

# Detox *(redefined)*

Up until recently, it went hand in hand with crazy diets and extreme juice fasts. Now doctors are realising that a healthier version could be your body's new best friend

By Bonnie Cleaver

**H**ere's a handy bit of life advice: should you ever find yourself at a dinner party with a health professional or two, and fancy spicing up the conversation, drop one word: detoxification. Then, get set for an interesting evening. When it comes to controversial health topics, detox wins hands down. For years, experts have fiercely defended the body's capabilities to detox unassisted, slamming 'cleansing' strategies like over-the-counter detox kits, juice fasts and enemas as hokum. And for the most part, they've been right: the body is a magnificent, self-regulating machine highly capable of processing toxins. Add to that the fact that many detox products on the market are ineffective, and sometimes downright risky.

But in recent times, our understanding of detox has deepened, introducing shades of grey into a formerly black-and-white picture. Increasingly, science is shedding light on the massive array of toxins we contend with daily and their less-than-ideal impacts on our health. At the same time, a growing body of health experts from fields as diverse as toxicology, public health and paediatrics to naturopathy and integrative medicine are endorsing a new approach to detoxing based on sensible, evidence-based lifestyle strategies—sans the coffee enemas and lemon and maple syrup concoctions. Curious? We asked leading experts for the latest news on the detox your body actually needs.

## HEALTH IN TOXIC TIMES

You do your best to live a 'low-tox' lifestyle: you don't smoke, you skip that second *sauv blanc* and you pile your plate with fresh produce. Even so, it's an inevitable fact of modern life that every day your body will encounter and have to process a staggering line-up of toxic substances. "At no time in evolution would we have been exposed to the level of toxins we are exposed to now," reflects Dr Ameeta Gajjar, an integrative general practitioner with an interest in detoxification. "That includes a lot of environmental toxins that our bodies just aren't adapted to."

While there is currently no systematic monitoring of toxins in the Australian population, what we do know is concerning. According to the Public Health Association of Australia, over 80,000 chemicals are now registered for use nationally, cropping up in everyday consumer products including foods and food packaging, clothing, building materials, water, cleaning products and personal care products. Yet 75% of these have never been tested for their toxicity on the human body or the environment.

"Really, we are all part of a global experiment on what happens when you subject populations to a wide range of chemicals," says Professor Marc Cohen, discipline leader for the Wellness Group at Melbourne's RMIT University and a *Prevention* advisor. "There is no-one who

“**WE ARE ALL PART OF A GLOBAL EXPERIMENT ON WHAT HAPPENS WHEN YOU SUBJECT POPULATIONS TO A WIDE RANGE OF CHEMICALS**

is not exposed: we've all got chemicals in our bodies at or near levels that cause harm.”

Before you start googling the shortcut to your nearest eco-commune, know this: it is possible to reduce your toxic load. The first step? Getting savvy about exactly what these insidious 'toxins' are, so you can outsmart them. Toxins can be classed into two categories: exogenous (those absorbed from outside your body) and endogenous (those produced within your body). "Endogenous toxins can include out-of-balance hormones such as stress and reproductive hormones, as well as the byproducts of excess bad bacteria, yeasts and parasites in the gut," explains naturopath and nutritionist Tania Flack.

As for the exogenous or external kind? These are the toxins lurking in our environment, including heavy metals (like lead and mercury), air pollution, pesticides, food additives and 'anti nutrients' (like trans fats, alcohol, refined sugar and processed foods). Add to that volatile organic compounds (found in solvents, petrol and fragrance ingredients), plastics (which can contain hormone-disrupting chemicals phthalates and bisphenol-A) and persistent organic pollutants (POPs)—a diverse group of chemicals linked to everything from antimicrobial products to stain repellents to Teflon pans, which are slow to break down and tend to hang around in the environment and our bodies for years.

All up, it's quite the cocktail of chemicals. The question is, what does it mean for our health and wellbeing?

