



ILLUSTRATION: LAUREN REBECK

Love the skin you're in

Your skin is a public broadcasting service that provides you, and everyone who sees you, with a window on your health. Naturopath Tania Flack reports.

WHAT you eat, how healthy you are, and how well (or badly) you are ageing is written across your face, for all to see. Mostly, people are interested in how their skin looks, but perhaps what we should be asking is, what is our skin trying to tell us?

Your skin is your largest organ and it plays a vital role in health. It forms a protective barrier between you and the outside world, and plays an important role in protecting you from pathogens. It is also responsible for helping you regulate temperature, protect against fluid loss, and synthesise vitamin D. It has a complex, multi-layer structure, with the cells of the epidermis (outer layer of skin) being continually being replaced every two to three weeks. And although you might not like to think about it, your skin is home to approximately 1,000 different species of bacteria; this diverse microbial landscape also plays an important role in skin health.

So, how can you achieve glowing, clear, healthy skin? The key lies in nourishing your inner health and providing all the nutrients skin needs to thrive.

Acne breakouts

Skin breakouts affect nearly everyone at some stage of their lives, and it's not just teenagers who are affected. Studies show that in Western populations acne affects approximately 79 to 95 percent of adolescents, 40 to 54 percent of people over 25 years, and 12 percent of women and three percent of

men by middle age. For some, acne can lead to many years of embarrassment, discomfort, and scarring, and can have devastating effects on self-confidence.

What causes acne and why does it persist beyond puberty in some people? Acne vulgaris causes deep, slow-to-resolve, scarring acne. Its development involves several processes, including hyperkeratinisation and blockage of sebaceous follicles in the skin; androgen-stimulated production of sebum; and finally, the sebaceous follicle becomes colonised by a bacteria called *Propionibacterium acnes* which causes inflammation. The hyperkeratinisation and excessive sebum production are thought to have several contributing factors, including a high glycaemic index diet, high insulin levels, excess androgen (male) hormones, poor elimination of toxins via the liver and bowels, psychological stress, and a low dietary intake of vegetables, fruits, and fresh fish or seafood.

Of all of these risk factors, high insulin levels (hyperinsulinemia), seems to be the key trigger, as it drives both hyperkeratinisation and androgen-stimulated sebum production. While genetics may predispose some individuals to be more sensitive than others, dietary intake of high glycaemic index

Dairy is associated with skin problems; interestingly, research shows that skim or low fat milk is even worse for acne than full fat.

Top tips

For preventing acne ...

Avoid all sugar in all forms

Avoid processed and refined carbohydrates, such as bread, pasta, baked goods

Avoid all dairy

Increase your intake of vegetables, fish, high fibre wholegrains and legumes, nuts and seeds, plus lots of water, fermented foods and minimal fruit

Supplement with zinc, vitamin C, bioflavonoids, lipoic acid, broad spectrum probiotics, prebiotics

Cardiovascular exercise, 3 to 4 times a week

Stress management

To slow skin ageing ...

Avoid sugar in all forms

Avoid all roasted, fried and toasted foods; enjoy lightly steamed foods instead

Go organic if you can, or thoroughly wash fruit and vegetables if you can't

Eat a high amount of varied plant foods

Enjoy oily fish, such as salmon, tuna, mackerel and sardines, to increase healthy fats

Eat an antioxidant-rich diet

Supplement with omega 3 essential fatty acids, zinc, selenium, vitamin C, lycopene, resveratrol, beta carotene, lipoic acid

To reduce pigmentation ...

Avoid sun exposure to affected areas

Always use a good quality, high SPF sunscreen

Eat an antioxidant-rich diet

Take care of your hormone health, and avoid oral contraceptive use

Avoid exposure to endocrine-disrupting chemicals, pesticides and plastics

See your naturopath or herbalist to discuss the use of Maritime pine extract

High dietary levels of sugar and processed carbohydrates damage collagen and accelerate ageing.

foods is the primary cause of hyperinsulinemia. One randomised controlled trial investigating the effects of a low-glycaemic index diet on 43 male subjects with acne, found that after 12 weeks subjects on a low glycaemic index diet had significant reductions in acne, greatly improved insulin sensitivity, and improved body composition. Unfortunately, the standard Australian diet is high in sugar, processed foods, and refined carbohydrates, all of which drive this process. So, the first rule of acne recovery is to strictly avoid sugar in all its forms and processed carbohydrates in the diet.

The second rule may not be as obvious. Dairy has long been associated with skin problems and acne, and one of the fastest ways to improve acne is to remove dairy from the diet. But why? Researchers have been investigating the link between dairy and acne for some time now, and have found a link. An Italian study in 2012 involving 563 participants found that the risk of acne increased with milk consumption. Another study of 88 Malaysian women found that those who consumed either milk (of any kind) or ice cream one or more times a week were four times more likely to have acne.

Interestingly, some research indicates that skim or low fat milk is even worse for acne than full fat dairy products. One retrospective study, involving 47,355 women, found that acne was strongly associated with dairy consumption, and those who reported drinking two glasses of skim milk a day had a 44 percent increased risk of acne. The explanation for this difference is thought to be due to the effect that dairy, especially low fat dairy, has on insulin. Earlier studies showed that low fat dairy causes a disproportionate increase in insulin levels despite having a relatively low glycaemic index - three to six times higher, in fact, than would normally be expected. While not many adults in Australia would drink two glasses of skim milk per day, many would consume two skim lattes per day - so there's food for thought!

