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papaa

Dear Reader

When the last issue of Skin 'n' Bones Connection (#50) was published in December 2019, I suspect none of us could have envisaged the change the world would have gone through over the following six months.

It would be difficult to ignore the impact and not least recognise that there appears to have been little else being reported in the news apart from COVID-19.

In March, like most other organisations, we relocated to our homes and started working remotely. From cold spare bedrooms to makeshift tables as desks, within a day we were operational, somewhat missing our normal routines, but safe and secure.

Our workload increased and during the first month we saw a doubling of activity and searches on our website. Understandably, the limited information and knowledge to provide answers about the impact of the virus for people with psoriasis and psoriatic arthritis caused much distress, and still does.

Until data and research is gathered and then analysed, it will be difficult to gain a full picture of the risks associated, but be reassured that this work is being undertaken around the world and will be published.

So, in this issue we will cover some updates on COVID-19 related to psoriasis and psoriatic, but have tried to provide information about other issues too.

Managing editor

Disclaimer

The contents of the journal are aimed at providing information that may be of interest to people with psoriasis and/or psoriatic arthritis or those who have a specialist interest, whether in a personal or professional capacity. Some articles which will be included are of general interest and may or may not relate directly to either psoriasis or psoriatic arthritis. This material may include aspects related to health, services or products that are available.

We believe that at the time of printing all information is correct and cannot be held responsible for any inaccuracies that may occur, nor do we endorse any products that may appear in this journal.
All opinions are of the contributors and not necessarily those of the Psoriasis and Psoriatic Arthritis Alliance.
User generated contents and articles which appear in Skin 'n' Bones Connection, that are clearly a point of view of the contributor or from an external source are excluded from the Information Standard Scope.

Always consult your own doctor or medical healthcare provider.

The Psoriasis and Psoriatic Arthritis Alliance (PAPAA) is the new single identity of the Psoriatic Arthropathy Alliance and Psoriasis Support Trust. The organisation is independently funded and aims to be a definitive source of information and educational material for people with psoriasis and psoriatic arthritis in the UK. To be a support to both patients and professionals by providing material that can be trusted (evidence based), which has been approved and contains no bias or agendas. We will be looking to provide 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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COVER PHOTO:

Is there a COVID-19 elephant in the room? Image by Nomad Soul

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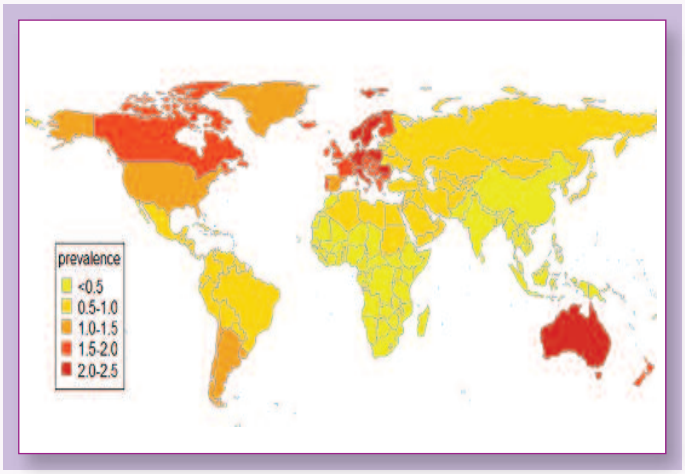
Psoriasis is unequally distributed across the globe.

An estimated 60 million people worldwide have chronic skin psoriasis, according to the latest results of the Global Psoriasis Atlas (GPA).



The researchers found that the prevalence of psoriasis had a strong association with age, showing the condition was less common in children and occurred more frequently in adults. It also found the condition was unequally distributed across the world's geographical regions.

It was most common in high-income areas such as Australasia, Western Europe, Central Europe, and North America. The largest adult populations affected by psoriasis lived in the US, India, and China, followed by Germany, Brazil, France and the UK. But the researchers say it is unclear whether this income-related pattern is due to a real trend or down to better data quality, awareness of the disease and access to care in high-income countries compared to low- and middle-income countries (LMIC).

To compile and analyse the data, the researchers identified over 40,000 records related to psoriasis, including 308 peer-reviewed papers, of which 168 were deemed suitable to analyse for the project.

The team then used statistical modelling and geographical clustering to generate estimates for countries with missing information. The group's analysis generated results for 21 regions and 189 countries across the globe.

The Atlas and its findings can now help guide countries and the international community when making public health decisions relating to the appropriate management of psoriasis.

Professor Chris Griffiths, a world expert in psoriasis, said:

"The GPA will become the leading resource of its kind globally, providing the common benchmark for psoriasis data in all countries and regions throughout the world. The Atlas aims to drive better understanding of the natural history of psoriasis and uncover how it affects the individual and society. It will also help us understand how healthcare can be improved for those living with the disease."

The study also found that considerable gaps still exist in the geographical areas that report this information, particularly from low- and middle-income countries.

Dr Rosa Parisi, who led the study, said:

"A clear need exists to improve the quality and increase the amount of data on the epidemiology of psoriasis. Methods, diagnostic criteria, and reporting of the incidence and prevalence of the disease should be standardised.

"An improved understanding of the epidemiology of psoriasis is important so that resources can be allocated to reduce morbidity, disability, and mortality associated with the disease."

The Atlas is an international project led by Professor Chris Griffiths and Professor Darren Ashcroft, at The University of Manchester. These latest findings have been published in the British Medical Journal (BMJ).

More information can be found at https://globalpsoriasisatlas.org

Source:
University of Manchester
News release 28 May 2020

Psoriasis and migraine

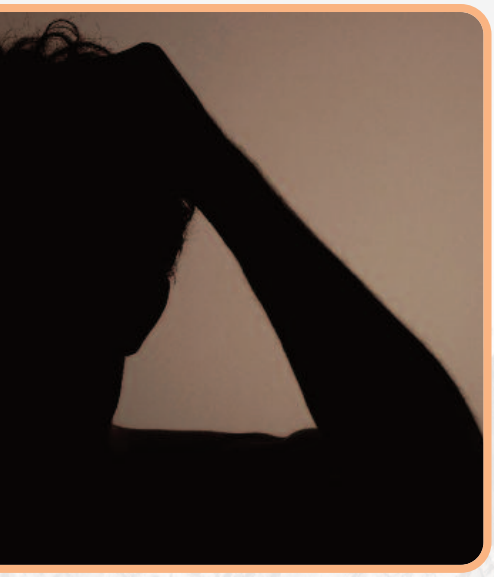
Does having psoriasis increase the risk for migraine? Anecdotal reports from people with psoriasis suggest that it may, but given that migraine affects six million people in the UK, it may not be more common among those with psoriasis than the general population. In recent years, several large studies have addressed the possible association between psoriasis and migraine and the strength of any such association.

