Nail Psoriasis

A positive approach to psoriasis and psoriatic arthritis
What is psoriasis?
Psoriasis (Ps) is a long-term (chronic) scaling disease of the skin, which affects 2% – 3% of the UK population. It appears as red, raised scaly patches known as plaques. Any part of the skin surface may be involved but the plaques most commonly appear on the elbows, knees and scalp. It can be itchy but is not usually painful. Nail changes are present in 50% of people and 10%-20% of people will develop psoriatic arthritis.

What happens?
Normally a skin cell matures in 21 – 28 days and during this time it travels to the surface, where it is lost in a constant invisible shedding of dead cells. In patches of psoriasis the turnover of skin cells is much faster, around 4 – 7 days, and this means that even live cells can reach the surface and accumulate with dead cells. The extent of psoriasis and how it affects an individual varies from person to person. Some may be mildly affected with a tiny patch hidden away on an elbow which does not bother them while others may have large visible areas of skin involved that significantly affect daily life and relationships. This process is the same wherever it occurs on the body. Psoriasis is not contagious.

Introduction
Psoriasis can affect both finger nails and the toe nails. The percentage of those with psoriasis who have nail involvement is thought to be 50%. In psoriatic arthritis this may rise to 80%. For some unknown reason the finger nails are more often involved than toe nails.

What is nail psoriasis?
The nails are part of the skin so it is perhaps not surprising that a skin disease such as psoriasis can affect the nails. No one knows why some people get nail involvement and others don’t.
Nails grow from the nail plate which is just under the cuticle. In people who develop psoriasis of the nails it is involvement of the nail plate that causes pitting and ridging of the nails. Onycholysis, subungual hyperkeratosis and splinter haemorrhages are due to disease of the nail bed.

The nail itself is totally inert, being composed of modified, tightly packed dead skin cells, and therefore any treatment must be directed to the nail plate itself or the nail bed.

The severity of nail involvement does not follow the severity of psoriasis elsewhere in the body. Rarely, the nails can be the only site of the body affected. More usually, if the nails are involved there will be areas of psoriasis elsewhere on the body. You can, however, develop severe nail changes with only minimal psoriasis elsewhere on the body.

What changes can occur?

A number of changes can occur in nail psoriasis, and these are the most common:-

- **Pitting of the nails** – the surface of the nail develops small pits looking rather like the surface of a thimble. The number of pits is variable from one to dozens.

- **Onycholysis** – this is where the nail becomes detached from the underlying nail bed and a gap develops under the nail. When it starts there is a white or yellowish patch at the tip of the nail, and this then extends down to the cuticle. The gap between the nail and the nail bed can become colonised by particular bacteria, such as
pseudomonas which can then produce a black pigment. The nail can become infected and discoloured and can cause considerable alarm when mistaken for melanoma under the nail.

- **Sub-ungual hyperkeratosis** – this is where you develop an accumulation of chalky material under the nail. The nail becomes raised up and can become tender, especially when the surface of the nail is pressed. This can become particularly troublesome on toe nails where the nail may be pressed by shoes, causing considerable discomfort.

- **Discolouration** – This may be seen as unusual nail colouration, such as yellow-brown.

- **Onychomycosis** – is a fungal infection that can cause thickening of the nails. This could be present alongside nail psoriasis, and can be confused in diagnosis. If this is present and diagnosed correctly it can be treated with systemic anti-fungal medication. It is estimated that approximately 35% of people who have nail psoriasis involvement may also have a fungal infection that could cause or worsen their psoriasis. Therefore treating the fungus or the fungal infection may not have any affect on the clearance of nail psoriasis.

Some nail changes that are caused by using systemic retinoid medication, can help the skin, but may result in formation of very thin nails which do not appear normal in appearance. These nail changes can take several months to grow out only after retinoids are stopped.

