Psoriasis is a chronic condition affecting 5 to 7.5 million adults in the United States. It appears to be due to increased activity of the immune system resulting in rapid growth of skin cells that combine to form unsightly patches (also known as plaques). These usually appear as thick, reddened lesions that often are covered by silvery scales. Plaques most commonly occur on the elbows, scalp, torso, and knees, but may also be found on the nails, palms of the hands, soles of the feet, face, and the genital area. Psoriasis is not contagious and cannot be transferred to someone who does not have the disease.

Causes of Psoriasis

Although the exact cause of psoriasis is not fully understood, it is probably mediated by the immune system. T-lymphocytes (T-cells) are a form of white blood cell that assists the body in combating infection from bacteria and viruses. In psoriasis, T-cells mistakenly recognize healthy skin cells as foreign substances and attack them. This process stimulates the immune system to produce additional T-cells that migrate to the surface of the skin. Simultaneously, new, healthy skin cells are being produced to replace those being attacked. The rate of new skin cell generation eventually exceeds the sloughing of dead cells from the skin surface and results in the inflammation and patches that characterize psoriasis. There are several triggering factors that may cause or worsen this condition. These include stress, smoking, cold weather, infections such as strep throat and thrush, alcohol consumption, certain medications, scraping of the skin, insect bites, and sunburn.

Risk Factors

Some factors appear to place a person at greater risk for developing psoriasis. Almost 50% of patients with psoriasis have at least one family member also suffering from the disorder. Individuals who are prone to infection or possess a weakened immune system also are more likely to develop the condition. As mentioned earlier, smoking may not only increase the risk of developing psoriasis, but may contribute to more severe disease than that seen in non-smokers.

Types of Psoriasis and Associated Symptoms

**PLAQUE PSORIASIS** (most common form)
- Raised patches
- Inflammation
- Silvery white scales

**GUTTATE PSORIASIS**
- Small, round, spots
- Associated with streptococcal infection in children

**PUSTULAR PSORIASIS**
- Pus-filled blisters within plaques
- Intense scaling
- May be painful, especially if involving palms and soles

**INVERSE PSORIASIS**
- Inflammation
- Deep redness
- Scaling in body folds such as underarms and groin

**ERYTHODERMIC PSORIASIS** (1% of patients)
- Small, round, spots
- Associated with streptococcal infection in children

Symptoms

Individuals with psoriasis have a variety of signs and symptoms, including dry or cracked skin, scales, itching, burning, soreness, thickened or ridged nails, and swollen or stiff joints (see illustration). Depending on the combination of signs and symptoms, individual cases can be classified into various types (see table). Some patients with psoriasis may also experience significant pain, stiffness, and swelling of the joints. This is a more complex condition and classified as psoriatic arthritis. Patients with psoriasis will not necessarily develop psoriatic arthritis.

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Prognosis
Psoriasis is not progressive; however, the severity of this skin condition can increase or decrease over time in relation to the triggering factors addressed earlier. Medications (for example, lithium and antimalarial drugs) have also been associated with worsening of the condition. Each patient with psoriasis responds differently to the various potential triggers, thus, what worsens psoriasis in one person may not have the same effect in another. Individuals with psoriasis have been found to have a greater risk for developing metabolic syndrome, diabetes, cardiovascular disease, and inflammatory bowel disease.

Diagnosis
There are no specific tests that can be conducted to confirm a diagnosis of psoriasis. It is commonly verified by a dermatologist (a doctor who specializes in diseases affecting the skin). Psoriatic arthritis can be diagnosed by evaluating symptoms, taking X-rays, and excluding other causes and types of arthritis. This disease is best managed by a rheumatologist (a physician who specializes in arthritis and other inflammatory disorders).

