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Key Inforbits

- What is psoriasis
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- Diagnosis
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https://bioplusrx.com/shining-a-light-on-national-psoriasis-awareness-month/

What is psoriasis?

Psoriasis is a common chronic T-lymphocyte-mediated inflammatory disease of various parts of the skin affecting men and women of all races and ages. It is thought to affect 17 million people throughout North America and Europe.[1] Approximately 75% of patients present with psoriasis before the age of 40 years, although this disease can present at any age. Peak age of onset for both males and females range from 30 to 39 years and 50 to 69 years.[2]

Psoriasis is characterized by recurrent exacerbations and remissions of thickened, erythematous, and scaling plaques on parts or all of a patient's skin. The abnormal differentiation in psoriatic skin is a result of hyperproliferation, abnormal epidermis differentiation, and inflammatory cell infiltrates. When compared to normal skin epidermis, hyperproliferative skin has increased numbers of epidermal stem cells, increased cells undergoing DNA synthesis, shortened keratinocyte cell cycle, and shortened turnover time of the epidermis.[2] The immune system is overactive and speeds up the skin cell growth. Instead of growing and shedding in a month's time frame as normal skin would, psoriatic skin grows and sheds in three to four days.[3] This escalated cell cycle causes the shed skin to pile up on top of the skin surface creating plaques.[3] The various changes in skin appearance can cause emotional effects such as embarrassment, anxiousness, or depression.

Having a family history of the disease can increase a patient's risk, with the more relatives affected by psoriasis, the higher the risk. The development of psoriasis can also be linked to smoking, obesity, injury to the skin, infection (bacterial and viral), alcohol use, drugs, and stress.[1,2] Medications that have been associated with exacerbations include nonsteroidal anti-inflammatory drugs (NSAIDs), lithium, antimalarial drugs, beta-blockers, corticosteroid withdrawal, and occasionally paradoxical use of tumor necrosis factor (TNF) inhibitors.[1,2] The inflammation associated with psoriasis can have a negative impact on other organs and tissues leading to conditions such as psoriatic arthritis, hypertension, depression, Crohn's disease, and diabetes.[1,3]

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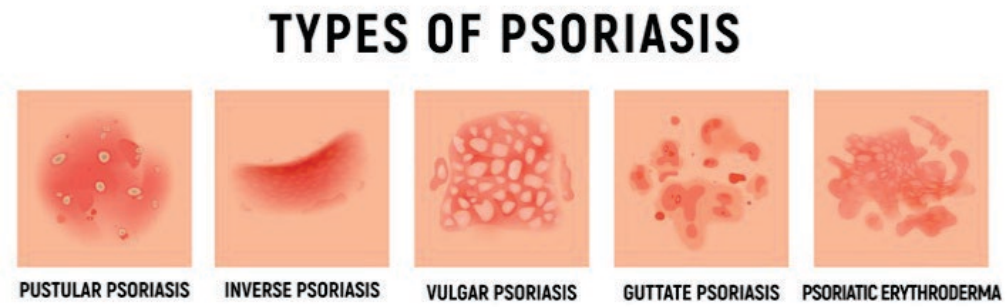
Clinical presentation:

Psoriasis occurs in numerous subtypes depending on the area of the body it affects. A patient can have more than one subtype at a given time together or more than one over the course of a life-time.[1] This condition is not contagious and cannot be transmitted through contact of the psoriatic lesion.[2]

Table 1: Psoriasis Subtypes

Subtype	Characteristics	Location on Body
Chronic plaque psoriasis	The most common subtype of psoriasis. Cutaneous plaques are usually symmetrical in nature, erythematous with sharply defined margins, pruritic, and have a thick, slivery scale. May appear red or purplish in color. The margins of the plaques can range from less than 1 cm to more than 10 cm in diameter.	Ranges from being localized to covering majority of the body surface area. The most common sites of involvement being the scalp, extensor elbows, knees, and gluteal cleft.
Guttate psoriasis	Typically occurs as an acute eruption in children and young adults with no prior history, although a flare can occur in those with pre-existing psoriasis. Appears as multiple small, red papules and plaque is usually less than 1 cm in diameter. There is strong association of this form of psoriasis and a recent infection such as streptococcal pharyngitis.	Papules and plaque mainly appear on the trunk and proximal extremities.
Pustular psoriasis	Can present life-threatening complications such as renal, hepatic, or respiratory abnormalities and sepsis. Pustules appear as white, pus-filled painful bumps that are surrounded by inflamed	May appear on certain areas such as the hands and feet or it may cover

