

SKINCARE & DERMATOLOGY

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beyond the skin

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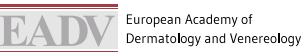
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SKINCARE & DERMATOLOGY

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DERMATOLOGISTS

Tackling misconceptions in an under-resourced sector

The alarmingly small number of qualified dermatologists in the UK must be addressed, along with a widespread misunderstanding of what they actually do

Emily Hill

It is often said that the state of our skin provides a litmus test for our overall health, so why do so few of us understand what a qualified dermatologist is?

As a discipline, dermatology is concerned with far more than the cosmetic; skin diseases can be serious. But according to Dr Angelika Razzaque, executive chair of the Primary Care Dermatology Society (PCDS), even doctors need to clue up on the subject.

“Most medical schools offer only up to two weeks dermatology education,” she says. “Clinics are overburdened with a two-week wait for skin cancer referrals, yet the majority seen are not cancer. GPs and primary care clinicians don’t feel suitably equipped to manage skin conditions, including lesions, in the community.”

The expectations and responsibilities of a qualified dermatologist are manifold, yet rarely explored. “It’s almost artificial to divide the medical and cosmetic,” says Dr Paul Charlson, president of the British College of Aesthetic Medicine. “People come with their skin problems – lumps and marks – and you give them a whole range of ideas because people are quite ignorant as to what they can do for their skin. So, often I might be doing some aesthetic work and find they have skin cancer. That happens not infrequently.”

This is when the question “what is a dermatologist?” becomes urgent to the point of potentially life-saving. “I saw a patient the other day who was treated at a skin clinic with a CryoPen for something that he had on his head which was clearly a basal cell carcinoma,” Dr Charlson recalls. The patient had gone to a high street clinic which can’t have examined the lesion with a dermatoscope. “It’s potentially a risky thing with a melanoma: ‘Oh, it’s just a brown mark. I’ll treat it with a freezing instrument or a cream and it’s a potentially lethal cancer,” he says.

The same thing goes for a “funny” rash that turns out to be dermatomyositis or lupus. Dr Charlson adds: “Among all the common stuff, there’s the rare and dangerous, so I think not having the ability to make the diagnosis and treating it is potentially a problem.”

While it may be quick and convenient to nip into a high street



FotCinema/Getty Images

clinic to talk about your skin problems, your first port of call over any skin worry, the professionals insist, is your GP who should be able to refer you to a qualified dermatologist if there is real cause for concern.

The PCDS is currently working hard to provide medical training for GPs in the diagnosis and treatment of the most often seen conditions such as eczema, psoriasis, acne, itchy skin, lesions, infections, hair and nails, urticaria and other inflammatory conditions. There’s also an emphasis on dermoscopy training as many GPs want to learn how to use additional tools aiding them in making a diagnosis.

In this context, Dr Razzaque insists: “Patient safety is paramount in all our dealings. Most

important is that clinicians have enough time to communicate with patients and involve them in decision-making. Closer working between primary and secondary care would be highly beneficial to patients and increase safety and satisfaction.”

Considering the need for them, the lack of qualified dermatologists in the NHS isn’t just puzzling, it’s seriously concerning, according to Dr Adam Friedmann, consultant dermatologist at The Dermatology Partnership and formerly dermatology teaching lead for University College London medical students.

“There are fewer than 1,500 consultant dermatologists in the UK, many of whom do not do any cosmetic work,” he explains. “I would guess there are probably in excess

of 10,000 cosmetic practices in the UK, which gives an idea as to how many practitioners there are out there who are not dermatology consultants.”

The “enormous” skills gap in primary and secondary caregivers needs to be addressed, says Dr Friedmann, adding: “Expertise in dermatology is an extreme rarity. To become a consultant dermatologist usually takes seven to ten years of training exclusively in dermatology. By comparison, general practitioners receive little training in dermatology. For example, in medical school, sometimes as little as only a single week is set aside for teaching dermatology over a five-year course. Given that 15 to 20 per cent of the GPs workload comprises skin disease, this is clearly disproportionate.”

Another challenge, in addition to the skills gap, is the public information gap as people generally know even less. Dr Friedmann points to public information campaigns by the British Association of Dermatologists and the British Skin Foundation as helpful, but more needs to be done. “Education on the basics of what to look out for in terms of changing moles or skin cancer tends to be useful as does advice on appropriate sun avoidance,” he says.

Demand for cosmetic procedures, such as Botox and lip-fillers, have “absolutely ballooned” in demand over recent years, says Dr Charlson. “Unfortunately, this has led to the creation of a community of the ‘unconsciously incompetent’ who go on courses and think they know what they’re doing,” he says.

Dermatology, as the experts are keen to state, is an attractive medical discipline to go into because there is no night-working, which makes it family friendly. So why are there still so few qualified dermatologists?

Dr Charlson thinks this might be rooted in our attitudes to skin complaints. We view them as an aesthetic matter rather than something serious. “Changes of attitudes to conditions like acne are quite important,” he concludes. “There’s a lot of psychological trauma involved, particularly with the selfie generation.”

Ultimately, whether tackling teenage spots or correctly identifying a cancerous mole, it’s clear that “what is a dermatologist?” is a question we should all know the answer to. ●

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TECHNOLOGY

Next-gen tech is revolutionising diagnosis and treatment

From expansive artificial intelligence programming to nano-engineering, dermatology is at the cutting edge of the digital health revolution



Jon Axworthy

As any dermatologist, or regular pub quizzer, will be able to tell you, skin is the largest organ of the human body, which brings with it some scaled-up problems for those involved in the specialism. Thankfully, innovative dermatology is enabling practitioners to diagnose and treat skin diseases better and more effectively than ever before, and the latest in skin-care technology is helping to solve some of the biggest challenges facing this diverse practice.

With new cases of melanoma skin cancer averaging almost 16,000 between 2014 and 2016 in the UK, one of the most sizeable of these challenges is early detection and diagnosis. However, thanks to it being an acutely visual specialty, dermatologists may soon be able to rely on a particular form of deep-thinking second opinion in the form of artificial intelligence (AI).

This was first identified in 2017 after watershed research from Stanford University found that a form of AI known as a convolutional neural network (CNN) could do a better job of distinguishing between a benign mole and a malignant melanoma than a panel of dermatologists.

"CNN is an algorithm, which is able to focus on different properties in an image and pull out the things that are relevant and important," explains Dr Karen Panetta, an expert in AI in healthcare. "CNN pushes the evolution of AI even

further and is a very exciting tool to leverage in the search for more accurate dermatological diagnosis."

The merit of AI's real-world application in dermatology was further confirmed last year with another study published by the European Society for Medical Oncology (ESMO), which found that CNN,

"We envisage that sooner than later automated diagnosis will change the diagnostic paradigm in dermatology"

once again, outperformed dermatologists in identifying melanomas from a sample of 100 images, correctly identifying 95 per cent compared with 87 per cent by qualified dermatologists.

The goal of all this research is not to pit dermatologists against the latest in skincare technology, but to fine-tune AI into a technological tool at the disposal of the profession.

"Most dermatologists already use digital dermoscopy systems to image and store lesions for documentation and follow-up," says Professor Holger Haenssle, who led the ESMO study. "The CNN can then easily and rapidly evaluate the stored image for an 'expert opinion' on the probability of melanoma."

Professor Haenssle, who is currently planning prospective studies to assess the real-life impact of CNN, says: "Currently, there is no substitute for a thorough clinical examination. However, 2D and 3D total body photography is able to capture about 90 to 95 per cent of the skin surface and, given exponential development of imaging technology, we envisage that sooner than later automated diagnosis will change the diagnostic paradigm in dermatology."

AI is a clear example of how the latest in skincare technology can be used to improve patient care and Professor Haenssle can speak

95%

of melanomas were correctly identified by convolutional neural network technology in a 2018 study; dermatologists correctly identified 87 per cent

European Society for Medical Oncology

with such confidence about the timescale of the change because of AI's ability to teach itself through machine-learning, where CNN continually improves its performance with every additional image it sees.

Of course, AI isn't the only high-tech solution to current dermatological problems as it's also hoped that the latest in skincare technology can help to reduce the shortfall in donor tissue, which has recently plagued countries such as Australia and Japan.

Advances in 3D bioprinting mean that it's now possible to create totally functional synthetic skin at the touch of a button, and a research partnership between scientists at the Charles III University of Madrid and bioengineering firm BioDan Group has already produced a pioneering prototype. Rather than using cartridges and inks, the printer layers bioinks over one another on a print bed to replicate the natural structure of skin, from epidermis to dermis.

