psoriasis
association of singapore

Understanding Psoriasis Treatments

Preface

"Understanding Psoriasis Treatment" is now in its 4th edition. An update is timely, as much has changed in the psoriasis landscape since the last edition (written by Professor T. Thirumoorthy) was published in 2013. These include a new understanding of the impact psoriasis has on the overall health of our patients and new treatment paradigms. Overall, our patients now have greater access to a wider range of therapies. This has brought relief and improved quality of life to many suffering from psoriasis and their caregivers.

The information given in this booklet is not meant to be comprehensive but aims to give an overview of the treatments available, the practical tips on care and how to cope effectively with psoriasis.

This information is meant to support you in your understanding of psoriasis, but not substitute a medical diagnosis and consultation. We hope the information presented will help you become an active partner in the management of your psoriasis.

This booklet is published by the Psoriasis Association of Singapore (PAS), a non-profit organization run by volunteers who are either psoriasis patients or relatives of patients, professionals, nurses and social workers.

The PAS organizes activities and information to help individuals and families to understand and cope with the problem of psoriasis. Accurate information and education can help reduce the suffering caused by ignorance and misinformation. I would strongly encourage you to join PAS as a member, and actively participate in the regular seminars and workshops it organizes. Many members have found the camaraderie therapeutic in their journey with psoriasis.

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April 2023 (4th Edition)
November 2013 (3rd edition)
March 2006 (2nd Edition)
March 1997 (1st Edition)

For more information please refer to:

www.psoriasis.org.sg – website of the Psoriasis Association of Singapore
www.aad.org – website of American Academy of Dermatology
www.psoriasis.org – website of National Psoriasis Foundation USA

Contents

What is *Psoriasis?*

Psoriasis is a common skin disorder worldwide. It is estimated that 1% to 3% of people around the world suffer from psoriasis. Psoriasis affects all races, both sexes and children, and can occur at any age. Many patients develop psoriasis between the age of 20 to 30, or between 50 to 60.

What causes psoriasis?

Psoriasis is an immune system mediated, long-term (chronic) inflammatory condition. Underlying genetic tendency, coupled with environmental triggers such as infections, certain medications and stress contribute to the development of psoriasis. The immune system plays a crucial role in the formation of psoriasis. Immune cells release chemicals (cytokines) that lead to rapid growth of skin cells. Skin cells mature in 3 – 4 days instead of the normal 21 – 28 days. The accumulation of skin cells, together with increased blood vessels and influx of inflammatory cells, give rise to the typical red, thick, and scaly patches of psoriasis on the skin.

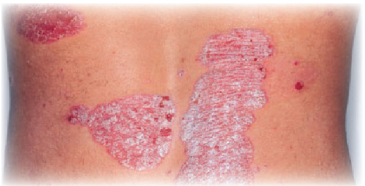
Psoriasis is not contagious and will not spread to other people via touch or the environment.

What are the types of psoriasis?

Psoriasis has many different appearances, ranging from localized patches that appear on only one location of the body, to generalized forms that cover your entire body.

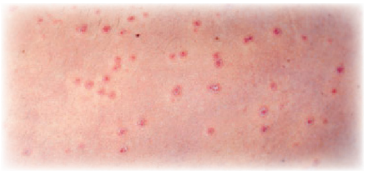
Psoriasis typically presents as red, thickened and scaly patches on the skin (called plaques). Itch is reported in 60% of patients. There are several clinical types of psoriasis:

- **Plaque psoriasis** is the most common and accounts for more than 80% of all cases of psoriasis. Psoriatic plaques can be of various sizes, range from pink to deep red, and are often covered with silvery-white scales. Plaques can occur anywhere on the skin, but are often found on the scalp, elbows, knees and lower back.



Plaque psoriasis [Photograph courtesy by Danderm]

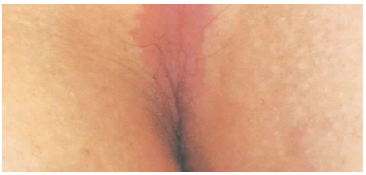
- **Guttate psoriasis** is often seen in children and adolescents, after an infection such as streptococcal throat infection. It is characterized by numerous small, red and scaly spots on the body.



Guttate psoriasis [Photograph courtesy by Danderm]

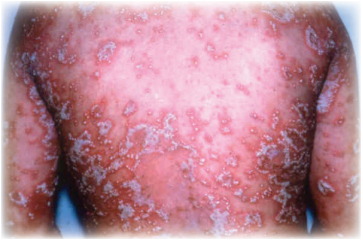
What is *Psoriasis?*

- **Flexural psoriasis** is also called inverse psoriasis, where red, inflamed patches appear in skin folds such as the armpits, groins, buttocks and underneath the breasts.