“People can have exposure to microscopic amounts of toxins over the course of a lifetime and while they're not at levels that will kill us, they are at levels that may potentially decrease how well the body works,” explains Flack. ▶

## —Toxic load checklist— DO YOU NEED TO DETOX?

Adopting a 'clean living' lifestyle is one of the hottest trends in health right now. The question is: how do you know if you need a full-blown detox? The symptoms below could be a sign that a trip to an integrative doctor or naturopath is in order.

- Feeling sluggish with low energy levels
- Poor short-term memory and difficulty concentrating
- Frequent migraines and headaches
- Digestive issues like constipation, bloating, gas and diarrhoea
- Skin problems such as acne, eczema, psoriasis, rashes
- Infections that keep coming back
- Depression, anxiety and mood swings
- Hormonal problems, PMS or infertility
- You're sensitive to odours or chemicals
- Constant allergies
- Experiencing aching muscles and weakness
- Bad breath that won't go away
- Puffy areas around the eyes and dark circles
- Difficulty shedding excess weight
- Sleep disturbances

PHOTOGRAPHY: GALLERY STOCK/OPPER AND THURMAZ

89%

The amount that you could reduce pesticide exposure, simply by eating an organic diet for seven days, according to a recent RMIT University study



PHOTO: SHUTTER/GETTY IMAGES

## BREAKTHROUGH HEALTH



### IMPROVING YOUR GUT HEALTH, EATING DETOXIFYING FOODS, SUPPLEMENTS AND GOOD, OLD-FASHIONED EXERCISE CAN ALL HELP LIGHTEN TOXIC LOAD

"They can cause inflammation in the body and oxidative stress, which in turn damages the way the body's cells work and the way organs work long-term."

While the evidence suggests that individually, many man-made toxins (also known as toxicants) are harmful to our health, what we don't yet know is the outcome of our exposure to a cocktail of interacting, synergistic toxicants. Compounding this is the fact our unique genetic profiles influence how susceptible we are to toxins. "We all have a different genetic ability to detoxify, and certainly infants and babies are at greater risk because they have immature detox pathways," explains Cohen.

Interestingly, it's not uncommon to be missing one or two detoxification genes or have a polymorphism (genetic variation) which may affect your ability to detoxify. "I've noticed this in a lot of clients, and these people in particular need detoxification support so their bodies can deal with the toxins they come into contact with," says Jan Purser, naturopathic nutritionist and clinical detoxification expert. "If someone says to me things like 'I can't have more than a few drinks without getting a bad hangover' or 'I feel really unwell if I don't eat vegetables every day', I think to myself, I bet they've got a polymorphism in their detoxification genes."

The good news is that overall, the human body is an incredibly sophisticated detox machine, able to cope impressively well with the constant chemical barrage of modern life. In fact, our body is continually flushing toxins out through our liver and gall bladder, lungs, kidneys, bowels and skin. The logic for embarking on a detoxification, then? "Given the increased toxic load we are all exposed to, many of us probably need some additional support," notes Dr Gajjar. That support comes in two forms: healthy lifestyle strategies that support our body's natural detoxification processes, as well as reducing our toxin intake in the first place. After all, the lower our intake, the less toxic load we will have to deal with.

#### THE NEW LOW-TOX LIVING

If detox experts had to distill the best way to lower your body's toxic load into just three words, they would be: avoid, avoid, avoid. "Avoidance is your first line of defence, and the good news is that it's becoming easier to do," encourages Lourie. "These days, it's easy to go into a conventional shop and purchase soaps, shampoos, deodorants and other products that are paraben and phthalate free; many major manufacturers of plastic bottles are removing BPA from their products and organic food is getting easier to access and more affordable."

And while it may be years before science can confirm that making 'low-tox' choices with the foods we eat and the products we buy translates to tangible health benefits (like a lower risk of chronic disease or increased longevity), early evidence suggests it does lower our toxic load—which has to be a good thing. Take for instance a recent study on the outcomes of an organic diet that Cohen was involved in. Volunteers were asked to eat at least 80% organic food, or a conventional diet, for seven days, then they swapped over to the alternate diet. On day eight of each phase, the participants provided a urine sample, which was analysed for organophosphate pesticide metabolites (that is, pesticide residues). The upshot? "We found just one week of organic food reduced these metabolites by 89%, which is a pretty dramatic result," observes Cohen. And considering organophosphate pesticides are neurotoxins, that's a strong argument for purchasing organic produce.

