommon in people of East Asian origin. It is more common in people from northern China (2 percent) and rarer among people in southern China (0.5 percent). Psoriasis is very rare in Japan (less than 0.5 percent) and in people in West Africa and their African-Canadian descendents.

This genetic link means that psoriasis often runs in families. If someone in your family has psoriasis, you are more likely to develop it. If one of your siblings has psoriasis, your risk of developing it is four to six times higher than that of the general public.

External triggers, such as injuries to the skin or infections, also

"I was born with it. My mother had psoriasis throughout her young life and then when I was born, her psoriasis disappeared. My psoriasis first appeared when I was one or two. And then it disappeared and came back when I was about thirteen."

ANONYMOUS PATIENT

contribute to the development of psoriasis by altering immune responses. The configuration of the immune system is another factor that influences whether or not someone will develop psoriasis. The immune system is complex and interacts with and affects every organ system in the body, including the skin.

However, it's unclear why some people's immune systems become configured in a way that allows psoriasis to develop. In some cases, we can point to a life event that causes a person's physiology to change and seemingly alter his or her immune system. Sometimes a combination of stressful factors (e.g., chronic stress, poor sleep, poor self-care) acts as a trigger, or a woman might develop psoriasis as a result of the hormonal changes that happen during pregnancy. But most of the time we can only guess why someone's immune system changes at a certain time in life, or why one person's immune response is affected while another person's is not.

Psoriasis is a complicated condition, and we will no doubt discover more about it as research on its causes and effects continues.

Next Steps

If you're not sure whether you have psoriasis, a thorough examination of your skin by your physician is probably all that's needed to diagnose you. Sometimes your physician might also need to conduct a few medical tests, such as a **skin biopsy**, which you can find out more about in Chapter 4.

If you already know that you have psoriasis, it's important to understand that it will likely come and go over the course of your life. It very rarely goes away altogether, except in the case of guttate psoriasis, which often never returns after clearing up (see page 18).

However, more treatment options are now available for psoriasis than ever before, and it is possible to find effective ways to deal with the condition's many physical and emotional challenges.

Taking advantage of the high-quality medical care that exists in Canada is the first step to easing your discomfort, so start by making an appointment with your physician and advocating for yourself by being clear about what you need to live a better life. Accepting the support that is available from patient groups, counselors and your loved ones can also help you deal more easily with the road ahead (see Chapter 11 and our Resources section for information on finding support).

Although your psoriasis journey may not be easy, know that you're not alone. Many others with this disease have found relief, and so can you.