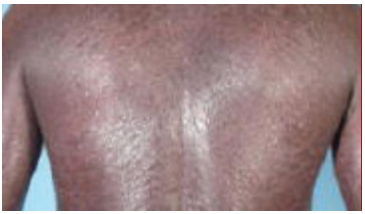
Flexural psoriasis

- **Pustular psoriasis** appears as small blisters filled with pus (pustules) over red and inflamed skin. Pustular psoriasis may be localized (such as on the palms and soles) or generalized over large areas of the skin. Patients with generalized pustular psoriasis may feel very unwell or feverish, and should see a doctor early.



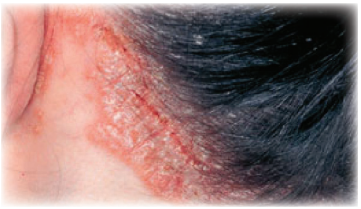
Pustular psoriasis

- **Erythrodermic psoriasis** is a severe form of psoriasis where almost all parts of the skin are covered with psoriatic patches. Patients may sometimes feel very ill and need to be hospitalized.



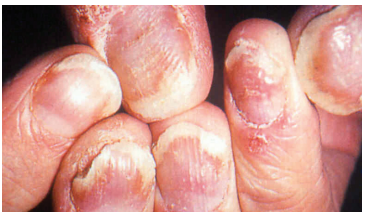
Erythrodermic psoriasis

- **Scalp psoriasis** appears as red scaly patches on the scalp, often extending beyond the hairline. There may be dandruff-like flaking. The scalp can sometimes be the only part of the body that is affected. Treatment is different from skin psoriasis, as hair gets in the way.



Scalp psoriasis

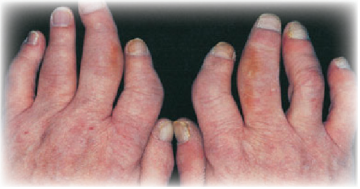
- **Nail psoriasis** can appear as pitting (dimples) on the nail surface, deformation, thickening or separation of the nail from the nail bed. It is often associated with psoriatic arthritis.



Nail psoriasis

What is *Psoriasis?*

- **Psoriatic arthritis** is an inflammatory joint disease that affects up to 20% of patients with psoriasis. Symptoms include joint stiffness, pain, swelling and deformity. Small and/or large joints may be affected, including the hands, knees, ankles, shoulders and spine.



Psoriatic arthritis [Photograph courtesy by Danderm]

Medical Conditions Associated with Psoriasis

Psoriasis is now recognized to be a systemic inflammatory disease, meaning that the inflammation in psoriasis affects not just the skin and joints, but also the rest of the body.

Psoriasis, especially severe psoriasis, may increase the risk of cardiovascular disease (heart attack, stroke), obesity, diabetes, high blood pressure, high cholesterol and fatty liver. The combination of high blood pressure, high cholesterol, diabetes, and obesity is called metabolic syndrome.

Patients with psoriasis need to be aware of these risks, and actively pursue a healthy lifestyle. The latter includes a balanced diet rich in vegetables and fruits, regular exercise, non-smoking, stress management, and maintaining body weight in the desirable range. Regular health-screening with your doctor can pick up these conditions before they become serious.

Aggravating Factors

Although there is no single cause of psoriasis, it is important to recognize that certain factors are known to make your psoriasis worse, delay the improvement of your skin, or make it difficult to clear the psoriasis. It is important to review these factors with your doctor as modifying some of these factors can help you to live better with psoriasis. The known aggravating factors include:

- **Stress** - physical, mental and emotional. Anxiety, worry, fear and anger associated with psoriasis itself can make psoriasis worse.
- **Injury** to the skin by scratching, rubbing, picking, peeling, injuries during sports, cuts and even sunburn.
- **Irritation** of the skin by creams, traditional herbal application, strong soaps, scrubs and detergents.
- **Infections**, including chest, throat and urinary tract infections.
- **Climate** ranging from cold and dry wintery climates to excessive sun exposure, sunburn, hot and humid temperatures.
- **Hormonal changes** such as pregnancy, childbirth, around menopause and puberty.
- **Drugs**, such as beta-blockers, lithium, oral corticosteroids, non-steroidal anti-inflammatory drugs (NSAIDs) and antimalarials.
- **Obesity**
- **Alcohol**
- **Smoking**

Goals of Treatment in Psoriasis

Psoriasis is a chronic disease; this means that there is a need for long-term treatment of psoriasis. With the right motivation, treatments can help you manage the condition effectively. Different types of psoriasis may require different treatments.

