

# Psoriasis

## Introduction

I chose psoriasis because I didn't truly understand what it was all about and there were not many other choices remaining. My knowledge of psoriasis consisted of the fact that it was a skin disease and that was it. When I was in high school, I knew of two people with this disease, a classmate and a teacher. The teacher's case seemed to be more progressed than that of my classmate's, but they both had the disease nonetheless. I always wondered what caused this disease and if it was something that they would have for life. Therefore, these questions and my lack of knowledge about this disease, is what led me to select it as my fact sheet topic.

## Section 1: Background and Problem Statement

- **Web site #1 Name: (Healthy People 2020) HP2020 does not have any information on your topic, therefore I will use another source titled "American Academy of Dermatology"**
- **Web address: <http://www.aad.org/skin-conditions/dermatology-a-to-z/psoriasis/psoriasis>**
- **Background Information:**

Psoriasis is a chronic disease that develops when a person's immune system sends faulty signals that tell skin cells to grow too quickly. These new skin cells form in days rather than weeks. The body does not shed these excess skin cells and because of this, the skin cells pile up on the surface of the skin, causing patches of psoriasis to appear. It is an inherited disease and there are five types: plaque, guttate, inverse, pustular, and erythrodermic.

- **Web site #2 Name: PubMed Health**
- **Web address: <http://www.ncbi.nlm.nih.gov/pubmedhealth/PMH0001470/>**
- **Background Information:**

Psoriasis is a very common condition. The disorder can affect people of any age, but it most commonly begins between ages 15 and 35. The condition cannot be spread to others via contact. The following may trigger an attack of psoriasis or make the condition more difficult to treat: bacteria or viral infections (including strep throat and upper respiratory infections), dry air or dry skin, injury to the skin, including cuts, burns, and insect bites, some medicines (including antimalaria drugs, beta-blockers, and lithium), stress, too little sunlight, too much sunlight (sunburn), too much alcohol

- **Web site #3 Name: National Psoriasis Foundation**
- **Web address: <http://www.psoriasis.org/about-psoriasis/causes>**

### Background Information:

Scientists believe that at least 10 percent of the general population inherits one or more of the genes that create a predisposition to psoriasis. However, only 2 percent to 3 percent of the population develops the disease. Researchers believe that for a person to develop psoriasis, the individual must have a combination of the genes that cause psoriasis and be exposed to specific external factors known as "triggers". Psoriasis triggers are not universal. What may cause one person's psoriasis to become active, may not affect another.

## Section 2: Research

### **Web site #1 Name: The Psoriasis Association**

- **Web address:** <http://www.psoriasis-association.org.uk/research.html>
- **Summary of the research:**

Dr. Catherine Smith, St John's Institute of Dermatology performed a study to establish clinically relevant pharmaco-genetic markers of systemic treatment outcomes in patients with severe psoriasis. Though there are a large number of different drugs that are used to treat psoriasis, none of these reliably work for every person, and they all have the potential to cause side effects. People know that the genetic make up of each person is an important factor in determining how they will respond to a treatment. Her overall research aim, therefore, seeks to discover which gene(s) are important in determining good (or poor) responses to the drugs that are used to treat psoriasis. Once discovered, doctors will be able to use the genetic blueprint of each patient to identify which treatments are most likely to work, be the safest, or least likely to cause side effects, rather than the current approach of trial and error. To do this, she and her team plan to collect DNA, and other blood and skin samples, from around 4000 patients who are receiving systemic treatments for their psoriasis, together with information on how they respond and any side effects. Once the data is collected, they would focus their initial genetic investigations on treatment responses to TNF Blockers (such as etanercept, adalimumab, and infliximab), and test around 20 genes that seem likely to be involved based on other work we, and others, have already completed. They also plan to achieve funding from other sources in order to continue the work, with the ultimate aim of achieving personalized medicine for patients with psoriasis, and improved treatment outcomes.