This kind of bioprinting isn't limited to the lab, as researchers from the US Wake Forest School of Medicine have shown by producing a mobile printer that can deliver skin directly on to a patient's body, offering a realistic alternative to skin grafts when the availability of healthy tissue is low. The process begins by taking a biopsy of tissue and extracting healthy cells, which are then mixed into a hydrogel to be fed through the print heads. Software directs the print heads to topically deliver the cells, building it up layer by layer until the structure is complete.

It's thought this particular form of bioprinting could be especially relevant to real-world wound treatments as doctors would be delivering the patient's own cells to the area, speeding up the healing process.

Nanotechnology is another exciting area for physicians as the properties of sun creams and anti-ageing products are engineered into nano-sized particles, increasing their bio-availability by making them more easily absorbed by the skin.

In anti-ageing products, nanomaterials represent the latest in skincare technology because they allow active ingredients, such as vitamin C, which would not normally penetrate the skin, to be delivered through it and increase rejuvenation. There is even potential for nanotechnology to be used in melanoma treatment with the discovery that gold can be turned into a nanoparticle and combined with a molecule that hones in on cancerous tissue. When a specific wavelength of light is targeted at the tissue, the gold nanoparticles heat up and kill the surrounding tumour, leaving the surrounding tissue unaffected.

It's another demonstration of why dermatology is considered one of the prime areas for technological health intervention and, thanks to a number of exciting advances in innovative dermatology, it's clear there is already plenty of skin in the game. ●

Giving psoriasis a voice

For a condition that is often hidden, the statistics and the voices of people with psoriasis are sounding a compelling message that should not be ignored

Global research, conducted by the LEO Innovation Lab and the Happiness Research Institute, found that 37 per cent of the two million people living with psoriasis in the UK are living in misery, while societal understanding of its debilitating impact remains poor.

Psoriasis costs the UK economy £1.07 billion a year in lost productivity and its sufferers have elevated risks of cardiovascular disease, diabetes, obesity and a range of immune system conditions, facts that can be overlooked when prioritising services and approaches to care.

GPs provide more than 13 million consultations for skin conditions a year at a cost to the NHS of £723 million, yet it is rarely an area of strategic focus and GPs may have spent less than two weeks of their medical school training learning about its intricacies.

But a groundswell of academic opinion and an increasingly louder patient voice are aiming to move psoriasis out of the shadows and into a clearer light where its physical, emotional and financial burden can be fully appreciated,

and significant advances in treatment in recent years can be more easily connected to patients in need.

The pressing challenge is to promote greater awareness across society and healthcare, particularly where there are existing myths and misconceptions, for example that psoriasis is contagious. Insights gathered by LEO Pharma, a pioneering medical dermatology company, detail the wide-ranging discrimination people living with skin conditions can experience. Some have been ordered out of public swimming pools and one person even suffered the embarrassment of seeing the next customer at a cash machine cleaning the keyboard with a sterile wipe.

"Many people are affected in their personal and professional lives by dermatological conditions, but they are often seen as 'just skin conditions' when, in fact, the conditions are so much more," says Dr Sathish Kolli, medical director of LEO Pharma, which is backed by decades of research and development in medical dermatology and patient advocacy. "For example, psoriasis is an immune mediated condition that is associated with a number of comorbidities, which may require specialist help.

"One of the saddest aspects that people living with psoriasis face is that many are poorly served, which conspires to make them resigned to their condition and not seek help, including holistic care from a healthcare professional when they need it. One third of people with psoriasis have not had an annual review with their GP for five years."

LEO Pharma has more than 80 product labels across the UK and Ireland, and its robust pipeline includes topical, biological and oral treatments. LEO Pharma is helping 76 million patients in 130 countries and aims to reach 125 million people by 2025. The company, which reinvests 18 per cent of revenue in R&D, is a wholly owned foundation, giving it the freedom to put patients, not shareholders, first. Some of these patients are playing a significant role in sharing their personal insights to support the development of new resources and therapies with LEO Pharma.

"We are very proud of our Voices in Partnership advisory programme that puts the patient voice at the heart of everything we do," says Geraldine



"One third of people with psoriasis have not had an annual review with their GP for five years"

Murphy, vice president, cluster Europe North of LEO Pharma. "We listen to what they say about living with their condition, what they need to live well and how they have adapted their lives, and include them in all stages of our decision-making. We work to make their lives better with effective treatments and developing awareness around the impact of psoriasis and atopic dermatitis."

The scale of the problem was identified by an Association of the British Pharmaceutical Industry Dermatology initiative, founded in 2014 by six pharmaceutical companies that seek to collaborate with people and organisations across dermatology.

LEO Pharma is one of the companies and chaired a task force that produced a report in 2018, which aimed to address the imbalance in care of people living with skin conditions. It concluded that dermatology is a "missed opportunity to realise productivity gains and better results for patients". Additionally, a PSO What? expert task force report from LEO

Pharma and the Patients Association (www.pso-what.com) in 2017 also called for holistic psoriasis care, regular reviews and screening for comorbidities to improve patient outcomes. "The outlook for people with skin conditions is improving, but there is still some way to go to reduce stigma and create systems where patients can get the treatment and support they need and deserve," Dr Kolli concludes.

LEO Pharma is committed to increasing awareness of the realities of living with skin conditions, driving positive change and highlighting the importance of seeking regular, at least annual, holistic reviews.



Rena Ramani: Psoriasis warrior

I was first diagnosed with psoriasis when I was 13 and started to get a few small red raised patches across my back and within days it had spread to my elbows and knees. My GP had a dermatology background so, unlike many others, my diagnosis was quick. More than 20 years later, I distinctly remember my GP saying, "You have psoriasis and there is no cure. You have this for life."

By the time I saw a dermatologist, I was covered head to toe and remember crying at night wondering how one minute I was a fine, but the next I was covered in psoriasis.

Over the years I have been on a rollercoaster journey with my psoriasis. Today, I see myself as a #PSOWarrior. I have now found inner-confidence that I channel to support others, via my personal blog and on LEO Pharma's QualityCare™ website blogger zone (www.qcbyleo.com). I am also a member of the LEO Pharma Voices in Partnership programme. LEO Pharma listens to the first-hand experiences of people living with psoriasis to create useful tools and empower patients to better manage their psoriasis and increase awareness of the realities of living with a life-long immune mediated condition.

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SKIN CANCER

Debunking seven common myths about skin cancer

With something as life-threatening as skin cancer, widespread misconceptions and knowledge gaps must be quashed to keep people safe in the sun

Fiona Duffy



1 'Skin cancer isn't that serious'

In a survey of 5,000 people by the British Skin Foundation, 36 per cent did not realise that skin cancer could be fatal, while 56 per cent did not know malignant melanoma, the most dangerous form of skin cancer, could spread to other parts of the body.

The reality makes stark reading. New figures from Cancer Research UK reveal that melanoma incidence rates have soared by 45 per cent in the last 15 years.

"Every day, seven people die from skin cancer," says Dr Bav Shergill spokesman for the British Skin Foundation. "It is one of the fastest rising malignancies in the UK."

And even though non-melanoma skin cancers are less likely to metastasize, they are disfiguring, usually occur in highly visible places, such as the face, lower legs, head and back, involve excision and frequently reoccur," says Clare O'Connor, Boots scientific sun-care adviser.

'A higher SPF means more time in the sun'

SPF, or sun protection factor, refers to relative protection from ultraviolet (UV) B rays, the chief cause of reddening and sunburn.

"This is commonly interpreted as how much longer skin covered with sunscreen takes to burn compared with unprotected skin," explains Professor Brian Diffey of the British Association of Dermatologists (BAD).

However, people wrongly assume that, if they follow the same principle, using a higher SPF means they can stay longer in the sun without burning.

In reality the blocking effect of any SPF product, regardless of rating, only lasts for approximately two hours before needing to be reapplied.

"A better approach is to think about the given SPF reducing the UV dose to a fraction, or 1/SPF, of the dose you'd receive without sunscreen," says Professor Diffey. "For example, applying an SPF 30 results in a UV exposure of one thirtieth the amount received without sunscreen."

But experts warn that people rarely apply recommended amounts of sunscreen, reducing their protection to a half or even a third of the labelled SPF.

Importantly, SPF rating offers no protection against UVA rays which penetrate deep into the skin. Although they don't contribute as much to sunburn, they can also cause skin cancer. Consumers should also check the UVA star rating, from one (minimum) to five (maximum), indicating the percentage of UVA radiation absorbed.



'My kids don't need sunscreen; a cotton T-shirt in the sea or pool is fine'

While covering up should be the first line of defence against skin cancer, a wet T-shirt isn't enough.

"Children have thinner skin and are even more prone to UV damage, so it is very important to keep them protected," says Professor Swen John of the European Academy of Dermatology and Venereology (EADV).