There are several highly effective and well-tolerated treatments available today. To achieve success in clearing your psoriatic symptoms, adherence to treatment is essential.

It is important that you have a discussion with your doctor, so that he/she can advise you on the treatments that best suit you and the potential side effects that you may experience while on the treatment course in addition to the expected time of clearance. There is no one size treatment that fits all. Your doctor will seek to understand your ideas, concerns and expectations about psoriasis and its treatment and, together with you, create a management plan.

Some of the questions you can ask your doctor include:

- How do I control the symptoms of itch, scaling and pain?
- How long do I need to apply the treatment?
- How should I use my treatments correctly?
- When can I expect to see an improvement?
- What are the side effects of the therapy and how can I minimize them?
- Can I expect a clearance of the skin patches?
- What are the foods and lifestyle habits that can help me manage psoriasis?

What are the *choices* of treatments available to me?

The choice of treatment for psoriasis can be divided into topical therapy (creams, ointments, foams, gels, lotions and shampoos), systemic therapy (oral medications and injectables), and phototherapy. The choice of therapy depends on the following factors:

- Severity of the psoriasis, extent, disability and distress
- Type of psoriasis
- Age, gender and reproductive (family planning) needs
- Site of psoriasis
- Any other associated medical problems
- Response to previous medications
- Ability to adhere to treatment, personal preferences, costs and social support

The choice of therapy in psoriasis has to be individualized, as not all treatments are effective for all people with psoriasis. For example, treatments that did not work previously may work better in combination or may need to be changed. Some treatments may be effective initially but lose their effectiveness over time.

Additionally, treatments that aim to clear psoriasis often differ from those that help to maintain the improved, cleared, or maintenance phase of your psoriasis. Your doctor may want to rotate or combine your therapy to minimize the unwanted side effects of long-term therapy.

Topical Therapy

Topical therapy is the first-line treatment for chronic plaque psoriasis. Approximately 70% of patients with plaque psoriasis can be managed with topical therapy.

Topical therapies include creams, ointments, foams and gels that can be applied directly on psoriatic plaques on the body. Shampoos, lotions and gels are also available for psoriasis plaques on the scalp.

- **Vitamin D analogues (calcipotriol)**
  Vitamin D analogues slow down the rapid turnover of skin cells in psoriasis and stimulate the skin cells to grow in a more normal fashion. Studies have shown vitamin D analogues to be as effective as medium potency steroid creams. Compared to steroids, psoriasis patches do not return as quickly when treatment with calcipotriol is discontinued. Vitamin D analogues can be an effective tool in the maintenance phase of psoriasis treatment.

  Side effects
  Vitamin D analogues can cause stinging or burning sensation, and occasionally redness when applied on inflamed (red) psoriasis. It does not affect blood calcium levels unless used excessively (no more than 100 gm per week). It may cause skin irritation when applied to the face and skin fold areas.

- **Steroids or Cortisone (creams, lotions, ointments)**
  Topical steroids are anti-inflammatory agents that can effectively clear psoriasis patches. Steroids are available in various potencies and formulations such as creams, ointments and lotions, making them a versatile and inexpensive tool in psoriasis treatment. Steroids are safe and effective when used under medical supervision.

  Mild steroids are usually prescribed for the face and body folds, while stronger steroids are used for the body and limbs. Stronger steroid lotions and shampoos are sometimes prescribed for psoriasis on the scalp.

  Side effects
  Strong steroid creams may thin the skin and cause stretch marks especially on the face, body folds, and genitals. When used in large quantities, the steroid may be absorbed through the skin and affect the rest of the body. Care is required when applying steroid lotions to the scalp, as these can run down from your scalp to your face.

- **Combination betamethasone dipropionate and calcipotriol**
  The combination of a vitamin D analogue and steroid has been shown to be more effective than either medication used alone. The addition of a steroid mitigates the irritation some patients experience with a vitamin D analogue and produces a faster and more complete response. This combination is available as a foam or gel, and can be applied to the scalp and body.

Topical Therapy

- **Tar**

  Tar has anti-inflammatory, anti-itch and anti-scaling properties, and has been used to treat psoriasis for hundreds of years. Tar preparations are available as crude coal tar and purified tar creams. Crude coal tar is a dark-colored preparation with a prominent smell. It can also stain clothing. Purified tar cream is easier to use but less effective. To reduce the unpleasant smell and staining, tar creams are usually applied at night and washed off in the morning. It is sometimes used in combination with salicylic acid, which helps to soften the scales. Tar can also be used as a bath solution or a shampoo.

  Side Effects

  Tar is safe to use on a long-term basis, although it may irritate the skin if the psoriasis patches are very red. Tar preparations can be very oily and cause folliculitis (redness and inflammation around the hair follicle) when used on hairy areas.