Three studies

One of the largest investigations of the possible relationship between psoriasis and migraine was based on the Korean Health Insurance Review and Assessment, involving more than 55,000 patients examined between 2002 and 2013.[1] A total of 11,071 patients with psoriasis were selected and matched 1:4 by age, sex, income, region and past medical history. According to the authors, migraines occurred significantly more frequently in patients with psoriasis than in the normal controls. However, the actual increase in risk was quite modest: 16%. When the researchers analysed the data by age and gender, a stronger association occurred, but only for middle-aged males, who have a 62% increase in risk of migraine. This is interesting, because in the general population of the UK, migraine is more common in women (5-25%) than in men (2-10%).

A second study involved no fewer than 5.3 million participants, from the Danish nationwide health registers.[2] These included 53,006 and 6,831 patients with mild and severe psoriasis, respectively, and 6,243 patients with psoriatic arthritis. Once again, the investigators found that those with psoriasis had a higher risk for migraine, which was around 37%, 55% and 92% for mild psoriasis, severe psoriasis and psoriatic arthritis respectively. This increased risk was found in both males and females.

And finally, in the US, researchers at the New York University School of Medicine used data obtained from the 2003-2004 National Health and Nutrition Examination Survey (NHANES) to examine the association between psoriasis and migraines in the general US population.[3] Of the 3,131 individuals who responded to questions concerning migraines and psoriasis, 3.2% had psoriasis and 29.2% reported a history of migraines within the last three months. Although researchers observed no significant association in basic univariate analysis, in multivariate analysis they found that psoriasis was associated with an almost



four-fold increase in risk for migraine. Unlike the Korean study referred to above, the US investigators found that male gender was a protective factor for migraine, reducing the risk by around 60%.

Possible mechanisms

The authors of these studies speculate on what underlying mechanisms might explain the observed association between psoriasis and an increased risk of migraine. A key factor is clearly related to the various pro-inflammatory cytokines – including interleukins and tumour necrosis factor alpha (TNF-α) – which are known to play a key role in the development of psoriatic lesions. These inflammatory molecules are also believed to affect the endothelial function of blood vessels found in the brain, a key factor in the onset of migraine attacks. Nevertheless, a great deal more research is required to elucidate the precise mechanisms involved.

Conclusion

Overall, the available evidence points to an increased risk for migraine in patients with psoriasis, though the strength of the association seems to vary widely between studies. Moreover, the relationship between gender and risk appears to yield conflicting results: in the Korean study it was middle-aged men who were most at risk, whereas in the US study, being male reduced the risk by around 60%. Some of these apparently contradictory outcomes are probably explained by differences in the definition of migraine used and the use of self-reported questionnaires.

Key points

- Patients with psoriasis have an increased risk of migraine, though the strength of the association is unclear
- It is not clear whether certain sub-types of migraine (eg with or without aura) are more commonly associated with psoriasis
- There are common inflammatory mechanisms which help explain both the skin manifestations of psoriasis and the symptoms of migraine
- Individuals with psoriasis should be monitored and appropriately treated for migraines.

Scientific references:

1. Min C, Lim H, Lim JS et al. Increased risk of migraine in patients with psoriasis: A longitudinal follow-up study using a national sample cohort medicine (Baltimore). 2019; 98(17): e15370.
2. Egeberg A, Mallbris L, Hilmar Gislason G et al. Increased risk of migraine in patients with psoriasis: A Danish nationwide cohort study. J Am Acad Dermatol. 2015;73: 829-35.
3. Steuer AB, Cohen JM, Wong PW, Ho RS. Psoriasis and the risk of migraines in the United States [published online October 30, 2019]. J Am Acad Dermatol. doi:10.1016/j.jaad.2019.10.050.

Dr David Ashton MD PhD

Psoriasis and depression

Depression is a common problem among those with psoriasis. In fact, of all conditions that co-occur with psoriasis, depression is the most common, affecting up to 80% of people with the condition. Depression not only makes life miserable for those it affects, it increases the risk of developing psoriatic arthritis and worsens treatment outcomes and prognosis.

It's hardly surprising that depression is such a prominent feature of psoriasis, given that people are living with a condition which is physically uncomfortable, can limit physical activities and often results in embarrassment and stigmatisation. However, recent evidence suggests that this is only part of the story and there is another factor at work in psoriasis: inflammation. In other words, both psoriasis and associated depression, have common underlying mechanisms. How does this happen?

Inflammation the key

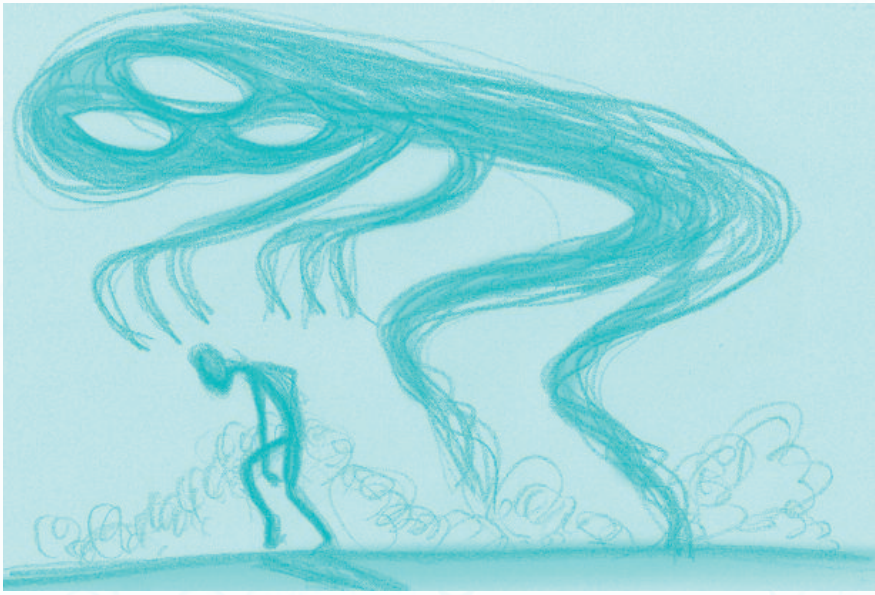
Inflammation and immunity are regulated by a special group of proteins called cytokines, including interleukins and tumour necrosis factor-alpha (TNF-alpha). The combined effects of these cytokines account for the various clinical features of psoriasis and psoriatic arthritis, and their blood levels are strongly associated with disease severity. In fact, psoriasis has been described as the result of a cytokine 'storm'. Importantly, these inflammatory cytokines can cross from the bloodstream into the brain, where they may deplete important brain chemicals such as serotonin, norepinephrine and dopamine. These neurotransmitters are intimately involved in mood regulation and mental function and it is by this mechanism that psoriasis contributes to depression.

