

What's in the journals

(Ones you might have missed and latest trends)

JoAnn See, Dermatologist at Central Sydney Dermatology

Dr See is a dermatologist in private practice in Sydney. She lectures internationally on the topic of acne and skin care. She is a member of the International Global Alliance to Improve Outcomes in Acne; a body dedicated to evaluating the "best treatment" of acne and advancing the understanding of acne science.



How to tackle antibiotic resistance in dermatology

This review by **Radhika A Shah and colleagues** explores dermatological conditions, such as acne, in which development of antibiotic resistance is a risk. Recommended treatment durations with oral antibiotics in acne is three to four months in order to limit the development of resistance and promote stewardship. They also recommend benzoyl peroxide in combination with antibiotics and/or topical retinoids because of its bactericidal properties and no known associated resistance. New treatments such as sarecycline and topical minocycline are also discussed. [therapeutics](#) ¹

Photodynamic therapy may improve acne inflammation

Karolina Wojewoda and colleagues performed a small split face placebo-controlled study evaluating a modified PDT protocol for the use of MAL-PDT in acne. They found that in comparison to baseline, the number of inflammatory lesions at 20 weeks on cheeks treated with MAL-PDT showed a relative decrease of 74% in the group with two treatments and 85% in the group with four treatments. "This new treatment regimen for both MAL-PDT and red-light-only PDT, with shortened pre-treatment and reduced light dose, could be an effective modality," they said. Although no statistically significant differences were found, there was a trend towards improvements in inflammatory and non-inflammatory acne lesions in the treatment arm after four, 10 and 20 weeks. However, adverse events such as pain is likely to be a limiting factor with this treatment modality. [therapeutics](#) ²

Patients with acne have more diverse skin microflora

This study by **Jian Shi and colleagues** aimed to explore the microbial differences between patients with acne and healthy controls. Skin microbe samples were taken from 16 participants. Those patients with acne showed increased diversity of skin microbiota in their samples. The findings indicate the importance of maintaining the skin's commensal microflora balance. You can then conjecture that certain conditions may alter this microflora such as climate, wearing masks and face washing. [skin microbiota](#) [causes of acne](#) ³



Exposure to BPA commonly occurs through water and food containers, and could be a factor in acne development and severity.



Endocrine disruptors may affect the severity of acne

Bisphenol A (BPA) could be a factor in acne development and severity, this study by **Hatice Kaya Ozden and Ayse Serap Karadag** has found. Exposure to BPA is commonly found through water and food containers. This prospective case-control study evaluated BPA levels in acne patients compared with healthy controls and found urinary BPA to be higher in acne patients and levels correlated with acne severity. The median levels of total BPA were significantly higher in the acne group compared with the control group, and acne severity was positively associated with the BPA values. Despite the small numbers, it will be interesting if similar results can be replicated in other countries. [causes of acne](#) ⁴

Review finds alternative therapies are ineffective

For consumers faced with overwhelming choices of acne treatments, alternative therapies can be appealing. The popularity of complementary and alternative medicine (CAM) continues to rise, with a perception by consumers that "natural" remedies are safer. This US systematic review and meta-analysis synthesised existing data regarding the efficacy of CAM in acne, atopic dermatitis and psoriasis. A literature review identified published randomised clinical trials and cohort studies measuring the efficacy of skincare ingredients including aloe vera, coconut oil, apple cider vinegar, tea tree oil, oatmeal, witch hazel, green tea and turmeric. "Only data from the qualitative reviews showed a reduction in the primary outcome measures with CAM treatments. Within the quantitative data, there was no statistically significant difference in improvement between the CAM treatments and placebo groups in all three diseases examined," **Virginia Jones and colleagues** wrote. "Based on our quantitative findings we conclude that there is insufficient evidence to support the efficacy and the recommendation of CAM for acne, atopic dermatitis, and psoriasis." [alternative treatments](#) ⁵

Managing acne in general practice

GPs are often the first healthcare professionals people talk to if they have a skin concern. Dermatologists from All About Acne regularly participate in forums with healthcare practitioners to share research and discuss latest updates. Here, Dr Kurt Gebauer answers some questions from a recent GP forum.

Clinical Associate Professor Kurt Gebauer

Dr Gebauer is a consultant dermatologist in private practice in Fremantle, WA, who practices in general and industrial dermatology. He has a special interest in clinical research and has conducted trials in acne and other dermatological diseases. He lectures medical and paramedical groups in WA and internationally, and has been a specialist adviser to GP publications.