- **Calcineurin inhibitors (tacrolimus/pimecrolimus)**

  Calcineurin inhibitors are non-steroidal, anti-inflammatory agents that have been shown to be effective for psoriasis affecting the face, neck, skin folds and genitalia. Although slightly less effective than topical steroids, they do not cause skin thinning. They are available as a cream or ointment. They can be used as maintenance therapy in these areas after initial treatment with topical steroids.

  Side Effects

  Burning or itching are common at the sites of application in the first few days, but these will improve with time. Stop your treatment if these side effects persist and see your doctor.

- **Moisturizers / Emollients**

  Moisturizers soothe the skin, reducing dryness, scaling, itch and soreness, and make you feel more comfortable. Moisturizers may also allow other topical treatments to be better absorbed. They are most effective when applied right after a bath or shower.

- **Bath Solutions and Cleansers**

  Gentle, moisturizing soaps or cleansers help soothe psoriasis skin which is often dry and irritable. Several preparations of bath solutions have been used from time to time.

  These include:

  1. Oatmeal baths
  2. Tar baths
  3. Bath oils
  4. Dead sea salts

  Soaking in a bath with any of the above preparations is beneficial in making the psoriasis patches soft and relieving itch. The soft scales can be gently rubbed off with a soft towel.

Topical Therapy

Applying emollients immediately after a bath is useful.

Contrary to popular belief, bathing in the sea may not always make psoriasis better. The sea and hot sun have been known to aggravate or inflame psoriasis. Exposing psoriasis skin to sunlight must be done with care as sunburn can make psoriasis worse. It is best to discuss these options with your doctor if you plan to get natural sunlight therapy.

Systemic Therapy

The name 'systemic' refers to the fact that the drug travels through the bloodstream and reaches cells throughout the body, thereby giving a systemic effect. This is in contrast to topical therapy, which has 'localized' effects (i.e. they target skin lesions directly). Systemic therapy is usually given when topical therapies have failed to reduce the symptoms of psoriasis or when the psoriasis is affecting large areas of the body.

Systemic therapies are taken as tablets or by injections. The most common oral systemic therapies include methotrexate, cyclosporine and acitretin. Biologic therapies are mostly given as injections, and function differently from these oral medications. They will be discussed separately in the next section.

Oral or injection steroids may lead to temporary improvement, but sometimes cause worsening of psoriasis when treatment is stopped. Hence, oral or injection steroids are not commonly used in psoriasis treatment.

- **Methotrexate**

  Methotrexate works by blocking the division of rapidly multiplying cells of psoriasis. It also has anti-inflammatory effects especially in psoriatic arthritis.

  Methotrexate is usually given in the form of tablets and taken as a single dose once per week. It can be administered for a short period of 4 to 6 months to clear psoriasis (i.e. intermittent courses) or prolonged periods over months to years depending on the individual's needs. Methotrexate should be used under strict and regular supervision by your doctor due to its potential side effects.

  Indications

  Methotrexate is useful in severe psoriasis or psoriasis that has not improved with the use of creams. It is especially useful in patients who also have psoriatic arthritis (psoriasis affecting the joints).

  Side effects

  Nausea, vomiting, tiredness and loss of appetite are some of the common side effects experienced by patients on methotrexate. Nausea and vomiting can be minimized by taking the tablets after food. Production of blood cells may be affected by methotrexate and therefore it is important to have regular blood tests. Your doctor may also give you folic acid which may help to reduce some of the side effects of methotrexate.

  One of the long-term effects of methotrexate is the potential injury to the liver. This happens when methotrexate accumulates over a number of years. Your doctor will request you to go through regular blood tests and ultrasound scans to monitor your liver health, especially in long term use. If methotrexate is used correctly, the chances of liver damage are slight. Alcohol should also be avoided when taking methotrexate, because when consumed together, it can cause more stress to your liver.

- **Acitretin**

  Acitretin belongs to a group of drugs known as retinoids, which are derivatives of Vitamin A. This drug affects the top layer of the skin by normalizing the maturation process that is abnormal in psoriasis patients. It is important to note that acitretin is not the same as taking high doses of pure vitamin A as the latter would result in side effects with minimum benefit.

  Acitretin is taken as a capsule once daily after food.

  Indications

  Acitretin is useful for extensive plaque psoriasis and generalized pustular psoriasis. It has a synergistic effect when combined with phototherapy. Compared to methotrexate or cyclosporine, acitretin does not lower one's immunity, which may be beneficial for patients who already have weakened immunity from other health problems.