A recent study examined the relationship between depression severity and blood levels of inflammatory cytokines (interleukins) in men with psoriasis.[1] Results showed that the severity of the depression was associated with the duration and severity of the disease and blood levels of inflammatory cytokines. Interestingly, the researchers also found a relationship between depression and low levels of vitamin D (vitamin D3), suggesting that vitamin D supplements may also be helpful in the management of psoriasis.

It is not only in psoriasis that the association between inflammation and depression has been found. Studies have found a similar link in patients undergoing surgery, many of whom suffer with post-surgical depression. As with psoriasis, this 'feeling low' has always been attributed to the impact of surgery on lifestyle – mobility, inability to work and social interaction etc. But the available evidence now also points in the direction of inflammation as a key factor in the post-surgical blues.[2]

The impact of biologics on depression

Biologic drugs, or biologics, used to treat psoriasis are given by injection or intravenous (IV) infusion (a



slow drip of medicine into a vein). Examples include infliximab, adalimumab and etanercept. They target specific parts of the immune system and block the adverse effects of inflammatory cytokines.

By calming inflammation throughout the body, biologics might be expected not only to improve skin lesions and arthritis in psoriasis, but also symptoms of depression. Anecdotally, we know this to be the case; in clinical trials it's quite common for participants to report improvements in mood, well before the benefits are seen in the skin. And now there is emerging scientific evidence to support this observation. A recent study on the impact of TNF-alpha inhibitors in a total of 980 patients with psoriasis or psoriatic arthritis found a significant improvement in rates of depression and insomnia after biologic therapy and a reduction of around 40% in the use of antidepressants.[3] A systematic review of relevant studies also confirmed a significant improvement in depressive symptoms in psoriatic patients taking a range of biologic agents.[4]

Why does this matter?

Evidence shows that inflammation is the key to both psoriasis and depression; the more severe the psoriasis, the more marked the depression. Given the substantial beneficial effect of biologics on both the physical and psychological manifestations of psoriasis, their use should be considered earlier rather than later.

So, the message here is that if you have moderate to severe psoriasis which has not responded well to the more usual treatments such as topical creams or other systemic options like methotrexate or cyclosporine and you have experienced mood changes, it might be time to talk to your doctor about biologics.

Scientific References:

1. Pietrzak D, Pietrzak A, Grywalska E et al. Serum concentrations of interleukin 18 and 25-hydroxyvitamin D3 correlate with depression severity in men with psoriasis. PLoS One. 2018; 13: e0201589. doi: 10.1371/journal.pone.0201589
2. Bouchard LC, Antoni MH, Blomberg BB et al, Postsurgical depressive symptoms and proinflammatory cytokine elevations in women undergoing primary treatment for breast cancer. Psychosom Med. 2016; 78:26-37
3. Wu CY, Chang YT, Juan CK, et al. Depression and insomnia in patients with psoriasis and psoriatic arthritis taking tumor necrosis factor antagonists. Medicine (Baltimore) 2016 May; 95(22): e3816. Published online 2016 June
4. Fleming P, Roubille C, Richer V et al. Effect of biologics on depressive symptoms in patients with psoriasis: a systematic review. J Eur Acad Dermatol Venereol. 2015; 29:1063-70.

Dr David Ashton MD PhD

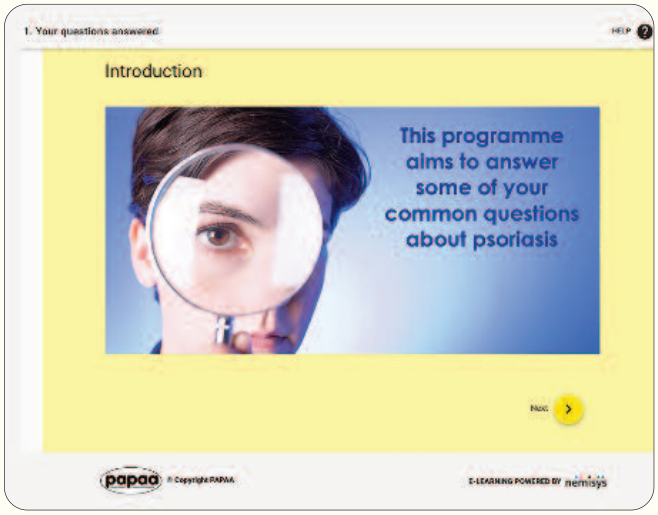
Interactive information

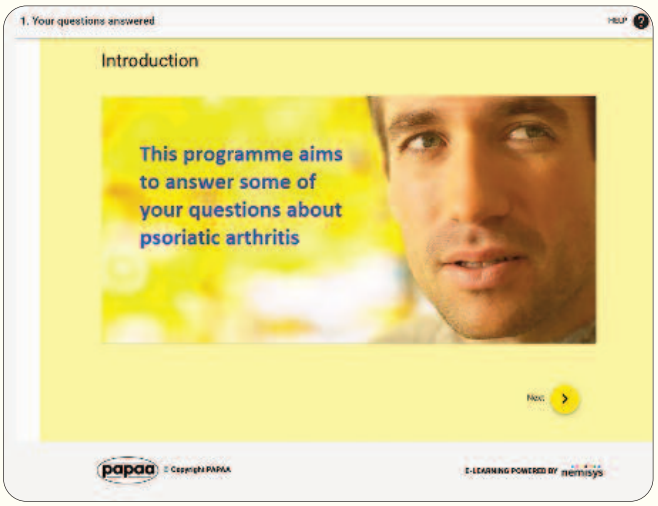
In a world where we are bombarded with information, absorbing that material can be difficult. Your preferred learning style influences how much you take in, remember and learn, so how you receive new information makes a difference.

The seven learning styles

- Visual (spatial): You prefer using pictures, images and spatial understanding
- Aural (auditory-musical): You prefer using sound and music
- Verbal (linguistic): You prefer using words, both in speech and writing
- Physical (kinaesthetic): You prefer using your body, hands and sense of touch
- Logical (mathematical): You prefer using logic, reasoning and systems
- Social (interpersonal): You prefer to learn in groups or with other people
- Solitary (intrapersonal): You prefer to work alone and use self-study.

The problem is that not all material is offered in every individual's preferred presentation method. With this in mind, PAPAA has developed another way to present material, which presents some of our basic information as interactive online training programmes.





The courses currently available are:

- Psoriasis: Your questions
- Psoriatic arthritis: Your questions
- iPhysio: Physiotherapy and exercise for psoriatic arthritis.

Each course is available via the PAPAA website free of charge; the only requirement is to join as a website user (requiring an email and password). At the end of each programme is a short quiz to test what you have learnt.