Another compelling study published in *NeuroToxicology* compared levels of synthetic chemicals in average women versus those living in an Old Order Mennonite community. Similar to the Amish, Mennonite women live a simple, rustic existence with limited use of personal care products and a diet based on homegrown produce. Sure enough, the researchers found the Mennonite women had significantly lower levels of hormone-disrupting chemicals such as bisphenol-A and phthalates.

It's thanks to studies like these that the value of a low-toxin lifestyle is gaining traction in the health world. Also part of the 'detox redefined' trend? A growing appreciation for the place of sensible, non-extreme cleansing strategies like repairing gut health, eating a range of detoxifying foods, taking supplements and sweat-inducing exercise in lightening our toxic load.

#### WHAT ABOUT ELIMINATION?

A liver so clean it practically sparkles is a common promise of some of the more dubious detox programs like over-the-counter kits and extreme juice cleanses. Sure, it sounds good in theory. Yet according to the more measured approach of integrative doctors and naturopaths, there's no point even contemplating cleansing your liver until your gut is in good order. "What many over-the-counter detox kits do is encourage the liver to step up its detoxification, but then a lot of those toxins end up in the bowel, and if the bowel can't get rid of them you end up with toxins recirculating in the body," explains Flack. "Our approach in naturopathy is very systematic: we start by preparing the bowel so it can accept any toxins, we then focus on healing the gut lining and recolonising the gut ▶"

Testing your body  
FOR TOXINS

Keen to start living a low-tox life? While there's no one-stop-shop test available to assess your body's overall toxic load, there are a range of screening strategies integrative doctors and naturopaths use to help them piece together a picture of your body's toxic burden. Their aim? To gauge whether your detox pathways are firing on all cylinders, or need a gentle kickstart. Here's a few of the most common.

**BLOOD TESTS:** Feeling sluggish? Dr Gajjar often runs blood tests checking for iron, zinc, B12, folate and copper. "Iron and zinc are important in liver detoxification, while B12 and folate issues can point to defects in methylation, an important biochemical process with a role in liver detoxification," she explains. "If your copper is high it can deplete zinc, as well as indicating an environmental source like copper water pipes, or it can be related to underlying genetic issues."

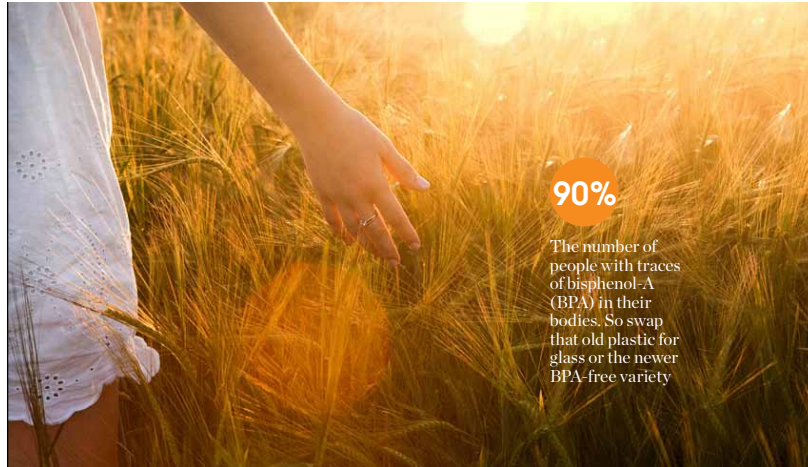
**URINARY INDICAN TEST:** This urine test measures the putrefaction of protein in the gastrointestinal tract by bad bacteria; if test results are positive, it suggests gastrointestinal toxicity due to an overgrowth of bad bacteria, yeasts and/or parasites. "This test, along with a liver test are my starting point with clients," says Flack. "If I'm concerned about their urinary indican result, I'll suggest a comprehensive stool and digestive analysis."