  Side effects

  Patients often report dryness of the lips and peeling of the skin on the palms and soles. Other common side effects include dryness of the nose and eyes, skin fragility, itch, muscular aches, and thinning of the hair and nails. All these side effects resolve upon stopping acitretin. In some cases, fat levels in the blood may rise. This can be monitored by doing regular blood tests. A low-fat diet and reduced alcohol intake can help to reduce fat levels in the blood.

  The most serious side effect is harm to the developing foetus (unborn baby) when acitretin is taken during pregnancy. Therefore, all women of child-bearing age should take adequate contraceptive measures while on treatment. It must be noted that the drug clears from the body very slowly, and contraceptive measures must be continued for at least 3 years after the end of treatment. With this consideration, acitretin is best reserved for men, post-menopausal women or young children.

- **Cyclosporin**

  Cyclosporin was first used in renal transplant patients to prevent the rejection of the grafted kidney. Subsequently, the immunomodulatory effects were found to be useful in inflammatory conditions like psoriasis and atopic eczema. Cyclosporine is dosed according to one's body weight and taken twice daily. A course of cyclosporine usually does not exceed one to two years, to limit the potential side effects on the kidneys.

  Indications

  Oral treatment with cyclosporin is most useful in erythrodermic psoriasis and generalized pustular psoriasis.

  Side effects

  Regular monitoring of blood pressure and kidney function (with blood and urine tests) before and during treatment is recommended. Your doctor will provide you with a list of drugs to avoid while on cyclosporin. Additionally, grapefruit or its juice should be avoided as it may affect the levels of cyclosporine in the blood. Other side effects that are known to occur include abdominal symptoms, tiredness, muscle cramps, tingling in the fingers, excessive hair growth and headaches. When these side effects do occur, discuss them with your doctor, and your treatment may be adjusted.

Biologic Therapy

Although they are newer compared to conventional oral medications like methotrexate, the first biologic was actually used in psoriasis more than 20 years ago. Unlike conventional drugs that are manufactured by a chemical process, biologics are protein-based and derived from living cells grown in laboratory conditions. Biologics work by targeting specific parts of the deranged immune system in psoriasis. Over the years, newer generations of biologics have demonstrated better efficacy and safety, and they now stand as one of the most effective and safest treatments available for psoriasis.

Biologics are indicated for moderate to severe psoriasis and psoriatic arthritis. Originally used in patients who have failed or are intolerant of other systemic therapies such as methotrexate, cyclosporine or phototherapy, biologics are now increasingly used as first-line treatment.

Because of their targeted action, biologics generally have a good safety profile with regards to risk to other organs like the kidneys, liver and bone marrow. This makes them useful for patients with medical problems that prevent them from using conventional oral medications like methotrexate. Biologics are classified as immunosuppressing medicines, and the main safety concerns are risk of infection and reactivation of latent infections such as tuberculosis or hepatitis. Individual biologics may have specific side effects or conditions prohibiting their use, which your doctor can explain.

Biologics are administered by injections either through the skin or the veins. The frequency of injections and treatment schedule varies with different biologics. The main barrier to their wider use is high cost, although bio-similar ("generic") versions of older biologics are now available at more affordable prices.

Drug name	Molecular target in the immune system
Etanercept	Tumour necrosis factor (TNF) - alpha
Adalimumab	TNA-alpha
Infliximab	TNF-alpha
Ustekinumab	Interleukin (IL)- 12 and -23
Secukinumab	IL-17
Ixekizumab	IL-17
Guselkumab	IL-23
Risankizumab	IL-23

Phototherapy
Therapy

Phototherapy employs ultraviolet (UV) light, either UVA or UVB, to treat psoriasis. Light tubes that emit UVA or UVB are arranged in a vertical manner on multiple panels. Patients stand in a cabin surrounded by these panels for the duration of treatment. Phototherapy is different from radiation therapy used in treatment of cancers. UV works by slowing down division of cells and reduces inflammatory cells in the skin.

UVB therapy can be divided into traditional broadband UVB (BBUVB) and narrow band UVB (NBUVB). The latter is more effective and is the most common mode of phototherapy in most centers.

- **UVB Therapy (Narrow Band)**

  UVB therapy is initially administered 2 to 3 times a week. Doses of UVB are gradually increased until the patches clear. Generally, an average of 20 to 30 treatments are required to clear the psoriasis patches. Once the skin is clear of psoriasis, the treatment is maintained for another 2 to 3 months and given less frequently at 1 time every 1 to 2 weeks.

  Most UVB treatments are given in clinics under close supervision and dose adjustments are done by the dermatologist and nurses. However, there are UVB light panels that patients can purchase and use at home in close consultation with the dermatologist.