As mentioned on page 13, PAPAA also has a programme called eTIPs, which is an online CBT programme.

You can find all our online programmes by going to the PAPAA online shop. The programmes can be viewed on any compatible device, so you can start on a desktop, view on smartphone or tablet, and a bookmark facility remembers how much you've viewed, so you can pick up from where you left off.

Go to: www.papaa.org/shop/training-courses-and-self-help-guides

If you do try any of the programmes, we would welcome your feedback (including any issues or problems you encounter while accessing the material), which can be given at:

www.papaa.org/about-this-site/contact-us. Alternatively, you can use any of the other methods listed on page 2 to contact us.

The Medicines and Healthcare products Regulatory Agency (MHRA) recently held a week-long social media campaign to raise awareness about the importance of reporting suspected side effects using the Yellow Card Scheme.

The week focused on polypharmacy and how reporting side effects helps ensure safe use when taking multiple medicines.

Polypharmacy is defined as the simultaneous use of four or more medicines (prescription, over-the-counter general sales or traditional medicines). Polypharmacy can increase the likelihood of a patient having side effects, medication errors and interactions between medicines and with foods or herbal products.

Although polypharmacy is common in older people, anyone who routinely uses multiple medicines at the same time can be affected. This includes people with long-term chronic conditions who regularly take multiple medicines. Studies show that one third of people over 75 years old take at least six medicines and over a million people take eight or more medicines daily.

Healthcare professionals are also being encouraged to review their patients' medications intake, especially when prescribing, dispensing and administrating multiple medicines, as well as being vigilant to monitor, detect and report suspected side effects to the Yellow Card Scheme. Reporting plays an important role in helping MHRA monitor the safe use of medicines to protect public health through effective regulation.

Mick Foy, head of pharmacovigilance strategy at the MHRA, says:

''Protecting patients is our topmost priority. Patients, their carers and healthcare professionals are asked to report suspected side effects on a Yellow Card to the MHRA online (https://yellowcard.mhra.gov.uk) or via the app, which is available from app stores. Reporting helps to improve the safety of medicines for all patients and can result in better tailored prescribing or administrative advice and information about monitoring, which can help improve adherence to treatment, and ultimately improves patient safety.''

Source:

https://www.gov.uk/government/organisations/medicines-and-healthcare-products-regulatory-agency

Lung disease and psoriasis

One of the significant symptoms of COVID-19 is a persistent cough and, in severe cases, shortness of breath. While this is not the place to discuss the specific features or details of coronavirus infection, it's a useful moment to review the various lung conditions associated with psoriasis and whether any of the current systemic drug treatments may themselves be associated with respiratory symptoms such as cough and breathlessness.

Psoriasis and psoriatic arthritis are chronic autoimmune disorders which produce an inflammatory response, specifically in the skin and joints. However, it is well recognised that psoriasis is a systemic disease which may be associated with other disorders such as obesity, diabetes, cardiovascular disease (CVD) and inflammatory bowel disease. Emerging evidence also suggests that patients with psoriasis may be more susceptible to a variety of respiratory (lung) diseases and that some of the systemic drug treatments for moderate-severe psoriasis may themselves have pulmonary side effects, such as cough and breathlessness.

Asthma

It is well known that psoriasis is a risk factor for asthma, although why that is remains unclear. A recent meta-analysis of six studies, involving 66,772 cases of psoriasis and 577,415 controls, showed that patients with psoriasis have a greater susceptibility to asthma. The risk was greater in older patients (≥ 50 years), though exactly why this should be the case is not clear.

Chronic obstructive pulmonary disease (COPD)

COPD refers to a group of diseases that impair the flow of air to the lungs, making it more difficult to breathe. A 2015 review concluded that people with psoriasis had an approximately twofold greater risk of developing COPD compared with the general population. The risk was higher in people with severe psoriasis.

A large study from Israel included 12,502 psoriasis cases matched with 24,287 controls and found the prevalence of COPD to be higher (5.7%) in psoriatic patients when compared with controls (3.7%). However, after taking into account other factors such as smoking, obesity, gender and socioeconomic status, the association was much less evident, though still statistically significant.

A 2018 study from Denmark set out to measure lung function in patients with psoriasis. Hansen and colleagues studied 20,422 adults in the Danish General Suburban Population Study, which included 1,173 people with psoriasis and 19,249 controls. Participants carried out lung-function tests with handheld spirometers, and answered various questions about whether they had psoriasis, shortness of breath or pneumonia during the past decade.

Results showed that patients with psoriasis exhibited a small reduction in lung function compared with the controls, though after adjustment for smoking the differences were quite small (a point the authors concede). The authors speculate that patients with psoriasis may have sub-clinical airway inflammation and inflammatory pathways may coincide between psoriasis and inflammatory lung disease. It is important to note that no adjustment was made for obesity or physical activity in this study, both of which would be expected to have an effect.

Sarcoid

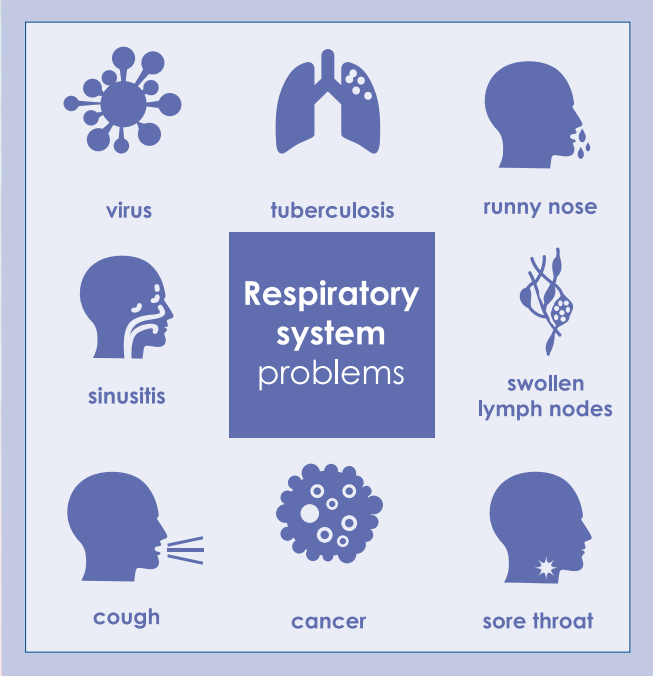
Sarcoidosis, or sarcoid, is an uncommon disease in which certain inflammatory cells clump together to form small lumps called granulomas. The organs most commonly involved are the lungs, skin and eyes. As a chronic inflammatory condition, sarcoid clearly has some features in common with psoriasis, and they may share common underlying mechanisms.