However, the fabric type and colour of clothing makes a huge difference.

"Wet fabric doesn't maintain the same protection as dry fabric," says Boots scientific sun-care adviser Ms O'Connor. "Think of a white T-shirt; once it's wet, it's practically translucent. Apart from this, the arms, legs and face are still exposed and would need protecting."

Invest in UV sun protection clothing, against both UVB and UVA



rays, that the sun can't penetrate. "UV swimwear blocks out harmful UV rays by as much as 98 per cent says, so gives children the protection they need," says Dr Ross Perry, skin cancer expert and medical director of CosmedicsUK. "But you will still need sunscreen on uncovered areas, such as the face, neck, hands, legs and feet."



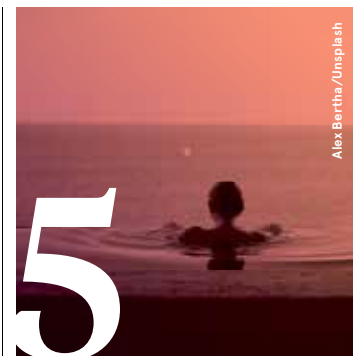
'I don't have moles so don't need to worry'

Having moles on your skin can quadruple your risk of developing the deadliest type of skin cancer, according to a study presented at the World Congress on Cancers of the Skin in Edinburgh.

Study author Dr Eugene Ong, of the University of Oxford, says: "Our results show that patients with a hospital diagnosis of melanocytic naevi,

or moles, have a high risk of developing melanoma both around the site of the mole and elsewhere on the body. These people might, therefore, benefit from increased surveillance."

However, the sad fact is that everyone is at risk of skin cancer, says CosmedicsUK's Dr Perry. "Seventy per cent of all melanomas are new moles, so it's important to keep checking even if you don't have any moles, as new ones can always develop."



'I don't want to trouble my doctor with a tiny mole'

Because skin cancer tends to be underestimated, we don't always respond as quickly as we should to skin changes.

"This is because skin cancer usually presents itself as an innocuous mole or mark on the skin at the beginning and, as such, is not taken seriously," says Dr Perry at CosmedicsUK.

Nina Goad at BAD says most public education campaigns focus on prevention and staying safe in the sun. "But new studies show that we now also need to target our efforts on early detection, by encouraging people to check their skin and report anything suspicious to their GP sooner rather than later," she says.

And it's important to act on any skin changes, says Dr Riccardo Di Cuffa, director at Your Doctor. "New moles, blisters or even scabs can be signs of skin cancer," he says. "Check your

'I always sit in the shade on holiday so don't need to worry about sunburn and skin cancer'

Seeking out shade is a great protective measure against skin cancer, particularly when the sun is strongest between 11am and 3pm.

"However, sitting in the shade alone does not offer ultimate protection as ultraviolet rays scatter more easily than visible light in the atmosphere," says Cheryl Lythgoe, head matron at Benenden Health. "Therefore, they can bounce and refract on to the skin and still cause damage."

This effect is heightened by reflective surfaces like water or light coloured sand, while the sun can also filter through the dappled shade of trees.

Even in the shade, wear an SPF sunscreen of at least 30, a wide-brimmed hat and protective eyewear, CosmedicsUK's Dr Perry advises.



'I work outdoors, have built up a resistance to the sun and don't need to use SPF'

The opposite is actually true. People who have a lot of overall exposure to the sun, even without burning, are at increased risk of non-melanoma skin cancer, according to the British Skin Foundation.

The EADV says non-melanoma occupational skin cancer is "a chronic disease that has reached epidemic proportions".

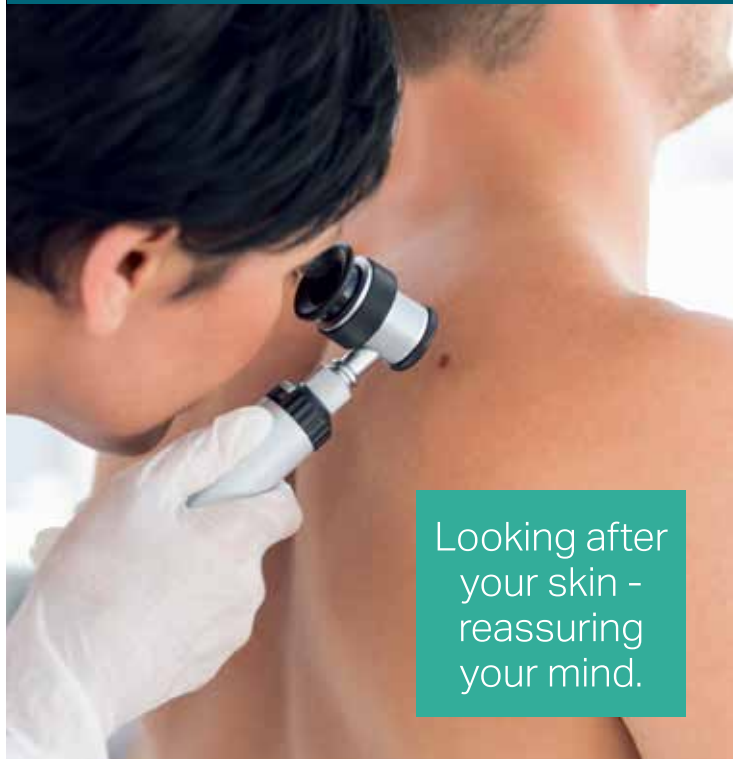
Professor John estimates that, as in Germany, British outdoor workers are exceeding the daily limit of radiant exposure set by the World Health Organization by almost five-fold.

And, according to the EADV, five UK workers a day get skin cancer, with 60 a year dying from the disease.

The EADV is calling for more accurate recording of non-melanomas, regular health screenings, and compulsory health and safety measures, including sunshields, providing sun protection clothing and sunblocks, of SPF50+, with indoor break facilities. ●



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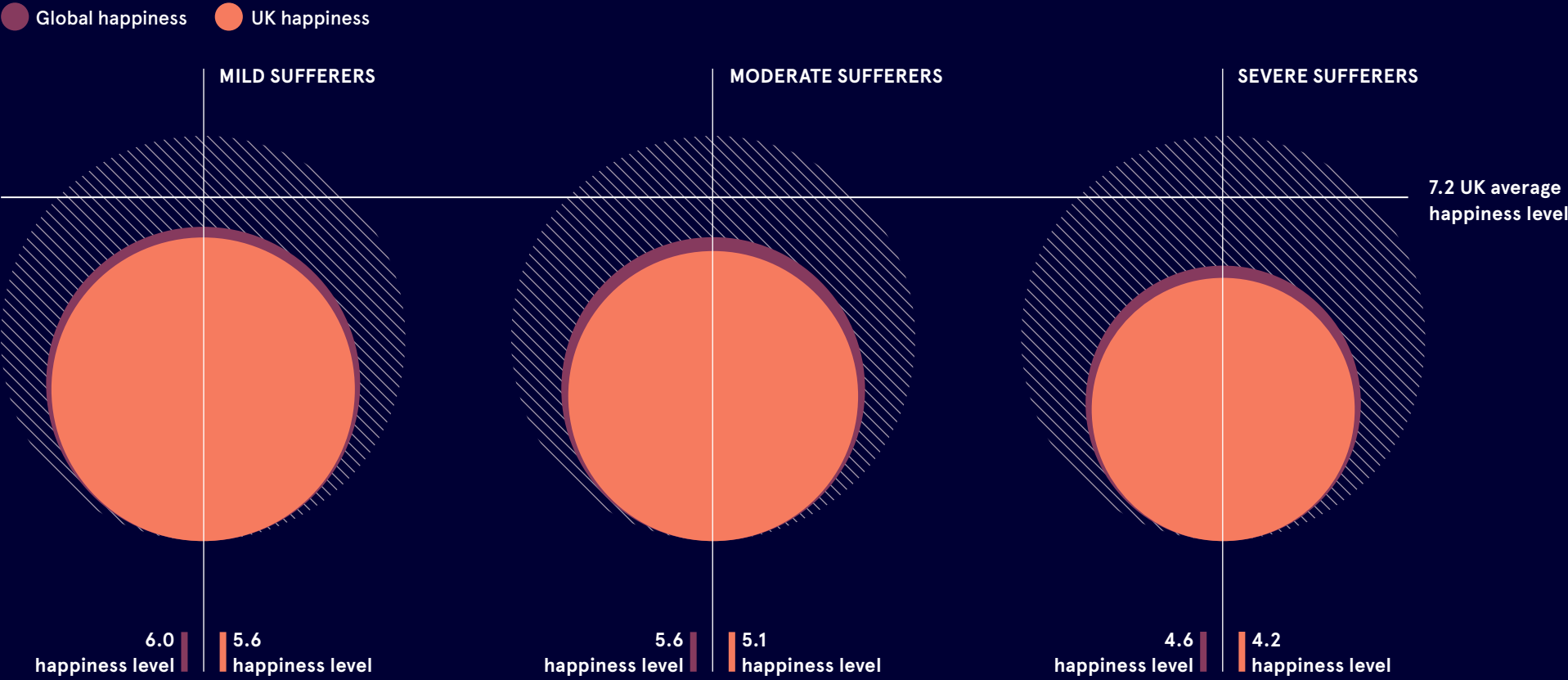
UNHAPPY IN OUR SKIN