Exercise is essential for those suffering from acne, as not only does it deliver oxygen to the skin and encourage lymphatic drainage of waste, it also helps to improve insulin sensitivity. Bowel health must also be addressed when treating acne. A diet full of sugar and processed carbohydrates causes significant imbalance in gut bacteria (dysbiosis). Dysbiosis compromises healthy digestive function and promotes low-grade inflammation, hyperpermeability of the gut membranes, and a process called entero-hepatic recycling of toxins, where microscopic particles of toxins are leached across the gut wall back out into

the circulation. This places greater pressure on the body's other organs of elimination, including the skin, and significantly compromises healthy hormone metabolism.

Accelerated ageing

How you are ageing is literally written on our face. Tell-tale signs, such as fine lines and wrinkles, sun damage, age spots, and changes in skin texture and tone are all a natural part of the ageing process. But how rapidly you age can be influenced by your diet and lifestyle. Many different factors contribute to skin ageing, including sun damage, oxidative stress and inflammation - sugar is again a major culprit.

Supple, youthful skin relies on collagen and elastin, connective tissue proteins that support the skin and give it its structure. Normally, these proteins are linked to each other in such a way that if they get damaged, they can be repaired. However high circulating levels of glucose (from a high sugar diet) can bind to these proteins in a process called glycation, which causes cross-linking between collagen and elastin fibres so that they can no longer be repaired. High levels of sugar and processed carbohydrates in the diet damage collagen and accelerate ageing.

The glycation process not only occurs within the body in response to a high sugar diet; it also occurs in some commonly consumed protein- and fat-containing foods when they are cooked. Frying, toasting or roasting foods like red meat, dairy and grains damages their proteins, which creates highly oxidative advanced glycation end products (AGEs). For example, fried chicken has more than six times the AGEs than boiled chicken. When these AGEs are eaten they are absorbed into the body, and cause oxidative stress that can accelerate ageing.

We are exposed to chemicals, pesticides, plastics and other toxins on a daily basis, which can trigger subtle low-grade inflammation and oxidative stress, so limit exposure wherever you can by buying organic or thoroughly washing all your fruit and vegetables, minimising your exposure to household chemicals and avoiding occupational exposure where possible. Sun exposure is important to help you synthesise vitamin D, regulate your circadian rhythms and support healthy mood; however, too much UV exposure causes oxidative damage



and accelerates ageing. I suggest always covering up with a hat and sunglasses to protect the more delicate skin of the face, and limiting exposure when sun is at its strongest in the middle of the day. An antioxidant-rich diet will help to slow the ageing process by neutralising free radicals and protecting against oxidative damage.

Pigmentation

Melasma is the most common type of hyperpigmentation, and usually affects women of reproductive age. It is due to overproduction of melanin by the pigment-producing cells in the skin, which causes patches of dark pigmentation, typically across the forehead, cheeks, chin and bridge of the nose. It often affects women of Asian, Indian, Mediterranean or Hispanic background who have a naturally darker skin tone.

Melasma pigmentation can be quite pronounced and research has found that due to its chronic nature it can significantly impact quality of life, causing distress and loss of confidence. This is a frustrating condition as there are no guaranteed effective treatments, although certain types of laser therapy may succeed in lightening pigmented skin and new research using natural medicines may offer a piece of the solution for this complex condition.

The causes of melasma are poorly understood. More than 125 genes are known to be involved in the regulation of pigmentation, and it is thought that a combination of hormones and UV light exposure trigger the condition in genetically susceptible women. Sometimes called 'the mask of pregnancy', melasma often strikes for the first time during pregnancy when women are expecting to have radiant, healthy skin. It is also triggered by oral contraceptive use. This interaction between the reproductive hormones and melanocytes is complex and more research needs to be done.

Addressing hormone metabolism is an important part of a natural medicine supportive protocol. Herbs and nutrients - such as broccoli sprout extract (indole-3-carbinol), di-indolmethane, rosemary, turmeric, selenium, St Mary's thistle, zinc, B-group vitamins, and flaxseed lignans - all help to promote healthy hormone metabolism. A wholefood, high fibre diet is important, as is avoiding chemicals, pesticides, and plastics that interfere with the endocrine system. Women usually elect to avoid oral contraceptives, as these worsen melasma. As skin - especially the

face - is constantly being exposed to UV light, in genetically predisposed women this causes oxidative stress, which triggers inflammation and a range of cellular changes that impact melanocytes, the pigment producing cells in the skin. Avoidance of UV light and diligent use of sunscreen is an important part of managing the condition.

Several studies using a powerful herbal antioxidant derived from French Maritime pine have reported success in reducing pigmentation in women with melasma. In one Chinese study, the extract was given to 30 women with melasma for one month and a reduction in pigmentation of approximately 80 was reported. This led to a larger, double blind, placebo-controlled study, which again found significant improvement in pigmentation after only 30 days. More recently, a larger randomised, double blind, placebo-controlled trial investigated the effect of the extract in combination with vitamins A, C and E on melasma pigmentation in 60 Filipino women. Again the results were positive and significant reduction in pigmentation was reported. Maritime pine is available in Australia and may be used in combination with other herbal medicines to support women with melasma. It must be prescribed by a qualified naturopath or herbalist. ✨

Tania Flack is a respected Australian naturopath. www.taniaflack.com References available on request.