A large epidemiological study, essentially involving the whole of the Danish population (> 6 million subjects), has demonstrated a strong association between psoriasis and the risk of sarcoidosis. When the results were fully adjusted to take into account age and gender, they showed that patients with mild psoriasis have about a 50% increased risk of developing sarcoidosis compared with the control group, while in those with severe psoriasis there is a 2.5-fold increase in risk. The association, such as it is, is almost certainly due to some overlap in the inflammatory and immunological pathways underlying both diseases.

However, it is important to set this risk in context. Among the 70,125 who developed psoriasis over the study period, only 100 (0.14%) also developed sarcoidosis. In other words, in practice, the risk of any patient with psoriasis also developing sarcoid disease is extremely small.

Interstitial lung disease (ILD)

This is a technical term used to define an unusual and



complex set of lung conditions – including interstitial pneumonia and pulmonary fibrosis – which have been observed in association with psoriasis. These conditions tend to cause progressive and irreversible scarring of lung tissue.

In one study of 447 patients with advanced ILD, 21 (4.7%) were found to have concomitant psoriasis. However, it was not obvious what the association between the two conditions was or whether there was any true association. The prevalence of psoriasis in the UK general population is around 3%, so the finding of 4.7% prevalence in the ILD group, while significant, was not dramatically so. As the authors themselves conceded, there is no obvious mechanism linking the two conditions and it thus follows there may be no mechanism linking them.

Another study found interstitial pneumonia in eight out of 392 (2%) patients with psoriasis who were being treated with biologic agents for severe disease. The average age of the patients was 73.5 years and they all had very mild or no symptoms. The authors speculate that there may be common mechanisms underlying psoriasis and interstitial pneumonia. They also concede that the population in their study was highly atypical; the incidence of pneumonia in a younger population with less severe psoriasis would be much lower.

Lung cancer

Studies show that individuals with psoriasis are more likely to be cigarette smokers. However, a 2016 study based on data from UK Health Improvement Network suggests that patients with severe psoriasis may have an increased risk of lung cancer, independently of smoking status. After adjusting for smoking and a range of other factors, those with severe psoriasis still had approximately 60% greater risk of lung cancer compared with patients with mild psoriasis. There was no association between psoriasis and risk of bowel, breast, prostate cancer or leukaemia.

It should be noted, however, that other studies have found no excess risk of lung cancer in psoriatic patients, once smoking status is taken into account. Whatever the truth of the matter, it's clear that stopping smoking is the surest way for a patient with psoriasis to reduce the risk of lung cancer.

Symptoms of lung disease

All the conditions above may have different combinations of symptoms, but by far the most common are cough and breathlessness. Others include production of phlegm (sputum), wheezing and chest pain. If any of these become persistent, then you should seek medical advice.

Psoriasis medication and respiratory disease

Certain groups of drugs used to treat psoriasis may themselves be associated with an increased risk of respiratory disease or symptoms.

Systemic drugs

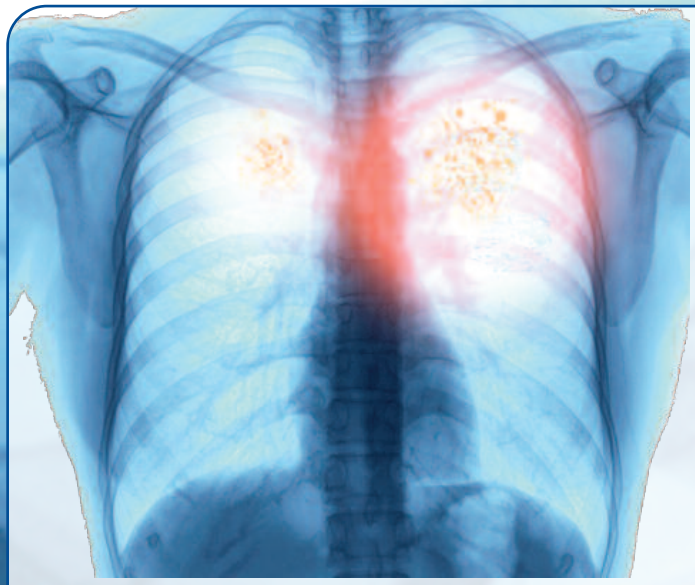
Methotrexate, ciclosporin and acitretin are all systemic drugs used in the treatment of psoriasis. While methotrexate has been reported to cause lung damage, this is an exceedingly rare complication, so all three can be regarded as generally safe from a respiratory viewpoint.

Biologics

Biologics are a group of bioengineered drugs which target specific parts of the immune system. They treat diseases such as psoriasis by modulating the activity of messengers called cytokines, which are at the heart of the inflammatory response in psoriasis.

There are two main mechanisms of action: (1) some drugs block the action of tumour necrosis factor (anti-TNF), while others (2) block the action of another group of inflammatory molecules called interleukins. The National Institute of Health and Care Excellence (NICE) recommends the use of biologics in patients who have not responded to the standard systemic

Lung disease and psoriasis



treatments such as methotrexate, ciclosporin and acitretin. Examples of biologics used in psoriasis include: Humira (adalimumab), Enbrel (etanercept), Stelara (ustekinumab), Cosentyx (secukinumab), Kyntheum (brodalumab), Taltz (ixekizumab), Tremfya (guselkumab), Cimzia (certolizumab pegol), Skyrizi (isankizumab), Ilumetri (tildrakizumab) and Remicade (infliximab). Because they are immunosuppressants, most biologics carry an increased risk of upper respiratory tract infections, though this is not usually sufficient to discontinue use of the drug.

Some of these medications, especially anti-TNF drugs such as adalimumab, infliximab and etanercept, have a cough as a side effect and may rarely cause an inflammatory reaction in the lungs. Incidentally, there is no evidence that biologic treatments increase the risk of cancer.

Summary

It is clear that psoriasis is a multi-system disease and that it may be associated with an increased risk of respiratory diseases. The problem is in deciding what the level of that additional risk actually is.

One difficulty is that many (if not the majority) of studies which address the association between psoriasis and lung disease fail to take into account three key risk factors – obesity, smoking status and physical activity – all of which are associated with respiratory problems and all three of which are more common in patients with psoriasis. Failure to adjust for these factors may result in an overestimate of the risks for the lung diseases referred to above.

The fact is that breathlessness and cough in a patient with psoriasis are more likely to be due to smoking, obesity or poor fitness levels than to complex lung disease or drug side effects. Stopping smoking, maintaining a healthy weight and taking regular aerobic exercise are the surest ways to reducing the risk of respiratory disease.

Nevertheless, patients with psoriasis appear to be at an increased risk of lung disease, even after they have made better lifestyle choices, though the level of this excess risk may be quite small. Some conditions, such as sarcoid and ILD, have an uncertain association with psoriasis and some medications may be associated with an increased risk of respiratory infections and cough.