  Combination treatment

  UVB treatment can be combined with topical therapy or some systemic therapies such as methotrexate or acitretin. Combination treatments tend to clear psoriasis faster than if each agent is used alone.

  Indications

  UVB therapy is useful for all forms of plaque and guttate psoriasis. Patients with erythrodermic psoriasis or pustular psoriasis may not tolerate phototherapy.

  Side effects of UVB therapy

  - Sun-burn like reactions – this can be prevented by controlling the dose of UVB
  - Tanning of the skin – this will fade in 6 to 8 weeks after treatment is discontinued
  - Ageing effects – wrinkles only appear with prolonged, continuous treatment
  - Eye Injury – prevented by wearing protecting goggles during treatment
  - Skin cancers – the risk is low in Asians, and usually only after prolonged, cumulative therapy

- **PUVA Therapy**

  UVA light therapy is used together with a drug called psoralen in the treatment of psoriasis. Psoralens make the skin more sensitive to UVA. This treatment is called PUVA, P(psoralen) + UVA. It involves taking a dose of psoralen 2 hours before exposure to UVA light tubes. PUVA therapy is usually administered 2 to 3 times every week until the psoriasis patches are clear. Thereafter, treatment frequency is tapered and maintained for another 2 to 3 months. An average of 20 to 30 treatments may be required for clearance. PUVA is generally more effective than UVB in clearing psoriasis. PUVA can also be combined with topical therapies such as coal tar or calcipotriol and with tablets such as acitretin.

  Side effects of PUVA

  In addition to similar side effects from UVB therapy, PUVA may lead to premature development of skin cancers in patients requiring long-term treatment. The risk of skin cancers is higher in individuals with fair or light-coloured skin. It is best given as intermittent courses.

Treatment of Scalp and Nail Psoriasis

Scalp Psoriasis

Psoriasis commonly affects the scalp where the plaques may remain confined for prolonged periods of time. In some patients, the scalp is the only affected area. Patients should note that psoriasis of the scalp does not cause hair loss and can be confused for dandruff. Scalp psoriasis can be frustrating to many patients, due to the visibility of the plaques and scales. However, there are medications that can help you to clear the psoriasis effectively.

Medications for psoriasis are divided into those to be left on the scalp and those to be washed off.

Products to be washed off are available as shampoos, which are meant to treat the scalp not the hair. These shampoos may contain coal tar, salicylic acid, sulphur, selenium, ketoconazole, antiseptics, or zinc pyrithione.

Leave-on products for the scalp can come in gels, lotions, foam and ointments. These may contain steroids, a combination of steroid and Vitamin D analogue, coal tar or salicylic acids.

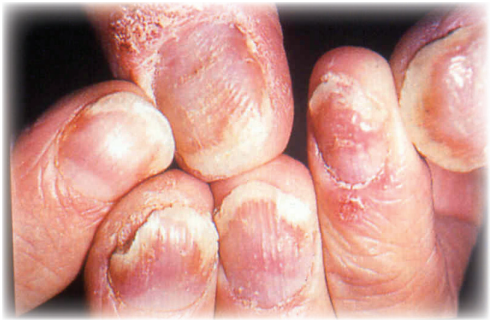
What are the ways to treat scalp psoriasis?

- When psoriatic scales are thick, massage mineral oils, such as olive oil or coal tar preparations onto the scalp and wrap your scalp with a shower cap or warm moist towel for 30 minutes before rinsing with your regular shampoo. Do not peel off the scales forcefully. Gently comb off the scales and repeat daily until the scales are softer before starting some medications.

- When applying lotions, gels or ointments, part your hair to reveal the affected scalp area. Apply directly to the scalp areas that have visible psoriasis with your fingertip. For a large area of plaque or thick hair, you may need to re-part the hair to expose neighboring psoriasis plaques. Gels or ointments can be left on the scalp overnight, or if not convenient for about 2 hours in the evening and washed off before going to bed. It is important to leave the treatment areas uncovered, so do not cover your scalp with a towel. When rinsing, use your regular ordinary shampoo on dry hair, rubbing your scalp gently before wetting, lathering and rinsing.

- Medicated shampoos should be massaged well into the scalp then wrapped with a warm damp towel around the scalp for about 10 to 15 minutes before the shampoo is rinsed off. You may follow a second round of rinsing with your regular ordinary shampoo or conditioner.

Treatment of Scalp and Nail Psoriasis



Psoriasis nails

Nail Psoriasis

Psoriasis of the nails can appear as pitting, discoloration, thickening, crumbling, loosening and even separation of the nail from the nail bed. Creams are generally limited in their effectiveness on nail psoriasis. Systemic medications such as biologics may be useful.