Lifestyle Modification and Non-Drug Measures
In addition to treatment with medication, certain lifestyle changes may improve the symptoms of psoriasis. Identifying and avoiding triggers may be very beneficial. Taking regular baths with oil, Epsom salts, or colloidal oatmeal can decrease inflammation and remove skin scaling. Using ointment-based moisturizers after bathing may improve redness and scaling associated with psoriasis. Applying moisturizers and covering the skin with plastic wrap overnight may also be beneficial. While excessive sunlight can aggravate psoriasis, small amounts may greatly improve the condition of the plaques. Sunbathing should be limited to short sessions, and use of sunscreen with a sun protection factor (SPF) of at least 15 is recommended. Because alcohol may interfere with some psoriasis medications, its consumption should be reduced.

Treatment
Unfortunately, there currently is no cure for psoriasis; however, there are several different forms of treatment available to manage symptoms and improve skin condition. These treatments include topical and systemic forms of therapy. It is not uncommon for patients to require periodic changes in treatment because the response to some measures may gradually be diminished. Some treatments are designed for localized disease involving less than 5% of body surface area. Other patients may require combination therapy to ensure appropriate control of their symptoms. Topical (creams and ointments) therapy can slow the growth of skin cells and usually is considered the first line of treatment. Another option is the use of phototherapy, which uses ultraviolet A (UVA) and/or ultraviolet B (UVB) light. This form of treatment usually requires multiple sessions at the physician’s office. The sole use of UVA light is considered relatively ineffective, thus a treatment known as PUVA (a psoralen class drug such as methoxsalen plus UVA light) may be more beneficial. Systemic therapy should be considered if the psoriasis is widespread (greater than 5% of body surface area), involves sensitive areas such as the face, or if topical treatment has been ineffective. An additional treatment option is the use of biologic agents that inhibit over-activity of the immune system. Appropriate treatment is based on the type and extent of the psoriatic lesions. See the accompanying table for a list of many of the available treatments for psoriasis. Patients with psoriatic arthritis typically require treatment with systemic agents that affect the immune system. These forms of therapy are associated with potentially severe adverse effects, including an increased risk of infection.

Psoriasis is a chronic, inflammatory skin disease that occurs in various forms and can involve many areas of the body. Fortunately, several non-drug measures and the use of appropriate medications generally result in resolution of the signs and symptoms of disease.

Some Common Treatments for Psoriasis

<table>
<thead>
<tr>
<th>OVER-THE-COUNTER</th>
<th>PRESCRIPTION</th>
<th>PHOTOTHERAPY</th>
<th>SYSTEMIC THERAPY</th>
<th>SYSTEMIC THERAPY</th>
<th>BIOLOGIC MEDICATIONS</th>
<th>BIOLOGIC MEDICATIONS</th>
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<tbody>
<tr>
<td>(OTC) TOPICAL</td>
<td>(TOPICAL)</td>
<td>(PHOTO)</td>
<td>(PSORIATIC)</td>
<td>(PSORIATIC ARTHRITIS)</td>
<td>(PSORIATIC)</td>
<td>(PSORIATIC ARTHRITIS)</td>
</tr>
<tr>
<td>Salicylic acid</td>
<td>Anthralin</td>
<td>Excimer (UVB)</td>
<td>Calcipotriene</td>
<td>NSAIDs</td>
<td>Amevive</td>
<td>Enbrel</td>
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<tr>
<td>Tar</td>
<td>Calcinet</td>
<td>PUVa (psoralen + UVA)</td>
<td>Calcipotriene/betamethasone dipropionate</td>
<td>Anti-malarials</td>
<td>Humira</td>
<td>Remicade</td>
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<td></td>
<td>Calcitriol</td>
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<td>Pimecrolimus</td>
<td>Methotrexate</td>
<td>Stelara</td>
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<td>Tazarotene</td>
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<td>Pimecrolimus</td>
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<td></td>
<td>Tacrolimus</td>
<td>Methotrexate</td>
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</table>

For additional information regarding psoriasis, the reader is encouraged to visit the following websites:

- The National Psoriasis Foundation: http://www.psoriasis.org/about-psoriasis
- The Mayo Clinic: http://www.mayoclinic.com/health/psoriasis/DS00193

www.duq.edu/pharmacy