It follows that any patient with persistent respiratory symptoms, especially breathlessness and cough, should be investigated appropriately.

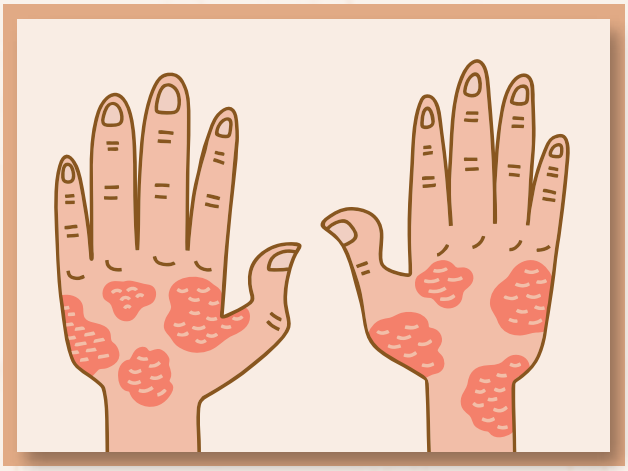
Key points

- Patients with psoriasis have an increased risk of a variety of respiratory diseases, including asthma, COPD, sarcoid and ILD
- While these conditions are important, they are relatively uncommon and do not represent a major cause of illness in patients with psoriasis
- The two most common symptoms of respiratory disease are breathlessness and cough and, in the patient with psoriasis, these are more likely to be due to obesity, cigarette smoking or poor cardio-respiratory fitness levels than to anything more serious
- All patients with psoriasis should be encouraged to stop smoking, maintain a healthy weight and take regular exercise
- Systemic drug treatments used in psoriasis (methotrexate, ciclosporin and acitretin) are generally safe and rarely cause respiratory problems
- Biologic treatments may cause mild upper respiratory symptoms and sometimes cough, but these rarely require discontinuation of treatment
- Any patient with psoriasis and persistent respiratory symptoms, such as breathlessness and cough, should be referred for specialist investigation and treatment.

Dr David Ashton MD PhD

Although the underlying cause of psoriasis and psoriatic arthritis stems from your body's immune system, the trigger factors that can make psoriasis and psoriatic arthritis worse, or cause flare-ups, include:

Cold and dry weather: Such weather can dry out your skin, which makes the chances of having a flare-up worse. In contrast, hot, sunny weather appears to help control the symptoms of psoriasis in most people.



Stress: Having psoriasis can itself cause stress and people often report that outbreaks of symptoms come during particularly stressful times.

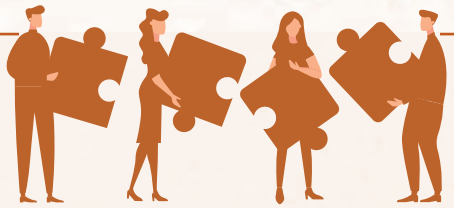
Some medications: Certain drugs, such as lithium (a common treatment for bipolar disorder), drugs for malaria, and some beta-blockers (used to treat high blood pressure, heart disease and problems with heart rhythm), can cause flare-ups of psoriasis. Some common painkillers – called nonsteroidal anti-inflammatory drugs (NSAIDs) – may also aggravate psoriasis, although they are still used in some people with psoriatic arthritis. If you experience side-effects remember to report these via the Yellow Card Scheme (see page 9 for more details).

Infections or disease: Certain infections, such as streptococcal throat infection or tonsillitis, can result in guttate psoriasis or other types of psoriasis. Psoriasis may worsen in people who have HIV.

Trauma to the skin: In some people with psoriasis, trauma to the skin – including cuts, bruises, burns, bumps, vaccinations, tattoos and other skin conditions – can cause a flare-up of psoriasis symptoms either at the site of the injury or elsewhere. This condition is called Koebner's phenomenon.

Alcohol: Using alcohol may increase the chances of flare-ups, at least in men.

Smoking: Some experts think that smoking can worsen psoriasis, in particular palmoplantar pustulosis psoriasis.



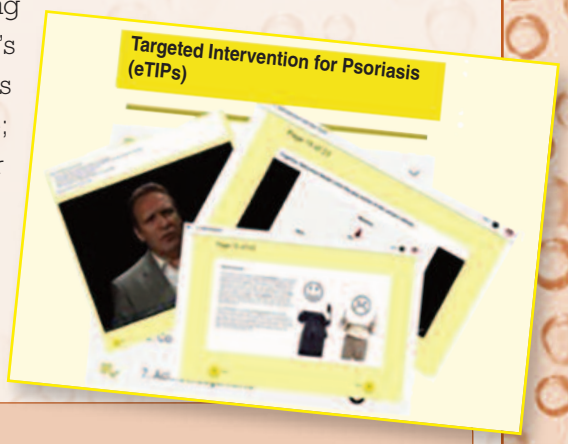
How does this information affect the management of psoriasis?

The bottom line is that the lack of precise information on the cause of psoriasis severely hampers the search for a cure. However, the current state of information has resulted in the development of new effective treatments, all based on trying to correct the faults within the immune system.

It is hoped that more effective treatments will be developed as understanding of the complex problems within the immune system increases.

What can be done?

Avoiding triggers can be difficult. On a recent post on a social media site, many people agreed with these common triggers, but no single solution appeared to provide any answers to how to avoid a flare. Keeping generally healthy, restricting alcohol, stopping smoking and trying to cope with stress are usually helpful, albeit to varying degrees. That's why psoriasis is such a puzzle; what works for one person doesn't always suit another.



Our online cognitive behaviour programme (CBT), eTIPs, might be a useful start to understand the way you think and feel about your psoriasis. It's free to access and works on any compatible device. It's available at:

www.papaa.org/shop/e-tips-course

There is so much information and indeed misinformation being circulated about coronavirus COVID-19 that to give definitive answers to the many questions that people with psoriasis and psoriatic arthritis may have is currently impossible, as so little is known about this new virus.

Speculation and educated guesses are the currency that is being traded, which is understandable as we all want certainty. Those who believe science and research are the only way to prove and test theories are cautious about providing answers without supporting evidence. This is 'the elephant in the room' that no one wants to see, a helplessness that has floored those who rely on certainty to provide the care people need.

The unfolding pandemic is unprecedented in modern times, with little reference material to help directly. The good news is this is changing and although the information in mainstream press focuses on finding a vaccine, other research is looking at managing and coping.

Research opportunity

The National Institute for Health Research (NIHR), the United Kingdom government agency which funds research into health and care, is the largest national clinical research funder in Europe, with a budget of over £1 billion (2015–16). The NIHR has developed the COVID-19 Rapid Response Rolling Call, which runs until 31st December 2020.