The correlation between body image and mental ill-health is well documented, so it should come as no surprise that skin conditions such as acne, psoriasis and eczema have been linked to increased levels of depression and anxiety, and a lower quality of life overall

PSORIASIS AND HAPPINESS BY SEVERITY

Based on the Cantril Ladder measure of life satisfaction, psoriasis sufferers in the UK rate their happiness level as just 5.1 out of 10, compared with 7.2 for the whole UK population, and these happiness levels decrease with severity of the disease

Happiness Research Institute 2018



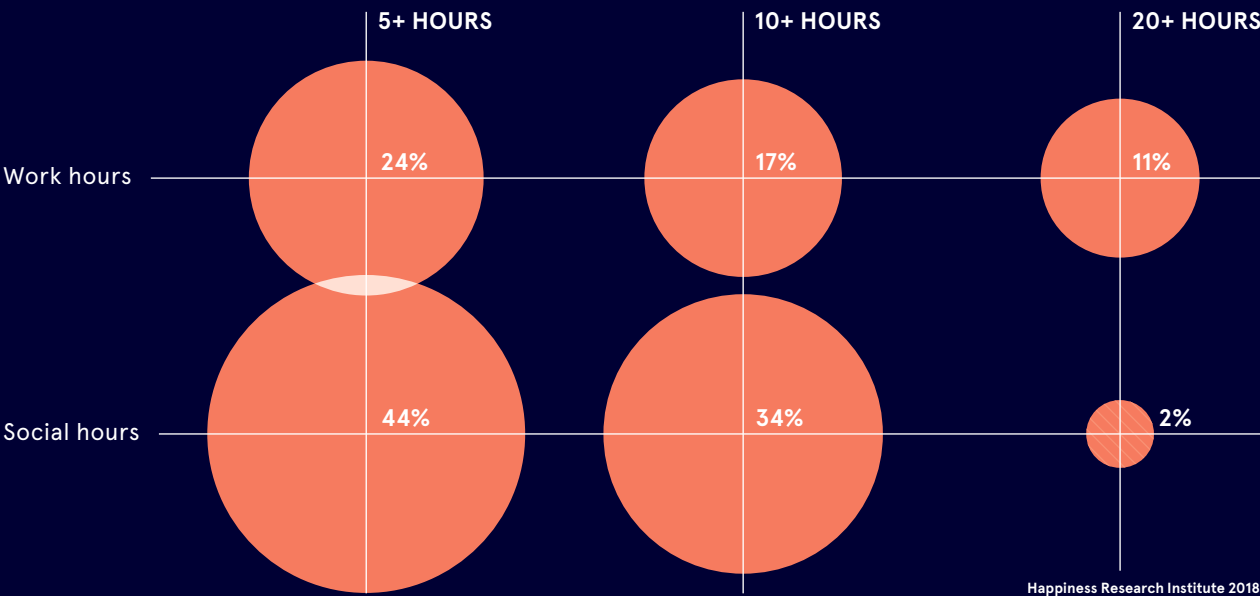
73%
of psoriasis sufferers reported high stress

40%
of psoriasis sufferers reported loneliness

Happiness Research Institute 2018

TIME LOST DUE TO PSORIASIS

Percentage of psoriasis sufferers who have missed work or social hours due to their condition



Happiness Research Institute 2018

THREE WAYS THE MIND AND SKIN INTERSECT

1 Inflammatory conditions are triggered: Anxiety and depression can cause an inflammatory response, which weakens the skin's barrier function and allows irritants in more easily. Skin can lose moisture and heal more slowly

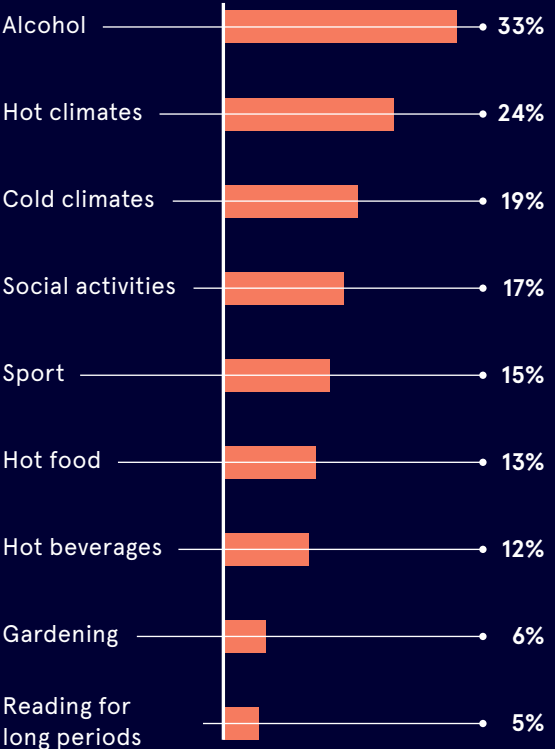
2 Health behaviours change: Sufferers might neglect skincare, hygiene or medication. Anxious people might also start picking or using too many products. As the skin reacts, this becomes a vicious circle

3 Altered self-perception: When anxious or depressed, one's interpretation of skin health and image can change dramatically. What was one small blemish can become a reason to avoid activities and people, exacerbating poor mental health

Josie Howard MD, Healthline 2019

ROSACEA'S IMPACT ON QUALITY OF LIFE

Percentage of rosacea patients avoiding basic activities

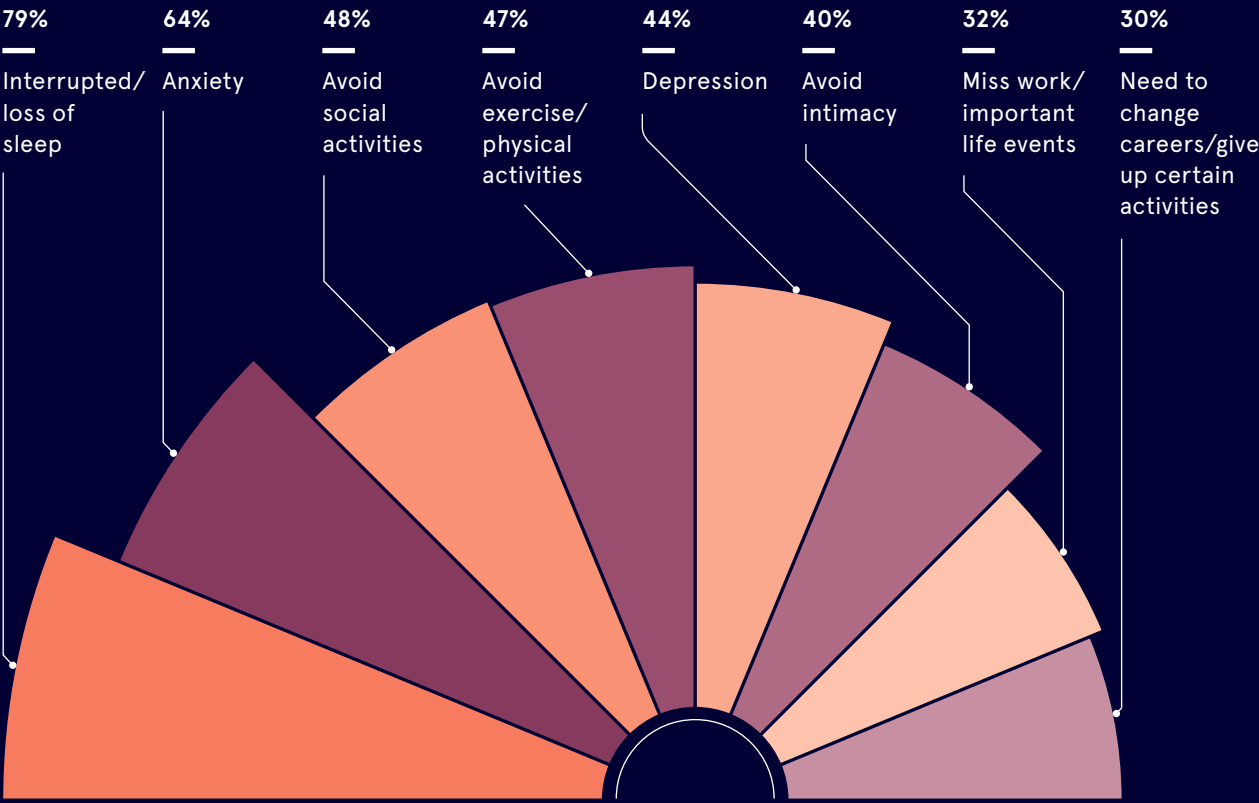


Galderma/British Medical Journal 2018

HOW ECZEMA (ATOPIC DERMATITIS) IMPACTS QUALITY OF LIFE

Respondents were asked: "Has your atopic dermatitis contributed to any of the following for you in the past two years?"