Do hormonal contraceptives help improve acne?

Using any oral contraceptive pill will improve acne in about 80% of women. Generally, there will be no clinical improvement for at least three months, and the best results are from six months onwards. It's probable that oral contraceptives containing cyproterone are the most effective, while Depo-Medrol and Implanon may destabilise acne.



Why do young adults in their early 20s sometimes still have acne once puberty has finished?

Puberty increases the production of sebum, which then unmasks the abnormal sebaceous gland follicular blockage problem resulting in acne. Many people in their 20s have the same hormone levels as 15-year-olds. Puberty causes sebaceous glands to switch on, and once switched on, hormonal changes aren't terribly relevant.

Can GPs initiate topical retinoids, and are any investigations needed beforehand?

GPs can prescribe topical retinoids and don't need to do any investigations. Topical retinoids are traditionally used at night because of theoretical concerns about photosensitivity. Women should cease its use during pregnancy. There is absolutely no evidence that topically-applied retinoids are absorbed, however this is in the packaging and is a source of anxiety for unexpectedly pregnant women. It's standard practice to separate the use of retinoids by a month before a planned pregnancy.



Laser hair removal safe during isotretinoin treatment

A small Turkish study shows that laser hair removal is safe in patients taking systemic isotretinoin. Sukran Sarigul Guduk and Gulsen Tukenmez Demirci analysed 52 patients who underwent laser hair removal during isotretinoin treatment. Some reports of scar and keloid formation in patients receiving systemic isotretinoin have led to a conservative approach and a delay in laser procedures for up to 12 months after the completion of isotretinoin treatment. This research shows that it's safe to go ahead. "The incidence of side effects was not significantly different between the 2 groups ($p > .05$). Neither patients in the isotretinoin group nor those in the control group experienced blistering, pigmentation, ulceration, and scar or keloid formation," the authors wrote. ^{isotretinoin 10}



Factors affecting acne relapse after isotretinoin therapy

It's frustrating for patients and physicians alike when acne relapses after oral isotretinoin treatment.

A paper by Elif Demirci Saadet evaluated factors affecting relapse after oral isotretinoin treatment in patients with acne.

This cross-sectional study examined the relapse factors and frequency of 212 acne patients using 0.3-1 mg/kg/day oral isotretinoin for at least four months. Patients had a mean age of 23.5.

The relapse rate was 37.3%, and the median time to relapse was 10 months. The rate of relapse was higher in patients younger than 20, those with macrocomedone-type acne, and those with residual lesions at the end of the treatment.

To prevent relapse in patients with acne using oral isotretinoin, it's important to continue treatment until complete clinical improvement, and extend the treatment for at least one more month regardless of the cumulative dose, Dr Demirci Saadet wrote.

All About Acne co-chair Dr JoAnn See said: "We may be rethinking the cumulative dosages that were the basis for prescribing.

"It may be better to judge according to clinical clearance, and add in a few months so that the patient clears. Ideally they would be clear for a further two months before they stop isotretinoin." ^{isotretinoin 6}



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Lack of psoriasis training has implications for acne

Many registrars and newly qualified GPs see few cases of psoriasis during their vocational training, potentially making future treatment and management of psoriasis challenging. This Australian study assessed how often specialist GP vocational trainees - or registrars - provide clinical management of psoriasis.

The study by **Nawaz and colleagues** analysed data from 1,741 registrars and 241,888 consultations. They found that only 0.22% of registrar consultations involved a psoriasis diagnosis or issue.

"While this is comparable to the frequency with which established GPs encounter psoriasis, this equates to approximately once every eight weeks, or approximately 10 times during registrars' three core general practice training terms."

A follow-up appointment was organised for only 36% of psoriasis diagnoses, suggesting low continuity of care.

Along with a lack of undergraduate and hospital experience of the disease, this low frequency of psoriasis management suggests there may be unmet learning needs relating to the condition, they wrote.

"We think that this could be the case with acne management as well," All About Acne co-chair JoAnn See said. "Trainees will see few acne cases throughout their training which means long-term management of these patients will be difficult. Acne is such a common condition that GPs see in day-to-day practice, so it would be good for registrars to have a firm understanding of the disease before they go out into practice." education ⁷



Post-inflammatory hyperpigmentation can be long-lasting and more distressing than acne itself.