The call is for UK-led academic, small and medium enterprise (SME) and wider industry research to address a wide range of COVID-19 knowledge gaps/needs, and to offer benefits in UK, potentially international, public health within 12 months.

All proposals will need to be able to show how progress within the period of award could make a significant contribution to the understanding, prevention and/or management of the COVID-19 outbreak. Short-term (up to 12 month) proposals are sought on the following topics:

- **virology, immunity and pathophysiology**
- **diagnostics**
- **epidemiology**
- **transmission**
- **disease susceptibility and severity**
- **control and mitigation**
- **IPC and PPE**
- **public health, media and communication**
- **clinical management**
- **primary, adjunctive and supportive therapies**
- **vaccines**
- **health and care delivery**
- **underpinning research.**

Current activities

Although much of the research funded by the NIHR is classed as rapid it will still take time. Up to 12 months for results in research terms is rapid, but in the current scenario feels like an eternity.

So, what is being undertaken now that is relevant to psoriasis and psoriatic arthritis? The PsoProtect project is an initiative set up by a group of academic clinicians and scientists at St John's Institute of Dermatology, Guy's and St Thomas' Hospital London, and the Dermatology Centre, University of Manchester and is an international registry for healthcare providers to report outcomes of COVID-19 in individuals with psoriasis.

Another group, the COVID–19 Global Rheumatology Alliance, was established to collect, analyse and disseminate information about COVID-19 and rheumatology to patients, physicians and other relevant groups to improve the care of patients with rheumatic disease. Their vision is to bring together the global rheumatology community

to curate and disseminate accurate and comprehensive knowledge to advance rheumatology care in the COVID-19 pandemic.

What has emerged?

The most common questions asked in relation to psoriasis, psoriatic arthritis and COVID-19 regard greater risk of infection, worse outcomes, stopping medication, and risk while on treatments. The issue of risk is unknown, but in a statement in March the International Psoriasis Council said:

"Individuals over the age of 60 years and/or patients with comorbid conditions, including cardiovascular diseases, diabetes, hepatitis B, chronic obstructive pulmonary disease, chronic kidney diseases and cancer have a higher risk for developing a more serious course of the illness. However, as of now, there is insufficient evidence to determine how COVID-19 will impact psoriasis patients on systemic treatment who are infected with the virus. The benefit-to-risk ratio of any immunosuppressive therapeutic intervention should be carefully weighed in patients with comorbidities on a case-to-case basis."

The National Psoriasis Foundation of America has suggested:

"Although psoriasis and psoriatic arthritis are immune-mediated diseases, if an individual is not on an immunosuppressive medication or have other comorbid diseases, there may be minimal additional risk of contracting COVID-19 above the rest of the population. Patients with severe disease, those on potentially immunosuppressive therapies and/or those presenting with comorbid conditions may be at greater risk of infection."

The British Society for Rheumatology provided a useful indication of levels of risk while on immunosuppressive medication. The categories are as follows.

Patients to shield:

- Corticosteroid dose of ≥20mg (0.5mg/kg) prednisolone (or equivalent) per day for more than four weeks
- Cyclophosphamide at any dose orally or within last six months
- Corticosteroid dose of ≥5mg prednisolone (or equivalent) per day for more than four weeks plus at least one other immunosuppressive medication, biologic/monoclonal or small molecule immunosuppressant (eg JAK inhibitors)
- Any two agents among immuno-suppressive medications, biologics/ monoclonals
- Small molecule immunosuppressants with any co-morbidity.

Self-isolate or maintain social distance at their discretion:

- Well-controlled patients with minimal disease activity and no co-morbidities on single-agent broad-spectrum immuno-suppressive medication, biologic/monoclonal or small molecule immunosuppressant
- Well-controlled patients with minimal disease activity and no co-morbidities on single-agent broad-spectrum immuno-suppressive medication plus sulphasalasine and/or hydroxychloroquine
- Well-controlled patients with minimal disease activity and no co-morbidities on a single-agent broad-spectrum immunosuppressive medication at standard dose (eg methotrexate up to 25mg per week) plus single biologic (eg anti-TNF or JAKi)

Low risk – no need to self-isolate

- Single-agent 5-ASA medications (eg mesalazine)
- Single-agent 6-mercaptopurine
- Only inhaled or rectally administered immunosuppressant medication
- Hydroxychloroquine
- Sulphasalasine.

Apart from these dedicated pieces of advice, the four nations of the United Kingdom have each set out what everybody should do to avoid getting COVID-19. Social distancing and hand washing are the main pieces of advice, but remember the advice does change and differs across the four nations. Check the sources below for more information and the latest updates.

NHS:
https://www.nhs.uk/conditions/coronavirus-covid-19

Scotland NHS Inform:
https://www.nhsinform.scot

Wales NHS Direct:
https://111.wales.nhs.uk

Northern Ireland HSC Public Health Agency:
https://www.publichealth.hscni.net

Useful links:

https://psoprotect.org

https://rheum-covid.org

https://www.psoriasiscouncil.org

https://www.psoriasis.org

https://www.rheumatology.org.uk

Sources:

Taken from information published in the public domain by the organisations mentioned. Be aware that at the time of printing and publication we believe this to be accurate. But the situation is changing and some of this may have been updated or changed. Sources accessed: 29 May 2020.

When a patient is diagnosed with rheumatoid arthritis, psoriatic arthritis or spondyloarthritis, prescribing the correct type of medicine is a case of trial and error. It is simply not possible to predict which medication will work for the individual patient, and it is therefore a matter of trying the different treatment options: glucocorticoids, low dose chemotherapeutic drugs or newer biological drugs.

But a new research project from Aarhus University and Aarhus University Hospital in Denmark suggest that it is the composition of cells in the joint of the individual patient which determines whether the medicine is effective or not.

The researcher behind the study, published in the journal of the American College of Rheumatology (ACR Open), is medical doctor and PhD Tue Wenzel Kragstrup from the Department of Biomedicine at Aarhus University and the Department of Rheumatology at Aarhus University Hospital.

''So far, we've examined the effect of nine drugs in three different in vitro models. We can see that the effect of a given drug depends on the cell compositions. This leads us to hope that the immunological cells and inflammatory signalling molecules in the joint of each individual patient will be able to predict the most effective treatment,'' says Tue Wenzel Kragstrup.

The study's in vitro models consist of cell cultures isolated from joint fluids aspirated from the joints of patients with severe arthritis. The researchers then used the diseased cells from the joint fluid to examine the effects of different types of medicine, explains Tue Wenzel Kragstrup's colleague and first author of the article, PhD student Morten Aagaard Nielsen from the Department of Biomedicine.

''As far as we know, this is the first description of a direct association between the composition of the immune system cells and the effect of medication," Morten Aagaard Nielsen says.