- **Web site #2 Name: Boonshoft School of Medicine, Wright State University**
- **Web address:** [http://www.med.wright.edu/whatsnew/2008/psoriasis\\_08](http://www.med.wright.edu/whatsnew/2008/psoriasis_08)
- **Summary of the research:**

The Department of Dermatology at Wright State University Boonshoft School of Medicine invited Dayton area (Ohio) residents who have moderate to severe psoriasis to participate in an important clinical research study investigation. The

year-long study evaluated the safety and effectiveness of an investigational treatment for psoriasis. This is a brand new medication that is an injectable (given as a shot) and has the highest rate of clearance to date. Participation in the new research study, was led by Dr. Heffernan, and involved as many as 12 office visits over a period of 12 months. People age 18 or above who had been diagnosed with moderate to severe psoriasis covering at least 10 percent of the body were eligible to volunteer. Volunteers received study-related examinations, lab tests, and study-related medication.

- **Web site #3 Name: PubMed**
- **Web address: <http://www.ncbi.nlm.nih.gov/pubmed/22077962>**
- **Summary of the research:**

There was a need for the development of novel non-steroidal topical drugs for the treatment of psoriasis. The objective was to assess the efficacy and safety of topical 1.0% WBI-1001 in patients with mild to moderate plaque psoriasis. A total of 61 patients with 1-10% body surface area (BSA) covered with plaque psoriasis and a physician's global assessment score (PGA) of 2-4 were randomized (2:1) to receive either 1% WBI-1001 in a cream formulation or placebo, applied twice daily for 12 weeks. At the end, it was determined that topical WBI-1001 induces rapid and significant improvement in patients with plaque psoriasis.

### Section 3: Statistics

- **Web site #1 Name: American Academy of Dermatology**
- **Web address: <http://www.aad.org/skin-conditions/dermatology-a-to-z/psoriasis/who-gets-causes/psoriasis-who-gets-and-causes>**
- **Summary of the statistics:**

People who get psoriasis usually have one or more person in their family who has psoriasis. Not everyone who has a family member with psoriasis will get psoriasis, but it is still common. In the United States, about 7.5 million people have psoriasis. Most people, about 80%, have plaque psoriasis. Psoriasis can begin at any age. Most people get psoriasis between 15 and 30 years of age. By age 40, most people who will get psoriasis, about 75% have psoriasis. Another common time for psoriasis to begin is between 50 and 60 years of age. Caucasians get psoriasis more often than other races. Infants and young children are more likely to get inverse psoriasis and guttate psoriasis.

- **Web site #2 Name: National Psoriasis Foundation**
- **Web address: [http://www.psoriasis.org/learn\\_statistics](http://www.psoriasis.org/learn_statistics)**
- **Summary of the statistics:**

Psoriasis is the most prevalent autoimmune disease in the U.S. According to current studies, as many as 7.5 million Americans (approximately 2.2

percent of the population) have psoriasis. About 125 million people worldwide, 2 to 3 percent of the total population, have psoriasis, according to the World Psoriasis Day consortium. Studies show that between 10 and 30 percent of people with psoriasis also develop psoriatic arthritis. Psoriasis prevalence in African Americans is 1.3 percent compared to 2.5 percent of Caucasians.

- **Web site #3: New Age Skin Research Foundation**
- **Web address: [http://www.newageskin.org/studies\\_and\\_stats\\_psoriasis.htm](http://www.newageskin.org/studies_and_stats_psoriasis.htm)**
- **Summary of the statistics:**

Ten to fifteen percent of those with psoriasis get it before age 10. Some infants have psoriasis, although this is considered rare. Annually, 20,000 children under 10 years of age are diagnosed with psoriasis. About 30 percent of people with psoriasis have cases that are considered moderate to severe (generally meaning it covers more than 3 percent of their body). More than 1.5 million Americans have moderate to severe psoriasis.

Severe types of psoriasis can compromise the skin's ability to control body temperature and prevent infections. Thirty percent of patients under a dermatologist's care have psoriasis so extensive or difficult to control that prescription topical (rub on) therapies are not adequate. On average, 350 people die from psoriasis or complications of its treatment annually.