Eczema Society of Canada 2016/17



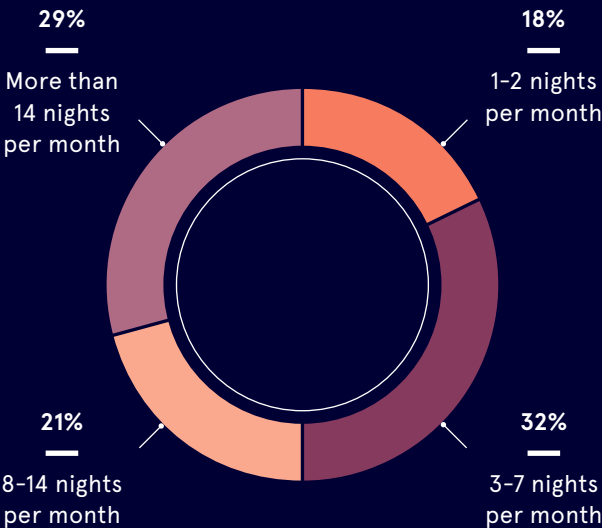
1 in 3
rosacea patients lost confidence as a result of their condition

1 in 10
rosacea patients felt dejected

Galderma, hosted on the British Medical Journal, 2018

HOW ECZEMA IMPACTS SLEEP HEALTH

Number of nights' sleep sufferers said their eczema affected per month



Eczema Society of Canada 2016/17

44%
of patients with acne were found to suffer from at least one mental health condition, compared with 20 per cent of those without acne

63%
higher risk of depression among acne sufferers in their first year after diagnosis, compared with people without acne

Sample of US patients in 2002-2012, British Association of Dermatologists 2019

British Journal of Dermatology 2018

MENTAL HEALTH

Conditions can go more than skin deep

Psychological issues that can arise from a range of skin conditions are fuelling the rise and importance of psychodermatology



Daniela Morosini

Anxiety, depression and obsessive compulsive disorder can all go hand in hand with chronic skin conditions, either as a by-product of a skin issue or even as the catalyst for one. In our increasingly visual culture, the pressure to have perfect, flawless skin mounts every day, as does misinformation about good skin health practices.

Psychodermatology has long been included on the medical curriculum, but it's finally starting to emerge as a field in its own right as a response to a growing mental health crisis.

"I would say the majority of my patients have an underlying mental health concern," says consultant dermatologist Dr Anjali Mahto. "It's hard not to when you're battling a chronic skin condition that has a tendency to flare up at the worst

possible times. A lot of the problems can centre around feelings of control or lack thereof.

"If you have a chronic skin condition like acne or rosacea that has no 'cure' so to speak, that can be really hard to deal with psychologically. It's unpredictable and you can end up planning your life around your 'good skin days'."

As a teenager, Dr Mahto struggled with acne herself and says she saw countless dermatologists, "some good, some not so good", and uses her own experiences to inform how she talks to patients. "I know every trick in the book. When a patient comes in with huge sunglasses or a hat on, or tries to hide behind their hair or won't make eye contact, these are all really good indicators there's a deeper self-esteem issue to be addressed."

Dr Paul Charlson, president of the British College of Aesthetic Medicine, says: "There are a few dedicated psychodermatology units up and down the country, but on the whole it's something everyone needs to be mindful of.

"It got to the point where I'd be waking up and immediately rushing to look in the mirror with a feeling of dread. I never knew if it was going to be a good or bad day for my skin. I just didn't feel like myself anymore and I couldn't relax. If I went out with friends, I didn't want to talk much or be looked at; I just felt shy all the time and like I wanted to be alone," she says.

After a course of antibiotic gel from her doctor, Hannah took the plunge and went for private treatments, which she estimates have cost more than £1,000. "I then struggled with feeling like I was being so vain for even caring, but I also felt so ugly and I hated it," she says.

"My dermatologist is a woman and she's always been really reassuring, but as I see her in a hospital, it still feels a bit clinical to me. And while my skin is good now and I largely feel optimistic, I know if I had a relapse, I'd probably go back to feeling awful again."

As Hannah experienced, access to care remains an issue. Dr Angelika Razzaque at the Primary Care Dermatology Society explains: "Waiting times to see a GP vary from same day for acute or emergency issues to weeks for routine appointments, so increasingly online advice is being sought, or just asking family or peers.

"Also, patients often have a bad experience as GPs are not trained in dermatology, which is a paradox given that 25 per cent of consultations are skin related. Patients often perceive their skin condition

"When I do a consultation with a new patient, body dysmorphia is part of the test. You look for those verbal and non-verbal clues. Part of the therapeutic relationship is supporting a patient and making sure they don't lose faith."

Some of the most pressing psychological issues that go along with skin conditions are anxiety and depression, though some

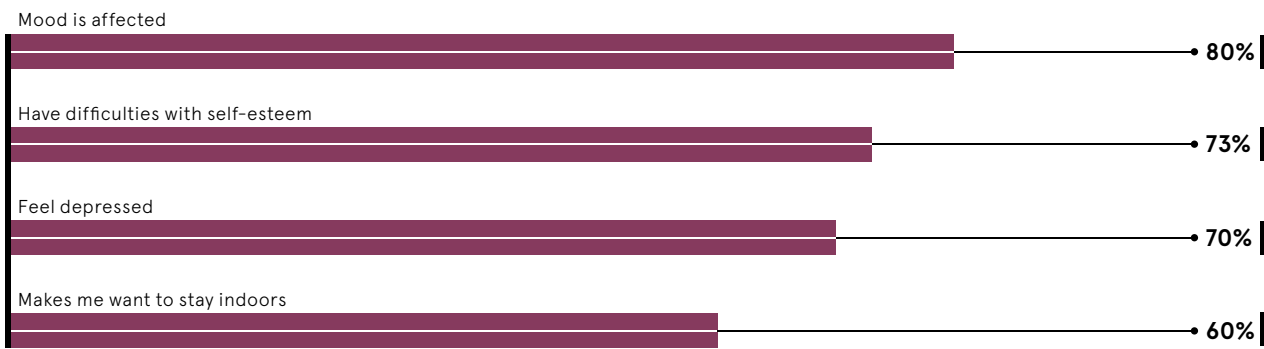
OCD-type conditions can manifest via the skin. For example, dermatillomania, or compulsive picking of the skin, or acne excoriée, where a patient scratches and gouges at their spots, causing scarring.

Hannah C, 27, began private treatment for her rosacea after she found herself increasingly saddened and frustrated by the unpredictable nature of her skin.

HOW SKIN CONDITIONS CAN AFFECT MENTAL HEALTH

UK study of adults who have severe eczema

Allergy UK 2017



“It got to the point where I'd be waking up and immediately rushing to look in the mirror with a feeling of dread

- Clinically-proven
- Steroid-free
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Targeted products to help relieve a range of different skin conditions

UK/2019-0440



The Insta effect

There's something of a cruel joke in the relationship between mood and skin. The anxiety often caused by suffering with something like acne or rosacea can in fact exacerbate the condition, thanks to the body's inflammatory responses to stress such as producing cortisol or interrupting sleep.

At the crux of this skin-mind-health relationship is Instagram, which serves both as a brilliant education tool for many and a refuge for those struggling with a condition, but also as a source of misinformation and unhappiness. Considering, according to Ofcom research, that 44 per cent of users edit their photos before posting and 82 per cent of women in particular say they feel a need to look their best in selfies, it's a breeding ground for discontent.

Consultant dermatologist Dr Anjali Mahto says selfies and Instagram invariably come up in consultations, with patients often proffering filtered versions of themselves as their desired end-goal.

"At the end of the day, your face is your calling card in many situations, both socially and professionally, and being constantly bombarded with images of radiant, glowing skin can skew your perception of normal," says Dr Mahto.