Tue Wenzel Kragstrup adds: ''The findings are based on the assumption that the cells in the test tube behaving like they would behave in the patient. So of course, the research result must be validated in humans in a larger number of patients.''. It was at the hospital, while meeting patients racked with pain, that Tue Wenzel Kragstrup came up with the idea.

''Today, the first-choice drug has no effect in around one in three patients. So, doctors often have to try several different types of medicine before they find the right one. This is a process that may take years, because a drug typically takes three to four months to be effective,'' explains Tue Wenzel Kragstrup. *''And while we wait, the patients continue to experience swelling and pain – not to mention the permanent damage that can occur in the joints as a result of persistent inflammation.''*

Tue Wenzel Kragstrup hopes that the research results in time can be translated into a simple test - such as a blood test - which can determine the correct medicine for the individual patient. According to Tue Wenzel Kragstrup, this type of individualised treatment could be realised within a decade.

Source:
Aarhus University - Denmark

Treatment recommendations

New updated treatment recommendations designed to help physicians and health professionals choose the right drug for people with psoriatic arthritis (PsA) have been published by the European League Against Rheumatism (EULAR).

The overarching principles address the nature of PsA and diversity of both musculoskeletal and non-musculoskeletal manifestations; the need for collaborative management and shared decision-making are highlighted.

The recommendations provide a treatment strategy for pharmacological therapies, which are published in the EULAR journal, Annals of the Rheumatic Diseases.

Depending on their symptoms, people with psoriatic arthritis should be offered painkillers and, if needed, local injections of glucocorticoids, then conventional systemic disease-modifying antirheumatic drugs (csDMARDs, such as methotrexate). The next step would be biologic disease-modifying antirheumatic drugs (bDMARDs, such as TNF or IL inhibitors), or targeted synthetic disease-modifying antirheumatic drugs (tsDMARDs, such as JAK or PDE4 inhibitors).

Based on updated evidence from a systematic literature review and expert opinion, a EULAR multidisciplinary task force formulated six overarching principles and twelve recommendations.

These guidelines aim to help rheumatologists choose the best treatment for each person with this rheumatic condition, based on their individual circumstances.

The six overarching principles

- Psoriatic arthritis is a heterogeneous and potentially severe disease, which may require multidisciplinary treatment.
- Treatment should aim at best care and must be based on a shared decision between the patient and the rheumatologist, considering efficacy, safety and costs.
- Rheumatologists should look after the joints of people with psoriatic arthritis; collaboration with a dermatologist is needed if a patient has significant skin disease as well..
- The main goal of treatment is to maximise quality of life by controlling symptoms and preventing structural damage and inflammation.
- Each musculoskeletal manifestation should be considered, and treatment decisions made accordingly.
- Skin, eye and gastrointestinal symptoms should be taken into account, as well as comorbidities such as metabolic syndrome, cardiovascular disease or depression.

The 12 recommendations give detailed, practical guidance for rheumatologists and can be viewed at https://ard.bmj.com/content/79/6/700.full#T1

Reference:

Gossec L, Baraliakos X, Kerschbaumer A et al, EULAR recommendations for the management of psoriatic arthritis with pharmacological therapies: 2019 update, Annals of the Rheumatic Diseases 2020;79:700-712.

About EULAR:

The European League against Rheumatism (EULAR) is the European umbrella organisation representing scientific societies, health professional associations and organisations for people with rheumatic and musculoskeletal diseases (RMDs).

The British Society for Rheumatology (BSR) psoriatic arthritis (PsA) register is a long-term study, set up to investigate the impact of psoriatic arthritis (PsA) on affected individuals' quality of life over a number of years and to monitor the safety of treatments available for PsA.

Overview

This register provides real-world data to assess the impact and natural history of psoriatic arthritis and response to treatments over the long term.

It is run by the University of Aberdeen on behalf of the BSR and is aligned to other international registries with psoriatic arthritis patients in the EU and North America.

The register aims to provide real-world data around:

- the impact of psoriatic arthritis on individuals, including function, work, quality of life and economic impact
- the natural history of psoriatic arthritis, including clinical, social and work outcomes in the medium to long term and the impact of disease phenotype on disease outcome
- the use of novel pharmacological agents (including biologic DMARDs, biosimilar DMARDs and targeted synthetic DMARDs), their use, effectiveness and predictors (including biomolecular predictors) of treatment response.

It also provides health economic data relevant to the evaluation of cost-effectiveness of different therapy options and infrastructure to support the collection, analysis and reporting of adverse events amongst patients on novel pharmacological agents.

Can I take part?

Patients are recruited to the study through their local rheumatology clinic. You may be eligible for the study if you are a patient at one of the recruited centres and you:

- have been diagnosed with psoriatic arthritis, are aged 16 years old or over, and are treated in adult rheumatology services
- are starting any biologic or targeted therapy approved for the treatment of PsA in the United Kingdom, having never previously received that treatment, or have never received a biologic or targeted therapy.

To find out more, visit the British Society for Rheumatology website:

www.rheumatology.org.uk/practice-quality/registers/psoriatic-arthritis

If you would like to learn more about how trials work, we have a booklet called Clinical Trials: An overview, which be downloaded or ordered from our website as a hard copy. You can also contact us via any of the ways listed on page 2 and we will be pleased to send you free copy.

Marketplace

Promotional material

If you are thinking about supporting PAPAA or raising awareness on behalf of PAPAA about psoriasis or psoriatic arthritis.

Why not check out some of the merchandise we have available?

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www.psoriasis-shop.org

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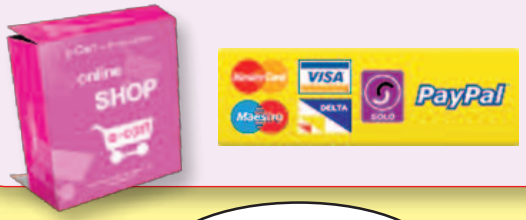

PAPAA's position on pharmaceutical funding

PAPAA does not receive funds (either directly or in kind) from the pharmaceutical industry or commercial sector. All activities are funded via donations, subscriptions, charitable grants, legacies or other income generation. We believe that this allows us to act in an open, non-biased way and free from any perceived influence or agendas that may arise. We do not link our activities to commercial marketing or public relations campaigns and will only link our name or logo to an activity if we believe it is beneficial to our constituent group.

Join the conversations

If you have a social media presence, then why not follow us and join the conversation to see what others have to say?

The following are the links to our pages:

Facebook:	**www.facebook.com/papaa.org**
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Pinterest:	**www.pinterest.co.uk/psoriasisuk**
Instagram:	**www.instagram.com/the_papaa_eye**
LinkedIn:	**www.linkedin.com/company/papaa/**