Nail Psoriasis

papaa®

A positive approach

to psoriasis and

psoriatic arthritis

What are the aims of this leaflet?

This leaflet has been written to help you understand what nail psoriasis is, what changes can occur in the nails, what can be done and provide you with some general tips on nail care.

What is psoriasis?

Psoriasis (sor-i'ah-sis) is a long-term (chronic) scaling disease of the skin which affects around 1 in 50 people, which is about 1.3 million, or around 2% of the UK population. It usually 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, including pitting and ridging, are present in nearly half of all those who have psoriasis. For those that have psoriasis around 1 in 4 may develop an associated psoriatic arthritis (PsA), which is about 325,000 people, or around 0.5% of the UK population. PsA causes pain and swelling in the joints and tendons, accompanied by stiffness particularly in the mornings. The most commonly affected sites are the hands, feet, lower back, neck and knees, with movement in these areas becoming severely limited. For more detailed information, see our leaflets ***What is psoriasis?*** and ***What is psoriatic arthritis?***

What happens in psoriasis?

Normally a skin cell matures in 21 to 28 days. 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 to 7 days, and this means that even live cells can reach the surface and accumulate with dead cells. This process is the same wherever it occurs on the body. 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 which does not bother them, while others may have large, visible areas of skin involved that significantly affect daily life and relationships. Psoriasis is not contagious, therefore you cannot catch it from another person. The cause of psoriasis is currently unknown.

What is nail psoriasis?

Psoriasis can affect both fingernails and toenails, with half of those with psoriasis alone having some form of nail involvement. The risk increases in those with psoriatic arthritis, and it is reported that this could be as high as 4 out of 5 people seeing changes to their nails. For some unknown reason fingernails are more often involved than toenails.

For many people, nail psoriasis is often mild and causes few problems.

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 root (matrix), which is just under the cuticle. In people who develop nail psoriasis it is involvement

of the nail root that causes pitting and ridging of the nails.

Onycholysis, (on-ik -ol-is-is) subungual hyperkeratosis (sub-ung-gwal hi-per-ker-at-o-sis) and splinter haemorrhages (hem-or-ij-iz) are all caused by disease of the nail bed. These conditions are explained in the next section.

The nail is made of modified skin and, once it has grown, it can only be altered by filing or clipping. Treatments are usually directed at the nail bed that supports the nail or the nail folds that tuck around the edges. Soothing these tissues can result in better nail growth with fewer features of psoriasis.

The severity of nail involvement does not follow the severity of psoriasis elsewhere in the body, although locally it can correspond to problems in the nearby joint of a finger or toe. On rare occasions, 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.

What changes can occur?

These are the most common changes in nail psoriasis:

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

- **Onycholysis** – 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 dark green pigment. The nail can become infected and discoloured and can easily be mistaken for melanoma under the nail.

- **Subungual hyperkeratosis** – a chalky substance accumulates under the nail. The nail becomes raised and can become tender, especially when the surface of the nail is pressed. Subungual hyperkeratosis of the toenails can be particularly uncomfortable because when wearing shoes the nail may be put under constant pressure.

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

- **Onychomycosis (on-ik-o-mi-ko-sis)** – a fungal infection that can cause thickening of the nails. This could be present alongside nail psoriasis and can be confused in diagnosis. If diagnosed correctly it can be treated with systemic antifungal medication. It is estimated that approximately a third of people who have nail psoriasis may also have a fungal infection that could make the nails worse. Treating the fungal infection may not have any effect on the clearance of nail psoriasis.

Some nail changes are caused by using systemic retinoid medication, which can help the skin but may result in format ion of very thin nails which do not

appear normal. 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.

What can be done about it?

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 has given particularly good results. The first things to consider are the non-medical aspects of caring for your nails.

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 could cause damage.

- Do not clean debris from beneath the nail with a sharp object or a nail brush. This tends to increase any onycholysis and make the situation worse; soaking the affected nails in soapy warm water may be sufficient to remove the debris.

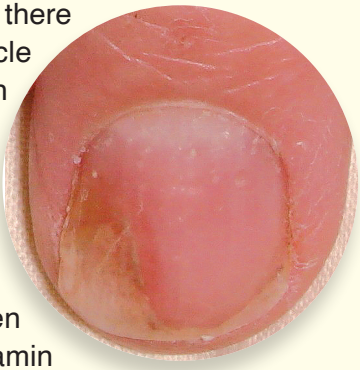
- Rubbing moisturisers into the nail and cuticle or soaking them in emollient oils may help.