The challenges of post-inflammatory hyperpigmentation

The inflammatory process of acne can cause skin pigmentation in people with darker skin tones, known as post-inflammatory hyperpigmentation. It occurs when inflammation stimulates excess melanogenesis and abnormal melanin deposition.

It's more common among people with darker skin tones, and can be long-lasting and more distressing than acne itself.

Nada Elbuluk and colleagues discuss what is known about acne-related pigmentation.

"Because dyspigmentation poses both a significant clinical concern to patients and a therapeutic challenge to clinicians, we formed a working group consisting of pigimentary experts with the aim of increasing awareness and education of acne-related pigimentary sequelae."

As dyspigmentation is a significant clinical concern to patients and a therapeutic challenge to clinicians, more awareness and education of acne-related pigimentary sequelae is needed, they write. hyperpigmentation ⁸



Study examines evidence of isotretinoin side effects

Concerns about the adverse effects of isotretinoin remains a barrier to its usage, according to an article published in the *Journal of Dermatological Treatment*. "A possible association with depression has gained widespread media attention and is a source of concern for patients and carers, but data from prospective studies and recent meta-analyses has been reassuring."

This study by **Haady Fallah** from The Skin Hospital Sydney and **Marius Rademaker** from the University of Auckland provides updated evidence around the side effects of isotretinoin.

The authors examine the evidence around common adverse effects including flare of acne, depression, inflammatory bowel disease, benign intracranial hypertension, ocular effects, hyperostoses, premature epiphyseal closure, muscular effects, teratogenicity, effects on male and female fertility and on laboratory monitoring. They suggest practical strategies to prevent and manage these adverse effects, and appropriate laboratory monitoring for patients taking isotretinoin.

"With almost 40 years of experience using isotretinoin in the management of acne vulgaris, our understanding of its mechanism of action, and the optimal way in which it should be prescribed continues to evolve. Isotretinoin has been associated with numerous adverse effects, although the risk of many of these can be substantially reduced by using lower dosages," the authors write. isotretinoin ⁹

We're changing the face of acne treatment¹⁻⁵

The only acne treatment in Australia with the **fixed-dose** combination of an antibiotic and retinoid in an **easy-to-use, BPO-free** gel that works to improve acne.¹⁻⁵

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PBS Information: This product is not listed on the PBS.

References: 1. Acanatop® Product Information. 2. Dreno B *et al.* *Eur J Dermatol* 2014; 24(2):201-9. 3. Ochsendorf F. *J EADV* 2015;29(Suppl.5):8-13 4. Leyden JJ, Wortzman M. *Cutis* 2008;82:151-6. 5. Yentzer BA *et al.* *Cutis* 2010;86:103-8.

Viatrix Pty Ltd. Millers Point, NSW. ACN-2021-0113. July 2021. BPO, benzoyl peroxide.

Study to evaluate spironolactone in women

Spironolactone has been widely prescribed for hormonal acne in women for more than 30 years, but there's a lack of robust clinical data. This randomised, double-blind trial will evaluate whether spironolactone is clinically effective and cost-effective in treating moderate or severe acne in women compared to a placebo. The UK study by **Susanne Renz and colleagues** is the largest study to date to inform clinical practice. Participants will receive either spironolactone or a placebo until week 24, then treatment will cease and they'll be followed up for six months. A follow-up of participants will be completed in early 2022. [spironolactone](#) ¹¹

Meet the team at All About Acne

Spot On is a quarterly news and research publication produced for healthcare professionals by a team of senior Australian dermatologists at All About Acne. Meet the team and learn more about our mission and purpose below.



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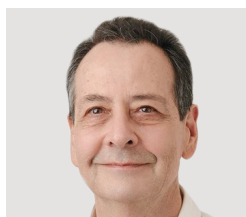
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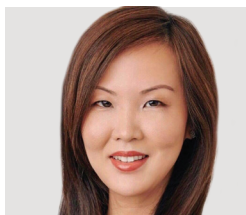
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All About Acne

All About Acne is a not-for-profit organisation run by a team of Australian dermatologists.

It provides independent, evidence-based news and information on the management of acne for healthcare professionals (HCPs) and people living with, or interested in, acne.

All About Acne publishes a website for HCPs and consumers (acne.org.au), a quarterly news publication for HCPs (Spot On) and

a monthly eDM for HCPs (coming soon). It also posts acne content on Twitter, Facebook and Instagram (@AllAboutAcneAU).

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