#### **Section 4: Consumer Information**

- **Web site #1 Name: WebMd**
- **Web address: <http://arthritis.webmd.com/psoriatic-arthritis/psoriatic-arthritis-the-basics>**
- **Summary of the information:**

Psoriatic arthritis is a form of inflammatory arthritis that can affect some of the millions of Americans who have psoriasis. There are five types of psoriatic arthritis, they are: Symmetric psoriatic arthritis, Asymmetric psoriatic arthritis, Distal interphalangeal predominant, Spondylitis, Arthritis mutilans

- **Web site #2 Name: Mayo Clinic**
- **Web address: <http://www.mayoclinic.com/health/psoriasis/DS00193/DSECTION=complications>**
- **Summary of the information:**

If you have psoriasis, you're at greater risk of developing certain diseases, such as metabolic syndrome, a cluster of conditions that include high blood pressure and elevated insulin levels, inflammatory bowel disease, cardiovascular disease, and even cancer. In addition, psoriatic arthritis can be debilitating and painful, making it difficult to go about your daily routine. Despite medications, psoriatic arthritis can cause joint damage.

- **Web site #3 Name: American Academy of Dermatology**
- **Web address: <http://www.aad.org/skin-conditions/dermatology-a-to-z/psoriasis/tips/psoriasis-tips-for-managing>**
- **Summary of the information:**

One should talk with their dermatologist before he or she stops taking medicine for psoriasis. Immediately stopping a medicine for psoriasis can have serious consequences. It can cause one type of psoriasis to turn into another more serious type of psoriasis. For example, if a person who has plaque psoriasis takes a medicine called methotrexate and the person just stops taking it, this can cause the plaque psoriasis to turn into guttate psoriasis or erythrodermic psoriasis.

## Section 5: Solutions to the Problem (or Issue)

- **Web site #1 Name: The Psoriasis Association**
- **Web address: <http://www.psoriasis-association.org.uk/what-is.html>**
- **Summary of the information:**

The type of treatment one receives is dependent on the type and severity of the psoriasis. There are four categories of treatments: **Topical solutions**, which are treatments that are applied directly to the skin. They are available as creams, lotions, ointments, mousse and gels; **Phototherapy** is the term used for treatment with ultraviolet light. There are two types of ultraviolet (UV) light that can be used to treat psoriasis, UVB and UVA. Treatment with UVA requires the use of a chemical agent (either in tablet or bath form) called psoralen. Psoralens make the skin more sensitive to UVA. **Systemic medication** refers to treatments you take into your body e.g. tablets, however, they all have potential risks and so are reserved for people with moderate to severe psoriasis; **biological injections** are new treatments available to treat severe psoriasis that has not responded to any of the aforementioned treatments. They work by blocking the action of certain immune cells (T cells) or the chemicals released by them, which play a part in causing psoriasis.

- **Web site #2 Name: PubMed**
- **Web address: <http://www.ncbi.nlm.nih.gov/pubmedhealth/PMH0001470/>**

### Summary of the information:

Newer drugs called “biologics” specifically target the body's immune response, which is thought to play a role in psoriasis. These drugs are used when other treatments do not work. Biologics approved for the treatment of psoriasis include: Adalimumab (Humira), Alefacept (Amevive), Etanercept (Enbrel), Infliximab (Remicade), Stelara

- **Web site #3 Name: UCSF Medical Center**

- **Web address:** [http://www.ucsfhealth.org/conditions/psoriatic\\_arthritis/](http://www.ucsfhealth.org/conditions/psoriatic_arthritis/)
- **Summary of the information:**

Some of the treatments available for psoriatic arthritis drug therapy, corticosteroid injections and exercise. Drug therapy consists of non-steroidal anti-inflammatory drugs (NSAIDs). If progressive inflammation or joint destruction occurs despite treatment with NSAIDs, stronger medications such as methotrexate, corticosteroids and anti-TNF (tumor necrosis factor) medications may be recommended. Corticosteroid injections are also used by directly being injected into the joints. Also exercise is essential element of treatment for psoriatic arthritis. An exercise program can be done at home or with a physical therapist. Physical activity helps to strengthen, maintain and improve joint range of motion. For best results, exercise should be done on a regular basis.

### Conclusions

After doing this fact sheet, I learned a substantial amount of information regarding psoriasis. I never knew that it is an autoimmune disease, that there are different types, it can cause psoriatic arthritis, or that there is no cure for it. This project has made me more informed on the “triggers” of psoriasis and the treatment solutions for it as well. Though I may not have this disease, this information has made me more aware that I should take care of my body better as a preventative method against other diseases.

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