Subtype	Characteristics	Location on Body
	or reddened skin. The most severe variant is the von Zumbusch-type which presents with an acute onset of widespread scaling, erythema, and sheets of superficial pustules. Other non-cutaneous presentations include fever, malaise, diarrhea, leukocytosis, and hypocalcemia. Potential causes include pregnancy, withdrawal from oral glucocorticoids, and infections.	most of the body surface area.
Erythrodermic psoriasis	Uncommon subtype that presents with generalized erythema, scaling, severe itching, changes in heart rate or temperature, and pain. Secondary life-threatening complications such as loss of barrier protection and fluid loss may put patients at increased risk of infections, sepsis, or electrolyte abnormalities.	Most or all of the body surface area
Inverse psoriasis	This subtype of psoriasis usually does not present with scaly skin, but smooth, red inflamed skin. The skin is itchy and painful which can be made worse by sweat and rubbing of the area affected.	Mainly affects areas of skin folds such as underarm, genital areas, under breast, and buttocks.



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Diagnosis:

There are no laboratory tests used to confirm diagnose of psoriasis. Diagnosis is based on skin examination and a skin biopsy, although it is not usually necessary. Assessment of severity is based on symptoms, extent of body surface area involvement, psoriasis area and severity index, and quality of life. The body surface area or the psoriasis area and severity index is used to determine the classification of mild, moderate, or severe psoriasis.

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Psoriasis Management:

Nonpharmacological therapy:[1,3]

- Nonmedicated moisturizers help maintain skin moisture, reduce skin shedding, control scaling, and reduce pruritus.
- Oatmeal baths may help reduce pruritus and can potentially help reduce the need for systemic antipruritic drugs.
- Aloe vera may be used for mild psoriasis but it does have potential risk of causing contact dermatitis.
- Topical St. John's wort may reduce erythema, lesion thickness, and scaling, although further studies are required to assess the benefits of this agent in psoriasis management.
- Stress reduction such as meditation or relaxation techniques can be used as adjunctive therapy in mild to moderate psoriasis. Other psychological interventions such as cognitive behavioral therapy or guided imagery may also be used to help reduce psoriasis severity.
- Avoid harsh soaps and detergents.

Pharmacologic treatment of mild-to-moderate

Topical agents are most commonly used to treat mild-to-moderate psoriasis and may be used in combination with phototherapy, systemic, or biologic therapy.[1] Topical corticosteroids provide anti-inflammatory, antiproliferative, immunosuppressive and vasoconstrictive effects in the treatment of psoriasis. Topical corticosteroids are classified into 7 categories based on their skin vasoconstrictive activity. They are classified from class 1 (super potent) to class 7 (least potent). In order to select an agent with the appropriate potency it's important to consider the severity of the disease, location, patient age, and patient preference.[1] Adults are usually recommended corticosteroids in class 2 to 5 as initial therapy.[1] Patients should be counseled on the importance of adherence as noticeable improvements may be seen in as soon as one week with topical agents but may require several weeks of application for full benefit.[2]

Table 2: Topical Agents[1,3]

Drug Class	Drug Name	Clinical Pearls
Vitamin D analogs	• Calcipotriene (Dovonex) • Calcitriol (Vectical)	• Used as first-line monotherapy or in combination with topical corticosteroids in mild plaque psoriasis • Various vehicles: cream, ointment, gel, foam • Used as maintenance therapy after the discontinuation of topical corticosteroid
Topical Retinoid	• Tazarotene (Tazorac)	• May be combined with a topical corticosteroid to enhance efficacy and reduce irritation • CI in pregnancy

Drug Class	Drug Name	Clinical Pearls
	• Anthralin	• Short-contact anthralin therapy (SCAT) with ointment applied only to thick plaque lesions for 2 hours or less then wiped off
	• Salicylic acid	• Do not use in children • Enhances penetration of topical corticosteroid • Often used in shampoos or bath oils for scalp psoriasis

