

# 'DETOX' CLAIMS - SUCH A CON!



Reporter HANNELIE BOOYENS investigates the efficacy of popular cleansing foot spas and plasters. A load of nonsense, medical experts say



**M**INUTES after Hannes Potgieter put his feet in the detox foot spa he was speechless. The clear salty water turned dark, then reddish brown and eventually almost black.

"The sales agent who had brought the spa to me to demonstrate it told me the colour change was the result of toxins escaping through my skin in the 20 minutes I had my feet in the water," Hannes says.

"I got the fright of my life. Like many people I don't lead a healthy lifestyle and you realise the cigarettes and drinks and unhealthy food are beginning to take their toll."

He saw the nearly R8 000 he spent on the detox spa as an investment in his health. At Hannes' home in Cape Town the salesman told him doctors had tested the machine and research showed it was effective in ridding the body of all kinds of poisons and heavy metals.

"The guy used impressive-sounding scientific terms and spoke about how your body supposedly activates the negative ions so they resonate through the body to stimulate the cells to restore energy levels and release toxins."

After he'd used the machine a few times Hannes wasn't feeling any better and decided to perform an experiment: he switched on the machine but didn't put his feet in the water. To his surprise the water still

went dark and eventually turned black. "I began to realise I may have been conned."

Then he read an article on detoxing in YOU and our sister magazine, Huisgenoot (21 August 2008), warning consumers against dodgy detox products. The article referred to detox foot spas and plasters.

Like many other readers Hannes wanted to know how the widely advertised detox aids worked. What's fact and what's fiction?

THE manufacturers of foot spas and detox plasters – there are at least eight in SA – want people to believe the body is like a giant magnet that attracts toxins.

Their argument is your body's natural defences aren't adequate to detoxify your colon, liver, kidneys and lymphatic system and you need help getting rid of surplus poisons – especially if you eat too much rich food, drink too much alcohol, smoke or are exposed to pollution.

The detox spa is claimed to cure just about everything – including headaches, gout, acne, rashes, eczema and aching joints. Manufacturers claim conditions such as cancer, heart disease and arthritis can be prevented by boosting your immune system with a foot spa.

When you put a detox plaster on your foot at night it's white – and when you remove it the next morning it's brown and has a bad smell, supposedly as a result of toxins that have

been removed from your body. Manufacturers say tourmaline and wood vinegar in the plasters cause "a resonance in the body that vibrates at the same frequency as water and this has a stabilising and cleansing effect". The negative ions' "Far Infra Red Rays" cause a reflex that stimulates blood circulation, resulting in a "homeostatic balance", according to one advertisement.

This is said to relieve stress, improve brain function, boost the immune system and help with arthritis and insomnia.

The converted insist detox plasters cure just about any ailment, including serious conditions.

The list of poisons the plasters and foot spa are supposed to remove from your body includes benzene, alcohol, aluminium, copper, lead, mercury, arsenic and asbestos. Because the skin on your feet has so many sweat glands it releases the toxins more readily than any other part of your body. Or so the salespeople tell you.

Medical experts disagree.

Skin specialists say it's extremely difficult for any substance to penetrate the skin. Much research has been done to find ways to administer medication through the skin and it's even harder for chemicals to seep through the skin from inside the body, says Professor Jeanette du Plessis, an internationally renowned pharmaceutical expert and head of North

West University's medical research unit.

"I haven't found evidence that a plaster can make toxins leave your body through the soles of your feet, which in any case has the thickest skin of any part of your body," she says.

If you wanted to expel chemicals in your body through the skin it would make more sense to do it where your skin is thinnest – such as behind your ears or on your forehead or genitalia, Cape Town dermatologist Professor Jak Cilliers explains.