- Toenails 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 toenails with an emery board and using good, sharp scissors to trim off small pieces of the nails. You should cut straight across the toenail, which helps prevent it from becoming ingrown. It helps to always wear comfortable shoes which make enough room for your toes; friction can cause toenail thickening to occur. It may be worth considering buying shoes a size up from your normal size.

Medical treatments include:

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. Results are not consistent however and there is the risk that the cuticle can become thinned with fine blood vessels 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 method 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 fingernails, and two years for toenails, to grow out normally; you will need to be patient with any treatment. It's worth noting that toenails can fail to respond where fingernails improve substantially.

Injections of steroids under the nail – these usually require additional injection of local anaesthetic and are not a good routine treatment.

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 be removed by surgery, however, nails may still often grow back with an abnormal appearance. X-ray treatment may cause nail shredding, but is not an advisable treatment in most instances.

Systemic treatments – where nail psoriasis is severe and you are not able to walk or use your hand properly, it may be possible to take tablet-based or other injected systemic treatment to improve psoriasis on the nails and skin together.

Is there anything else I can do?

If your fingernails are affected, that hand can be painful and you may find the dexterity of your fingers

is restricted. If the toenails are affected it's sometimes helpful to seek attention from a chiropodist, who may be able to remove the excess thickening of the nails to reduce the pressure when wearing shoes. This can reduce pain and improve mobility. Specialist shoes may also prove helpful; you can easily find various suppliers by searching on the internet or asking a chiropodist or podiatrist for recommendations.

Nail psoriasis can also be a cosmetic problem. The nails may be distorted, which some people find embarrassing. Nail varnish can be used to conceal some of the damage. Application of a good nail hardener or wearing artificial nails if the nails are mostly intact can improve their appearance and also help to protect them. Some people are sensitive to the chemicals in the glue used to apply artificial nails, so it's advisable to tell your manicurist about your psoriasis so that he/she can be extra careful. Also, where there is onycholysis, all nails should be kept short and this includes gel nails. If nails are extended by gel application or other form of artificial nail then it is likely to make the nail bed psoriasis worse and increase the onycholysis.

If you have any views or comments about this information or any of the material PAPAA produces you can contact us via the details on the back page or on line at www.papaa.org/user-feedback

Useful contacts

For information about health matters in general and how to access services in the UK, the following websites provide national and local information.

- NHS UK: www.nhs.uk
- NHS England www.england.nhs.uk/
- NHS Scotland: www.scot.nhs.uk/

- Health in Wales: www.wales.nhs.uk/
- HSCNI Services (Northern Ireland): http://online. hscni.net

These sites are the official sites for the National Health Service and provide links and signposting services to recognised organisations and charities.

Did you know that if you experience side effects from any treatments you have received you can report them to the Medicines & Healthcare products Regulatory Agency (MHRA) via the Yellow Card Scheme? For more information, visit https://yellowcard.mhra.gov.uk or call free phone 0800 731 6789 (9am to 5pm Monday-Friday only).

For references used in the production of this and other PAPAA information, contact us or go to: www. papaa.org/resources/references.

About this information

This material was produced by PAPAA. Please be aware that research and development of treatments is ongoing. For the latest information or any amendments to this material please contact us or visit our website: www. papaa.org.

The site contains information on treatments and includes patient experiences and case histories.

Original text written by PAPAA in 2004. Peer reviewed by Dr David de Berker, Consultant Dermatologist and Honorary Clinical Senior Lecturer, Bristol Dermatology Centre, Bristol Royal Infirmary, Bristol, in June 2013, August 2015 and in April 2018.

Further minor updates PAPAA June 2021

A lay and peer review panel has provided key feedback on the content used in this leaflet. The panel includes people with or affected by psoriasis and/or psoriatic arthritis.

Quality and accuracy

The standard by which we produce information is based on the PIF TICK criteria, which is the UK-wide Quality Mark for Health Information. PAPAA was awarded the PIF TICK after a thorough application and assessment process and has shown that it meets the health information production process 10 point criteria.

For more information about the PIF TICK process and criteria visit https://pifonline.org.uk/pif-tick

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The charity for people with psoriasis and psoriatic arthritis

PAPAA is an organisation that is independently funded and a principal source of psoriasis and psoriatic arthritis information and educational resource.

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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