Tips on how to care for your nails

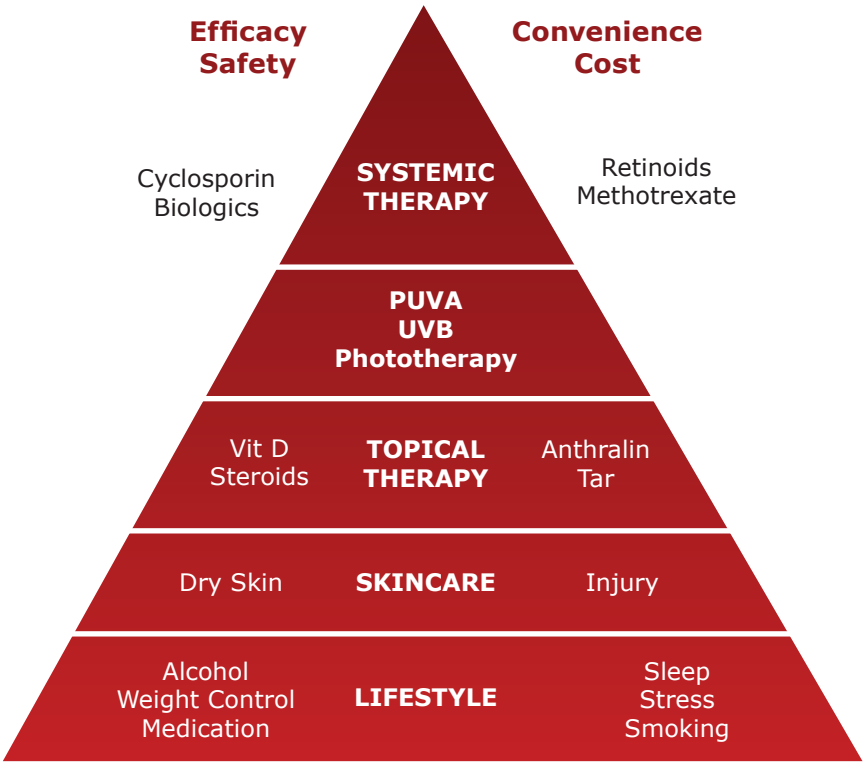
1. Soak finger nails or toe nails in warm water before trimming
2. Trim nails straight across
3. When the toe nails are affected, make sure to wear proper fitting shoes to avoid pressure points
4. Use protective hand gloves when doing wet work
5. Avoid nail damage by excessive filing

How can I *manage* my psoriasis?

- Take control of your disease – consult with your doctor for advice on how to cope with your psoriasis. Do not give up on the sports or activities that you enjoy.
- Discuss with your doctor your preferred treatment and work together with him/her to develop a treatment plan.
- Follow the treatment recommendations that your doctor has given you.
- Stay on course with your treatment so that you can achieve the best outcomes.
- Be aware of the factors that might cause flare ups.
- Take personal responsibility for your health – physically, mentally and spiritually.
- Inform your doctor on the current medications that you are on (including tablets, herbs, vitamins, over-the-counter products and natural therapies), any drug allergies, and any side-effects you have experienced when taking or using other psoriasis medications.
- Review with your doctor the progress of your treatment plan from time to time and keep up with your follow-up appointments.
- Be prepared for the long-term involvement in therapy since psoriasis is a chronic disease.
- Do not be afraid or anxious about the side effects. Instead, share your concerns with your doctor. Side effects can be managed or prevented.
- Do not look for quick or miracle cures. One is likely to become a victim of quacks and charlatans resulting in the loss of money and worsening of your psoriasis.
- Your immune system is a central factor in psoriasis so do your best to strengthen your immune system by developing a healthy lifestyle:
    - Stop smoking.
    - Minimize your alcohol intake.
    - Sleep adequately.
    - Exercise regularly.
    - Have a balanced diet rich in fresh vegetables and fruits.
    - Handle stress effectively.
- Psoriasis may be associated with an increased risk for metabolic syndrome (high blood pressure, high cholesterol, diabetes, obesity) and cardiovascular disease. Keep to a healthy lifestyle and see your doctor for health checks regularly.
- Psoriasis is not contagious so you cannot catch it or spread it to others. Therefore, you do not need to avoid physical contact with other people. Do stay engaged with your family and friends. Remember that they may not know a lot about the disease, so you can help them by first telling them about your psoriasis and how it affects your life.
- There are many people out there with psoriasis. Share your experiences with other psoriasis patients at the **Psoriasis Association of Singapore**.

The *Therapeutic Pyramid*

The goals of therapy and steps of treatment can be summarized in this diagram. The base of the pyramid consists of treatments applicable to all patients with psoriasis. Those with more extensive disease will require treatments higher up the pyramid.