Another issue is that Instagram advice is not peer reviewed or fact checked, leading to some influencers, who command huge followings,

being able to dispense misinformation. A vegan or dairy-free diet is often posited as a "cure", while celery juice, yoga and excessive water consumption are also often suggested, bringing the advice into the realm of "clean" eating. "A narrative is much more convincing than a doctor," Dr Mahto comments.

However, support communities do exist for people with particular skin complaints, such as acne and eczema, and these can be a breath of fresh air for sufferers.

Hannah C says: "I follow a few girls with rosacea on Instagram and that's really reassuring me to see that I'm not the only one."

Likewise, a movement called #FreeThePimple was started by student Louisa Northcote to encourage skin inclusivity, garnering thousands of posts a week. Meanwhile, influencer Em Ford, who has some 880,000 followers, created a video called *You Look Disgusting*, including sections of abusive comments she receives about her acne-prone skin, which ignited a mainstream discussion about how skin is viewed on social media.

Dr Mahto, too, documents the flare-ups of her own acne on Instagram and discusses it frankly and candidly, saying: "Partly why I do it is to show people they're not alone, but also to help stop the spread of misinformation about so-called cures."

possibly as minor compared to more serious problems, such as diabetes or heart disease, and yet most people with skin conditions have worse mental health than people with diabetes."

Of course, the beauty and skin-care industries have seized the skin positivity message, with brands such as CVS, SPKTRM and Lady Gaga-owned Haus Beauty eschewing retouching for their advertising.

Both Dr Charlson and Dr Mahto say it's their responsibility to look for warning signs of suffering in a patient and refer them to a specialist where necessary. Dr Mahto offers "almost all" her patients

psychiatric or psychological referrals to ensure their needs are being met.

"I ask them, 'Do you feel ashamed of your skin? Is it a big deal for you to be here without make-up on?' Those kinds of questions can provide a valuable window into someone's mental state," she says.

The duty of care for a patient with a chronic skin condition goes beyond just the superficial and as pressures continue to mount, thanks to our increasingly visual culture, practitioners will need to take a holistic view to ensure they support patients in mind as well as body. ●



Why a pharmacy is often better than a GP

For mild skin conditions, the best place for advice and treatment may be your local pharmacy

It's getting harder to see a GP. The latest NHS England survey figures show one in three patients are not satisfied with appointment times and conditions have worsened steadily over seven years. The proportion who can get through on the phone has also fallen over the same period, from 80.8 per cent to 68.3 per cent.¹

Dr Richard Vautrey, chair of the British Medical Association's GPs committee, says: "We recognise that patients are often waiting too long for appointments, and this is equally frustrating for GPs and their teams."

But there is a simple solution for many patients: visit a pharmacy instead. Both the NHS and the National Pharmacy Association are encouraging patients

with mild conditions to visit a pharmacy rather than go to a doctor. Many patients will find both the advice and treatment they are looking for, saving them time, and the NHS will be liberated to focus on urgent and severe conditions.

Part of the campaign is to explain the capabilities of pharmacists to the public. "It's true, most consumers don't realise what they'll find at a pharmacy," says Farah Ali, pharmacist at The Perrigo⁴ Learning Pharmacy, Warman-Freed, in Golders Green, north-west London.

"We are qualified professionals with a degree plus a year of registration training, with knowledge and expertise to advise and support patients with mild conditions. We are accessible. My pharmacy is open 8.30am to midnight, 365 days a year. And you don't have to make an appointment. You walk in and see a pharmacist there and then."

For conditions, such as eczema or dry skin, a pharmacist is a sensible first port of call. A pharmacist can offer advice and provide over-the-counter treatment for mild conditions. "Just go and talk to the pharmacist," Ms Ali advises. "The pharmacist will go through every option and refer to a specialist if needed, as over the counter treatments and advise alone may not be sufficient."

The potency of treatments on offer at a pharmacy is higher than patients often assume. The notion that only a doctor can prescribe the right medicine is too simplistic, she says.

"The reason some medicines are prescription only is not only due to

their potency but down to many reasons such as a new drug needing time to bed in, or being restricted to certain conditions. When a medicine has good clinical data, medicines regulators may switch them from prescription only to pharmacy only medicines, allowing pharmacists to recommend these to the appropriate patient," says Ms Ali.

A pharmacist can help navigate the options. For example, an eczema sufferer may need advice on what emollients and other steroid and non-steroid options are suitable.

"A pharmacist can explain the difference and will be able to offer the most suitable medicine over-the-counter," she says.

"We look at many factors such as duration of use. For example, Dermalex is suitable for long term use and is OK for the face."

If patients with mild conditions turn to their local pharmacy, they may find a more accessible, convenient service, offering advice and effective treatments. In just one category, of simple emollients, increase in self-care has already cut NHS spending by 40 per cent since 2012², saving millions.

Further progress would free up NHS time and save scarce resources. It's beneficial for all parties. The trend will accelerate when patients realise what a remarkable service a pharmacy can offer.

Dermalex Eczema treatment is a steroid-free cream developed by dermatologists to treat mild to moderate atopic eczema symptoms, such as itching, redness and dryness.

Dermalex Repair and Restore ultra hydrating moisturiser is suitable for treatment of dry and very dry skin and helps to prevent symptoms of dry skin returning. It is also proven to increase the days without eczema by almost 50 per cent.³

Both are available without prescription from local pharmacies

¹ <https://www.gp-patient.co.uk/surveysandreports>
² NHS Prescription Cost Analysis 2012-2018, NHS England

³ Koppes, SA, et al. Acta Derm Venereol. 2016, 100 patients³ vs. reference cream. Akerstrom et al. 2015 (n=198)

⁴ Farah Ali is employed by Perrigo, the owners of Dermalex.



MICROBIOME

Can your skin ever be too clean?

Revisiting how we think about cleanliness and bacteria could be the key to improving overall skin health. Clean is good, but can you have too much of a good thing?

Daniela Morosini

We're all familiar with the old adage that cleanliness is next to godliness and yet a new movement is suggesting the fastidious sanitisation of our lives could be doing more harm than good. Talks of "rewilding" or "reconnecting" with nature are cropping up and just like the interest in "good bacteria" for the gut before it, the focus is on the microbiome. As allergic reactions and inflammatory conditions such as eczema and psoriasis continue to rise, attention is shifting towards the idea of a healthy bacterial balance and how it can not only protect the skin, but also help repair it. The microbiome, in essence, is a community of organisms that live on the skin, including bacteria, viruses and fungi. It's a finely tuned ecosystem that controls a surprising amount about our health and, much like gut bacteria, it can have far-reaching consequences. "Your skin microbiome is already under pressure, as the skin is quite acidic. For example, sebum, the spot-causing oil, is actually

antibacterial. So the microbiome already has a bit of adjusting to do to that," explains Professor Carsten Flohr, consultant dermatologist and eczema specialist. "It's a very intricate balance on the skin and when the regulation fails, you get problems. For example, eczema is linked to the overgrowth of a certain bacteria." Now research and brands are suggesting our lifestyles are also damaging the microbiome and taking our skin health down with it. "Hygiene is not bad," says Jasmina Aganovic, president of Mother Dirt. "But we have moved to a point of sterilisation." Founded in 2014, Mother Dirt's hero product is the AO+ Biome Mist, which contains live bacteria and so needs to be kept refrigerated. An MIT graduate, who previously worked at LVMH and Fresh Skincare, partnered with David Whitlock, a chemical engineer and fellow MIT alumnus for the venture. "Remember, humans used to walk barefoot, swim naked in rivers; bacteria was very ubiquitous. And now, as our lives have been taken indoors

and we're less in touch with nature, we're feeling the effects. There have been studies that have sequenced the microbiome of uncontacted tribes around the world, which show they still have this bacteria and the rest of the world has lost it. And these tribes don't have the same incidences of acne, eczema or other inflammatory conditions," says Ms Aganovic. Indeed, a 2015 study of the microbiome of the previously uncontacted Yanomami tribe found they possessed an unprecedented volume of bacterial biodiversity and even possessed some functional natural antibiotics. The bacteria, which much research, including Mother Dirt's product line, centres on, is referred to as ammonia oxidising bacteria. Believed to feed on sweat and then convert into nitrite and nitric oxide, it functions as a sort of built-in cleanser and deodorant. "Some people even refer to the microbiome as a new organ system or the second genome," says Ms Aganovic. "It can impact everything from the look and feel of skin, how oily it is and the texture." A number of beauty brands are looking to capitalise on the movement. L'Oréal has patented several bacterial treatments for dry skin for use in a number of their brands from Lancôme to La Roche-Posay, and Estée Lauder-owned Clinique use *lactobacillus ferment* in the Clinique iD Moisturiser range. Much research around the microbiome has focused on inflammatory conditions, such as eczema, while trials have also been undertaken for conditions including keratosis pilaris, the red bumps that can present on arms and legs sometimes referred to as "chicken skin". "Eczema is not just an unpleasant and painful condition, but it also represents a breakdown in the skin barrier," says Professor Flohr. "This can then leave the skin more open to infection or other kinds of irritation and people who have very severe eczema are more likely to have hay fever as well, for example." It's widely accepted we have gradually lost some strains of bacteria from our microbiome, such as ammonia oxidising bacteria, as our lives moved indoors and became less agricultural. "It's worth noting modern hygiene practices of literally having hot water piped into our homes and using antibacterial surfactants every day is relatively new in evolutionary terms," adds Ms Aganovic. "Evolution is a slow process and it took thousands of years for our microbiome to develop to the point it was at before."