In addition to these changes you may get longitudinal ridging of the nails and reddish marks under the nails called splinter haemorrhages due to tiny burst blood vessels under the nails.
Nail psoriasis is perhaps the most difficult part of psoriasis to treat. In the past a large number of treatments have been tried, none of which have given particularly good results. These include:

Injections of steroids under the nail – these are extremely painful and generally do not work.

Removal of the nail – nails can be removed quite painlessly using a high concentration of urea applied under polythene occlusion to the nail. The nail becomes rather jelly-like and can be peeled off. Nails can also be surgically removed or removed by X-ray therapy, but in general the nails tend to grow back abnormally.

The use of topical steroids rubbed into the cuticle – the nail plate is under the cuticle and by massaging steroid creams into the nail plate you can induce some improvement in nail psoriasis. This is not consistent however, and there is the risk that the cuticle can become thinned with thread veins over the surface.

Anecdotally a number of dermatologists noticed that psoriasis of the nails improved when patients were using vitamin D analogue preparations for psoriasis of their skin. This led to a more focused study of vitamin D analogue creams and ointments rubbed into the cuticle in the treatment of nail psoriasis. Experience from around the world has shown that this is an effective line of treatment and should be regarded as the first-line treatment of choice. The vitamin D analogue cream or ointment should be massaged into the cuticle for about five minutes twice a day. When onycholysis is present, calcipotriol scalp solution can be dripped under the nail and massaged in, which is effective.
Remember that nails grow extremely slowly and what you are influencing is not the existing nail but new nail that is developing from the nail plate. It may, therefore take up to a year for finger nails, and two years for toe nails to grow out normally. So you must be patient with any treatment because of the slowness of growth, so any benefits from such treatments you apply may take up to a year or more to be seen.

Is there anything else I can do?

Nails on the hand in psoriasis can be painful and often restricts dexterity of the fingers. If the toe nails are affected attention and care from a chiropodist may be helpful and may be able to pare down the nail to remove the pressure from excess thickening of the nails to remove the pressure from the wearing of shoes thus reducing pain and improving mobility.

It can also be a cosmetic problem. The nails are distorted and this can be embarrassing. Nail varnish can be used to conceal some of the damage. Application of a good nail hardener or artificial nails if the nails are mostly intact can improve their appearance and also aids to protect them. Be careful to avoid sensitivities to glues with chemicals that may be used to apply artificial nails. It is always advisable to tell your manicurist about your psoriasis so that he/she can be extra careful.

Tips on general nail care

- The basic strategy for both hands and feet should be to keep the nails short. Try to trim them back to the point of firm attachment and gently file them down with an emery board.

- Try to protect your nails from damage because this can worsen the problem. Consider wearing gloves to protect your nails whenever you are doing something that may damage your nails.

- Rubbing moisturizers into the nail and cuticle or soaking them in emollient oils may help.
If your nails are pitted but mainly intact, nail hardeners or artificial nails may improve their appearance. It is a sensible precaution to rule out the possibility of any sensitivity to glues and chemicals by first applying a small sample to the skin.

Toe nails can benefit by being soaked for at least 10 minutes in a bowl or bath of warm water which softens the nails before gently filing the thickened part of the toe nails with an emery board, and using good sharp scissors to trim off small pieces of the nails. You should cut straight across the toe nail, which helps it from becoming ingrown. It helps to always wear comfortable shoes, which gives room for the toes, avoiding any friction to the toe nails causing thickening to occur. It may be of benefit to consider when buying shoes to select a size up from your normal size.

Always consult a doctor or your healthcare provider.

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The Charity for People with psoriasis and psoriatic arthritis

PAPAA, the single identity of the Psoriatic Arthropathy Alliance and the Psoriasis Support Trust.

The organisation is independently funded and is a principal source of information and educational material for people with psoriasis and psoriatic arthritis in the UK.

PAPAA supports both patients and professionals by providing material that can be trusted (evidence based), which has been approved and contains no bias or agendas.

PAPAA provides positive advice that enables people to be involved as they move through their healthcare journey in an informed way, which is appropriate for their needs and any changing circumstances.

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