Psoriasis Management - Goals of Therapy

- Control of symptoms
- Reduce disease extent
- Clearance of skin lesions
- Prevention of recurrence
- Prevention of complications

Factors to Consider in Therapy

- Efficacy - Effectiveness
- Safety
- Cost
- Convenience

psoriasis
association of singapore

c/o National Skin Centre No 1 Mandalay Road Singapore 308205
Email address : psoriasissg@gmail.com
http://www.psoriasis.org.sg

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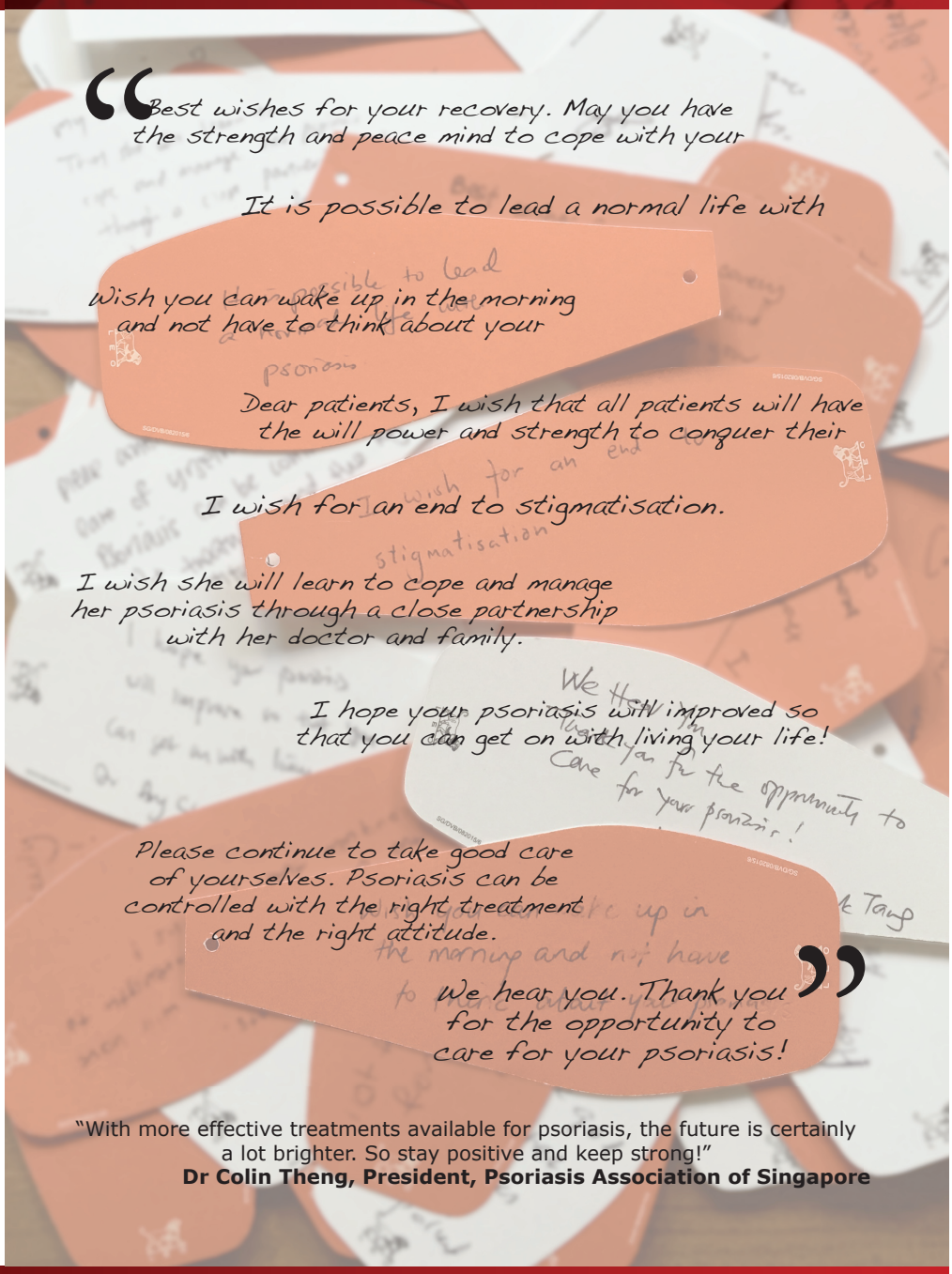

"With more effective treatments available for psoriasis, the future is certainly a lot brighter. So stay positive and keep strong!"
Dr Colin Theng, President, Psoriasis Association of Singapore

Helping *people* living with psoriasis.

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