Hsui lee/Unsplash

Both Ms Aganovic and Professor Flohr agree we're just at the beginning of our understanding of the full potential of the microbiome. Professor Flohr points out that the technology needed to investigate this thoroughly is still only about 15 years old. What we do have, however, is a potential paradigm shift in the way we think about cleanliness and bacteria. Just like your doctor may now advise a side of kefir with your course of penicillin, consumers

are starting to think twice about lathering up in the same way they did before, especially if they're suffering with an atopic inflammatory condition. With the knowledge that hard water can exacerbate skin conditions, and fears around pollution and skin damage, we're left with the perfect storm of modern, Western issues: how clean is clean enough? And could our daily hygiene practices be harming us, not helping us? ●

“It’s worth noting modern hygiene practices of literally having hot water piped into our homes and using antibacterial surfactants every day is relatively new

OPINION

‘People with skin disease deserve better’

Dermatology is a medical speciality of enormous significance, but historically one that has been marginalised within medical school education in the UK. The skin is our largest organ with more than a thousand diagnoses. More attention needs to be paid to preparing doctors for the challenges that patients suffering from skin conditions face. Delay in diagnosis and treatment, and an underestimation of the psychosocial and economic burden of skin disease, are only a few of the consequences of an underinvestment in dermatology. Alarming trends to outsource dermatology entirely to the community, leaving hospital inpatients deprived of expertise, pose further challenges. Skin conditions have been subject to prescribing restrictions with an expectation of self-care. This has often been misinterpreted as self-funding, neglecting the fact that conditions such as eczema, psoriasis and acne are long-term conditions, which should be on par with others including hypertension or heart disease. Patients usually rate the psychological impact of skin disease far higher than, for example, having diabetes. Waiting times for an appointment in secondary care are in many areas beyond the 18-week referral-to-treatment target the government has set, largely because priority has to be given to suspected skin cancer cases. Patients face the problem of either not being given a prompt diagnosis or, if treatment options in primary care are exhausted, they do not get timely access to secondary care. Patient experience tells us that healthcare provision is in crisis, but what are the solutions? With budget cuts across health and social care, efficiency measures have been introduced, which have promised improvements in care, but often are compromised by the lack of advances in technology. Our computer systems are not "talking to each other" and we have not quite yet reinstated the good old "clinician-to-clinician chat" to improve patient pathways and flow. Initiatives such as Advice and Guidance have improved matters, particularly where teledermatology for skin conditions has been embraced at the same time, but it is not a quick solution for an ever-growing demand. Workforce implications need to be more thoroughly considered with additional investment, as well as embracing multi-professional

learning, provided by the Primary Care Dermatology Society, for example, to benefit patients. The future will pose even more challenges with populations living longer and environmental changes impacting on individuals' health. We will, inevitably, face a greater burden of disease overall. The incidence of skin cancer has significantly increased and is anticipated to continue to do so if we do not encourage behaviour change through public health initiatives when it comes to excessive exposure to sunlight. Community-based dermatology clinics are able to support primary care in the management of skin disease, which is estimated at approximately a quarter of the current workload in general practice, but there is great variation in its application. Getting It Right First Time, the NHS improvement programme, is being employed in some places to ensure patients are seen at the right time in the right place by the right person, but there is a lack of consistency across dermatology service provision. People with skin disease deserve better. We need to increase dermatology education in medical school, in GP and other primary care healthcare professional training. More emphasis needs to be paid on the psychosocial and economic burden by recognising many skin conditions are long term and need to be managed as such by ensuring access to appropriate treatments and monitoring of associated comorbidities. None of this can be done without sufficient investment in the workforce and technology. It is time for policymakers to raise the bar to improve outcomes for patients suffering from skin disease, providing them with better quality of life, better mental health and increased longevity. A better experience of healthcare without variation and inequalities, a better NHS. ●



Dr Angelika Razzaque
Executive chair
Primary Care Dermatology Society



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All educational content is developed under the guidance of the Action Eczema steering committee with the support of Siyemi Learning ([siyemi.org](https://www.siyemi.org)), an independent CME provider. Siyemi Learning is accredited by the Accreditation Council for Continuing Medical Education (ACCME) to provide continuing medical education for physicians.



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THE MODERN FACE OF DERMATOLOGY

Azitra is harnessing ‘good’ bacteria to treat skin disease

Clinical-stage medical dermatology company Azitra is making strong progress towards clinical testing and commercialisation

Skin diseases are among the most common health problems worldwide. There are more than 3,000 known diseases of the skin and the most severe can limit life chances, cause disability and impairment, and death.

Also skin diseases impose a heavy burden on society, with financial, social and psychological consequences for patients and their families. The Global Burden of Disease project has shown that skin diseases continue to be the fourth leading cause of non-fatal disease burden worldwide.

Chronic and incurable skin diseases, such as psoriasis and eczema, are associated with significant morbidity in the form of physical discomfort and impairment of patients’ quality of life, while malignant diseases, such as malignant melanoma, carry substantial mortality. Despite this, skin disease historically has not attracted the investment in care or research that it undoubtedly requires.

Thankfully, awareness of the importance of access to care for skin disease is improving. In no small part, this is thanks to technological advances in research that were not available only a few years ago. This has deepened our understanding of the genetic make-up of skin disease and is leading to the creation of innovative new treatments.

This is where Azitra comes in. Azitra is a clinical-stage company that is developing novel therapeutics to treat adverse skin conditions by harnessing the human microbiome. Azitra has a discovery-stage platform focused on the identification and development of microbiome-based therapeutics and bioactive compounds that can be derived from commensal bacterial strains. These strains and their bioactive compounds can be used for treating disease and addressing skin appearance.

The human skin serves as a barrier to the outside world and is also rich in micro-organisms, which are collectively known as the skin microbiome. They play a crucial role in maintaining

good health and skin appearance. The microbiome is made up of many different types of microbes. It is a diverse community of bacteria, fungi, mites and viruses that provide protection against disease, and keep the skin looking smooth and moist.

Azitra is solving the challenges of skin disease by using “good” bacteria naturally found in the skin microbiome, such as the commensal *Staphylococcus epidermidis* (SE). An abundant member of the skin microbiome, SE plays an important role in beneficial processes, such as tissue repair and immunity.

There is a robust body of published, high-impact evidence around SE, with articles in journals including *Nature*, *Science* and *Cell*. With significant venture capital support and funding in America from the National Science Foundation, National Institutes of Health and US Department of Defense, Azitra is working with the skin microbiome team at the Jackson Laboratory in Farmington, Connecticut, to explore treatments from SE that can address skin disease.

One of Azitra’s strategies is to reintroduce the bacteria that help keep the skin healthy and whose population may become limited during an infection. Another is to use SE to deliver biotherapeutic proteins to the skin. Direct application of commensal bacteria can treat dysbiosis, a microbial imbalance, or microbes associated with disease, as well as skin inflammation, tissue damage or a weakened skin barrier.

These properties are being harnessed by Azitra to create novel therapeutics for skin diseases. This is the case with cancer therapy-associated rashes, which are skin diseases linked to chemotherapy and associated with dysbiosis, and with elevation of the *Staphylococcus aureus* population that lives on the skin.

Azitra’s product portfolio addresses the cause of skin disease and the consequences of dysbiosis. AZT-02 is designed for people with Netherton syndrome (NS), a serious genetic disorder for which there are few treatment options. Affecting one in 200,000 children, NS skin is sensitive, open, red, scaly and subject to excess shedding. Some 10 per cent of infants with NS die in their first year.

NS is caused by mutations in the SPINK5 gene, which makes LETKI protein. Applied topically, AZT-02 provides continuous delivery of functional LETKI, a protease inhibitor involved in regulating the rate of skin loss.