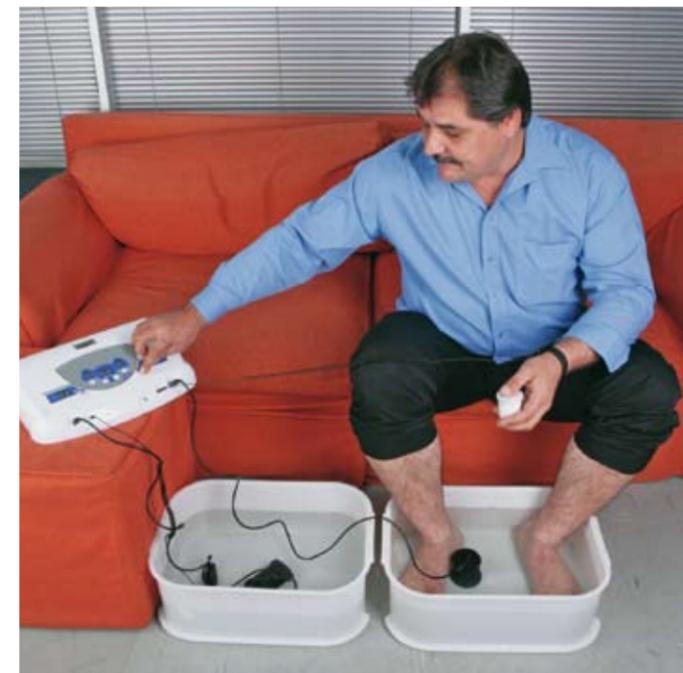
To protect the soles of your feet the upper layer of the skin, the stratum corneum, consists of 15 to 20 layers of dead skin cells. When you sweat you lose mostly water – very few other substances leave your body through the skin.

If you had such a high concentration of toxins such as arsenic, lead and mercury in your body that they escaped through the soles of your feet you'd be so badly poisoned you'd be dead, says Dr Gerbus Muller, a toxicologist at Stellenbosch University's department of pharmacology.

One of the substances the plasters are said to draw from your feet is asbestos – and that is physically impossible, Dr Muller says, because there's no way asbestos fibres can move through your body to your feet.

"The discharge of poisons and trace elements through sweat and saliva is so minimal that medically speaking it's of no consequence," he explains.

"Your body rids itself of



CORRIE HANSEN

**'If you had such high levels of toxins that they'd escape from your feet you'd be dead'**

unwelcome substances through the liver, which changes the chemical structure of those materials so your kidneys can remove the impurities from your blood and expel them through your urine or faeces."

He believes the idea that it's possible, or desirable, to detox your body is a con.

"To think you can cleanse yourself using detox plasters or foot spas is a myth. You simply can't boost the body's purification processes in that way."

Dr Muller is convinced the fact many people claim the plasters and foot spas have

helped them is due to the placebo effect – your brain tells you you're feeling better even if the treatment or medication is fake and doesn't have any healing effect.

"Many alternative medicines are aimed at ailments that don't have easily identifiable causes or can't be measured, such as aches, inflammation and exhaustion.

"The brain is a very powerful organ. If you use something you believe will make you feel better you probably will feel better."

BECAUSE the plasters and the water in the foot spas change colour and sometimes smell bad many consumers believe these products do remove toxins from the body.

The easiest way to determine whether this is really the case is to perform a simple experiment: put one plaster on your foot, immerse another plaster in water and leave both overnight. The next morning both will be the same brown colour, even the one that wasn't in contact with your skin.

Carbohydrates in the starch content of the plaster cause it to get sticky and develop a bad smell.

The water in the foot spa turns brown because of oxidation; the plasters change colour because the wood vinegar is highly absorbent and turns brown when it comes into contact with moisture.

In April last year American TV network ABC broadcast an insert exposing these products in the show 20/20. The manufacturers of the detox plasters and foot spas, who were invited to take part in the programme, refused to be interviewed and couldn't supply any scientific proof their products work.

When plasters worn by eight volunteers were tested none of them showed any significant amount of heavy metals or toxins.