**HAIR MINERAL ANALYSIS:** Yes, your hair can reveal a lot about your body. This test indicates if there are accumulated heavy metals in your system, such as mercury, cadmium and lead. "Some people aren't effective at ridding the body of heavy metals so even low-grade exposure from the environment or the food we eat can lead to bioaccumulation," adds Flack.

**FUNCTIONAL LIVER DETOXIFICATION PROFILE:** Through the use of low doses of aspirin, caffeine and paracetamol, this test challenges the liver's detoxification pathways, revealing how efficiently toxins are being cleared from your body. Very clever!

**HEMAMVIEW:** Also known as live blood screening, this is a go-to test for many naturopaths. "It gives insights into everything from liver stress to immune dysfunction, bacteria in the gut, dehydration and inflammation," says Purser. Using just a pinprick of blood, the test can be repeated over consultations, providing instant feedback on how your health is tracking.

**GENETIC TESTING:** "This isn't a first-line test, but it is something we would consider if a person reaches a plateau with their health. In case there's an underlying variation in their detox genes that's impairing their ability to detoxify," explains Dr Gajjar.



90%

The number of people with traces of bisphenol-A (BPA) in their bodies. So swap that old plastic for glass or the newer BPA-free variety

with healthy bacteria, then we'll start gently doing some work with the kidneys and lymphatic system, and our last stage is supporting how well the liver is working."

This gradual detoxification process may involve steering clear of processed foods, alcohol and caffeine, temporarily eliminating certain foods like wheat, dairy and sugar, and adding in some nutritional and herbal supplements. "If someone has a gut bacteria imbalance, I would put them on specific probiotics and antimicrobial herbs. For healing the gut lining, I might use a supplement containing things like glutamine, aloe vera and slippery elm. Or if we had moved on to liver detoxification, I might use a supplement with herbs like St Mary's thistle and cleavers, along with nutrients like cysteine, taurine, turmeric and broccoli powder," explains Purser.

Unlike the one-size-fits-all approach of quick-fix detoxes, a professionally guided cleanse is tailored specifically for you. For instance, if tests reveal you have a heavy metal accumulation, you may be given specific herbs or even intravenous chelation therapy, which uses binding agents that attach to heavy metals, so they can be excreted. Similarly, unlike the broad-brush pro-colonic irrigation stance of trendy detox retreats, a detox planned by an integrative doctor or naturopath will take into account if your gut health truly calls for a colonic. "It's not something I recommend all the time; I'd only suggest it if a client has a yeast overgrowth or a parasite infection, and it should be done in a clinical environment," explains Purser. What's blatantly evident so far? There's nothing faddish about detoxing, when it's done the right way.

THE LAST WORD ON WELLNESS

It's hard to go past an expert-guided program if you're after a detox that delivers results. That said, there's still plenty you can do to eliminate toxins. Stay well hydrated, pick wholefoods, up your fibre intake to help usher waste through your digestive system and eat plenty of detoxifying superfoods like cruciferous vegetables (such as cauliflower, broccoli and cabbage), garlic, onions, celery, leafy greens and turmeric. In fact, aim to make most of your meals plant-based, viewing meat as the 'gamish'. "Over the past few years I've cut down my meat consumption by 90% and after writing *Toxin Tossout*, I'm more convinced than ever that it's the right thing to do," reflects Lourie. His impetus? "Many synthetic chemicals are lipophilic, which means they reside in fat, so when you consume meat, you're also ingesting chemicals in the fat of the animal."

The fat-loving nature of many toxins is also a good reason to trim down. Keep the weight off, and you'll curb your body's toxic storage capacity. To get in shape go for sweat-inducing exercise; studies show that a vast array of toxicants are flushed out when we perspire. "Anything you do vigorously, whether it's housework, gardening, having sex or dancing, counts," encourages Cohen.

Research to support detox strategies like these is still nascent, but in the future you may well be able to get a cleansing prescription tailored just for you. "The future is about being more specific and individual, looking at a person's biochemistry and their genetic make-up to tailor very specific treatments," predicts Lourie. As for now? Stick to a 'clean' lifestyle and your body will thank you. ■



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