“

As we move into more clinical trials, we hope we can offer relief to patients suffering from debilitating skin diseases

Julia Oh, assistant professor at the Jackson Laboratory, says: “There is increasing evidence the microbiome plays a vital role in many diseases and the potential of rationally designing microbes to express proteins that can treat a skin disorder such as NS is very exciting.”

Similarly, SE is being engineered by Azitra to deliver other beneficial proteins to the skin. For example, the delivery of flaggrin, which is key to skin structure and moisture, could help treat eczema and ichthyosis vulgaris, and interleukin-10 could help treat psoriasis.

Another of Azitra’s products, AZT-04, is a non-protein-expressing strain of SE, designed to treat skin with severe rash driven by excess levels of *Staphylococcus aureus* on the skin. The strain requires a supplement added

to the product to grow. In this case, the necessary addition is the amino acid D-alanine, which the bacteria can grow off for two days only. When the D-alanine is used up, the bacteria die and the products must be reapplied.

Azitra brings together a strong leadership team. Richard Andrews, president and chief executive, has enjoyed a successful career translating research and academic discoveries into product development and advanced clinical programmes. His work has primarily focused on skin disease, pneumonia and kidney failure, and he has helped to raise more than \$130 million in equity funding for new ventures.

Travis Whitfill, chief scientific officer and co-founder of Azitra, has a background in molecular biology and biochemistry. He has co-founded a number of biotech and healthcare companies. He is a partner at Bios Partners, a healthcare-focused venture capital fund, and senior analyst at Bios Research, which provides research to institutional investors.

Trudy Grossman, vice president of research, is a world-class microbiologist who has led the development of a number of important therapies for skin disease. Senior director of product development is Gilles Dubé, with more than 15 years’ experience supporting drug discovery and

developments. Before joining Azitra, Dr Dubé served as head of pharmacology and non-clinical development at two biotech companies. Roger Léger is vice president of chemistry, formulation and development.

Mr Whitfill says: “We are developing commensal organisms to serve as a unique, living delivery system for the cost-efficient production and topical delivery of important therapeutic proteins. We have shown that our proprietary strain of SE can be engineered for the delivery of therapeutic proteins, and can efficiently colonise both healthy and diseased skin. As we move into more clinical trials, we hope we can offer relief to patients suffering from debilitating skin diseases.”

With a strong technology platform and leadership team with a proven track record, Azitra is making good progress towards delivering much-needed therapies to alleviate skin diseases that have previously been overlooked, to the benefit of patients all over the world.

For more information please visit www.azitrainc.com



TELEMEDICINE

Teledermatology may help ease the burden on the NHS

For mild or moderate skin conditions, patients and doctors are increasingly turning to teledermatology

Danny Buckland

NHS doctors, who spend three million hours a year assessing skin conditions, are increasingly turning to dermatology telemedicine to navigate a strained diagnostic system.

Skin diseases are among the most common ailments presented to healthcare professionals, yet dermatology is not prioritised in the GP training curriculum and is starved of resources.

Around 24 per cent of the public seek medical advice for skin conditions and a report by the Association of the British Pharmaceutical Industry (ABPI) earlier this year called for urgent action to “make dermatology an exemplar for integration, self-care and harnessing technology and innovation”.

The ABPI Dermatology Initiative report identified telemedicine – the use of secure mobile devices to upload and share images and video links for remote patient monitoring

– as a vital tool to support triage and referral if properly integrated with existing services. The take-up is gathering momentum.

Skin cancer rates have risen by 70 per cent for people aged 25 to 49 since the 1990s, according to Cancer Research UK and, with one in ten consultant dermatology posts vacant, the stress on secondary care is an advancing concern.

“Technology needs to be embraced on a wider scale and interoperability of systems is key. For this, hearts and minds need to change as well as further investment given to technology,” says Dr Angelika Razzaque, executive chair of the Primary Care Dermatology Society. “Clinicians and managers need to be more open minded and need to have more time for innovative thinking. With busy clinics and government targets to keep up with, there is little room for creative thinking.”

“

A lot of our skin cancer clinics are full of patients with benign lesions because the GP has nowhere else to send them

added a function to our app that made it easy for GPs to take photos safely using their own phone. The photos aren’t saved on the phone nor the user’s photo stream. They are saved to the cloud and can be easily exported to the patient record or the NHS electronic referrals system.

“The photos can also be shared directly with NHS dermatology teams. It’s now the most used photo app in the NHS.”

Dr Alice Overbury, who has used Consultant Connect at her practice in south-east London, says the system was “revolutionary” in helping provide fast diagnoses and targeted referrals.

Online dermatology service Dermatica allows patients to upload three photos of their skin for remote review for speedy identification and therapy of conditions such as acne, which if left can become a devastating burden. “We offer efficient, effective and affordable access to specialist care for common, mild-to-moderate skin conditions, such as acne and anti-ageing concerns,” says Dermatica’s Dr Natalie Spierings.

Established teledermatology schemes have been credited with reducing waiting times and costs, while also improving convenience for patients and spreading knowledge across healthcare. “Hospital trusts are now looking at it to streamline the patient pathway and reduce waiting times of four to six months, down to two weeks,” says Dr Adil Sheraz, consultant dermatologist and British Skin Foundation spokesman. “Patients get seen quicker and get a treatment plan in place, particularly for more benign conditions such as rashes, acne or a mole where the GP just wants a second opinion.

“At the moment, a lot of our skin

cancer clinics are full of patients with benign lesions because the GP has nowhere else to send them and the patient does not want to wait six months. Teledermatology allows GPs to access expert opinion to refer with full confidence and reduce skin cancer lists.”

Dr Sheraz adds that safety protocols, patient data and confidentiality are robust, but image quality, combined with good patient history, are key to a successful system.

“We have a growing and ageing population which means more lesions, skin cancers and other age-related skin complaints. There are not enough dermatologists to meet the demands. Teledermatology is now seen in a more positive light and can provide a quicker access point for a dermatological opinion, and is often more convenient for patients in terms of travel and logistics,” he says.

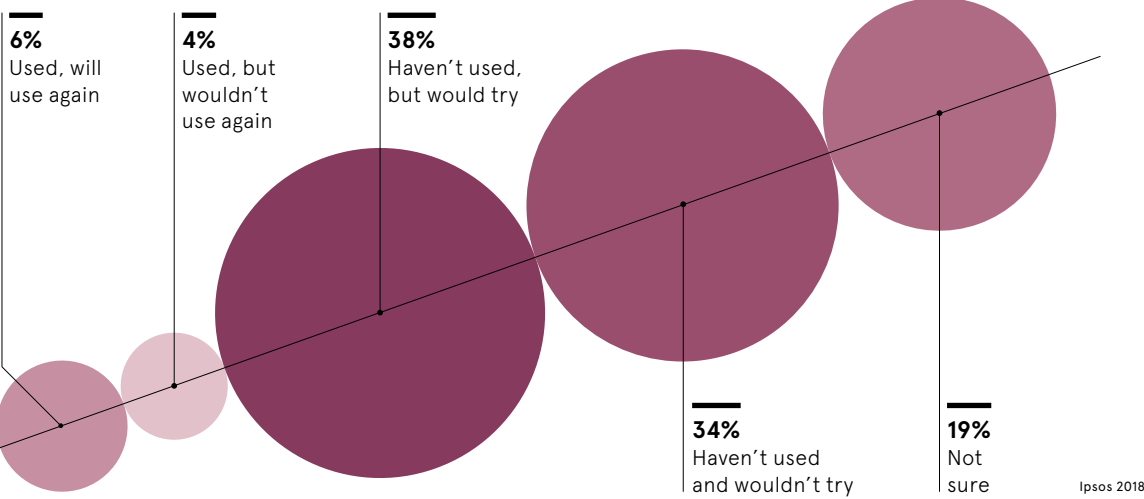
“We’ve had good feedback from both patients and GPs. Of course, it also serves as a great learning tool for primary care physicians who can look back at the images and the final dermatological diagnosis.”

Teledermatology is in its relative infancy and needs initial promise backed up by evidence that it can consistently impact waiting times and improve patient pathways. Integrating systems and reimbursement for telemedicine across the vast NHS landscape will also prove a logistical and financial challenge.

Dr Razzaque concludes: “There is some benefit in accessing telemedicine and teledermatology, but there are limitations and, for clinicians being able to give advice, the quality of photographs needs to be good, as well as the information supporting the photo. Patients still prefer face to face and it remains the gold standard of consultation.” ●

CONSUMERS MIXED ON USING TELEMEDICINE

UK consumer survey



>3k

known skin diseases, the most severe of which can limit life chances, cause disability and impairment, and death

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