Kinoki, one of America's biggest manufacturers of detox plasters, is currently facing several legal actions regarding

(Turn over)

Put some Spring into your step, Naturally!

Manufacturers of detox products say they have many health benefits but medical experts question the claims.



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**ABOVE, LEFT and RIGHT: Hannes Potgieter demonstrates how he worked out his foot spa was a con. The water discolours whether his feet are in the spa or not. The change isn't the result of toxins released through the skin; it's a result of oxidation caused by electrical current.**

(From previous page)  
“misleading and false” claims in its advertisements and accusations it abuses the American Food and Drug Administration’s stamp of approval.

South African companies also misuse this stamp because detox plasters aren’t considered medicine and aren’t FDA tested for efficacy.

The manufacturers of detox plasters and foot spas have endless documentation of tests they’ve carried out and explanations of how their products work in theory. But when you take a closer look you see most of the tests aren’t to determine whether the products work but whether they’re safe for human use and are in fact made of the chemicals and substances the manufacturers claim.

None of these test results has ever been published in an authoritative scientific journal.

Ironically none of the manufacturers has spent a cent on relatively simple tests that would determine whether the products remove toxins from the body.

All it would entail is for a qualified scientist to test the toxin levels of a representative group of people before using the plasters or foot spas, and test again afterwards to see whether any toxins had been removed.

The water and plasters would also have to be tested beforehand to ensure they didn’t contain any toxins.

To be strictly scientific the test would have to be carried out by a recognised pharmaceutical unit at a university or state-run laboratory and the results published in a scientific journal so other scientists could evaluate them.

The real problem could be that there’s no proper watchdog organisation to protect consumers against unscientific claims made for such products.

The only organisation in



Experts say carbohydrates in the starch in detox plasters – not toxins – cause them to discolour and become sticky and smelly after use.

## ‘I want to see proof these products work, not the theory of why they could’

South Africa that can regulate and certify such products is the Medicine Control Board (MCB). According to a law recently introduced the MCB will be replaced by a new body, the South African Health Products Regulatory Authority (SAHPRA). It’s not yet clear how the health department will in future regulate and classify traditional and complementary health products.

In countries such as Britain and America advertising authorities some time ago banned adverts making unscientific claims for detox products. Judging by the way South Africa’s Advertising Standards Authority (ASA) has dealt with

complaints it’s not equipped to separate the chaff from the wheat.

When Dr Harris Steinman of Cape Town laid a complaint about improbable claims made by manufacturers of detox plasters in their adverts the ASA rejected it, based on the opinion of just one homeopath, Dr Frédéric Motz.

Dr Motz has no conventional medical training and has never published an article in a recognised scientific journal, yet the ASA accepted him as an “independent, credible expert”.

“It doesn’t help to have someone who practises alternative or complementary medicine evaluate such claims,” says

Professor Marjanne Senekal of the department of human biology at the University of Cape Town.

“You can expect such a person to approve of the product. Dr Motz’s report to the ASA was extremely unscientific.”

The necessary research to prove plasters and foot spas work hasn’t yet been done, Professor Senekal says. The companies marketing these products do so under a false pretence of scientific proof, she adds.

Dr Steinman warns the public not to waste money on these dodgy products.

“I want to see proof they work, not the theory of why it could be possible,” he says. “Even if the manufacturers’ claims were true – which they aren’t – it doesn’t logically make sense to extract toxins through sweat in your skin on a part of your body that’s less than five per cent of its surface.”

With medical science it’s possible to accurately determine toxin levels and once that has been done you can do factual research, Dr Steinman says.

“The fact is there’s absolutely no proof that toxins are concentrated in your feet and that plasters or foot spas can remove them.”

His advice to consumers is simple: if you’re concerned about your health it’s much better to eat healthily and do regular exercise that increases your heart rate than to rely on detox products.

And insist on reliable scientific evidence before wasting your money on a con. □



Still images from an advert for detox plasters.