Pharmacologic treatment for moderate-to-severe

Patients with more moderate-to-severe psoriasis require the use of phototherapy or systemic therapy. Patients in this category usually have psoriasis that covers 5 to 10 %of body surface area (BSA) or involvement of the face, palms, or soles.[1] Topical agents can be used as adjunctive therapy in addition to phototherapy and systemic therapy in the event of resistance or treat localized lesions. Improvement of symptoms are usually seen within weeks.[1]

Table 3: Systemic Non-biologic Agents[3]

Drug Name	Clinical Pearls
Acitretin (Soriatane)	• Commonly used in combination with topical calcipotriene • Contraindicated in pregnancy
Methotrexate	• Provides oral, SC or IM administration • Contraindicated in pregnancy
Cyclosporin	• Moderate-to-severe plaque psoriasis • < 12 weeks use due to increased risk of nephrotoxicity • Gradually taper to prolong time before relapse
Tofacitinib (Xeljanz)	• Active psoriatic arthritis • Do not use with nonbiologic DMARDS
Apremilast (Otezla)	• Active psoriatic arthritis and patients with moderate-to severe plaque psoriasis

Table 4: Systemic Biologic Agents[2,3,4]

Drug Class	Drug Name	Clinical Pearls
TNF Inhibitors:	• Adalimumab (Humira)	• Psoriatic arthritis and moderate-to-severe chronic plaque psoriasis • May be an alternative treatment therapy for patients who failed to respond to Etanercept.
	• Etanercept (Enbrel)	• Reducing signs/symptoms and progression of joint damage in psoriatic arthritis • Can use monotherapy or combination with MTX

		• Use in patients ≥ 4 years of age with chronic moderate-to-severe plaque psoriasis
	• Infliximab (Remicade)	• Chronic severe plaque psoriasis and psoriatic arthritis • There is a potential risk of developing anti-infliximab antibodies, which may contribute to loss of response to infliximab
	Certolizumab pegol (Cimzia)	• Moderate-to-severe plaque psoriasis or psoriatic arthritis • Minimal placental transfer compared to the other anti-TNF biologics
Interleukin-12/23 Inhibitors:	• Ustekinumab (Stelara)	• Used in patients ≥ 18 years of age with moderate-to-severe plaque psoriasis • Does not require drug level monitoring for efficacy
Interleukin-17A Inhibitors:	• Secukinumab (Cosentyx) • Ixekizumab (Taltz) • Brodalumab (Siliq)	• Secukinumab has a greater level of efficacy, but less safety than the Interleukin 12/23 inhibitor. • Due to risk of suicidal ideation and completed suicide in treated patients, the use of brodalumab requires participation in Risk Evaluation and Mitigation Strategy program
Interleukin-23 Inhibitors:	• Guselkumab (Tremafya) • Tildrakizumab (Ilumya) • Risankizumab (Skyrizi)	• Response to therapy is best after 12 weeks • May increase risk of infections and patients should be screened for tuberculosis before initiation

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Therapies in Development:

Bimekizumab is an investigational monoclonal IgG1 antibody that selectively inhibits interleukin-17A and interleukin-17F that is currently undergoing phase 3 trials for the treatment of moderate-to-severe plaque psoriasis. A recent study looked at the efficacy and safety of bimekizumab in comparison to tumor necrosis factor inhibitor adalimumab (Humira). This study showed bimekizumab was noninferior and superior to adalimumab in reducing signs and symptoms associated with plaque psoriasis.[1] Another recently published study looked at the efficacy and safety of bimekizumab in comparison to secukinumab (Cosentyx) which is an interleukin-17A inhibitor. This study showed bimekizumab provided greater skin clearance than secukinumab (Cosentyx).[2]

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The last "dose" …

"Alone we can do so little, together we can do so much."
-Helen Keller [American author and disability rights advocate, 1880 to 1968]

"The only way to discover the limits of the possible is to go beyond them into the impossible"
-Arthur C. Clarke [English author and futurist, 1917 to 2008]

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