

by Julia Bloore



SAVED BY THE SUN?

miraculous Vitamin D



For three decades now, we've been fed an unwavering message about how bad the sun is for us. Every summer we're encouraged to 'slip, slop, slap and wrap' in order to protect ourselves and our children from its harmful rays: "We have one of the highest rates of melanoma skin cancer in the world, don't you know? Come on New Zealand, wise up and get with the programme!"

But what if the very thing we're protecting ourselves from is the answer to those melanomas? Not only that, what if it's also the answer to other multiple illnesses that dramatically affect our nation? What if, all along, we've been making ourselves sicker and sicker, as we've been 'safer and safer'?

Ian Wishart, award winning journalist and author, investigates the research around vitamin D in his book *Vitamin D, is this the Miracle Vitamin?* As co-editor and publisher of news magazine *Investigate*, he took some time to find out whether the hype around vitamin D was justified.

GRAPEVINE: Why vitamin D? What was it that sparked your interest in the first place?

IAN: At *Investigate* magazine, we have access to international news feeds, and a story came in from the *Chicago Sun*. They were doing some work on vitamin D in North America, and the article referred to studies showing that a lack of vitamin D was being linked to cancer and heart disease. This was pretty shocking stuff, and it raised my antennae as a journalist.

GRAPEVINE: Especially as a Kiwi, I'm sure. We have pretty high rates of skin cancer here.

IAN: We do, but this study actually revealed that, even though New Zealand

and Australia have the highest melanoma rates in the world, our fatality rate from melanoma is actually one of the world's lowest. The studies had taken a range of incidents of melanoma and found that

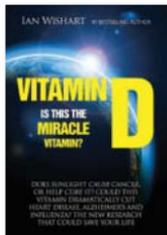
vitamin D or sunlight appeared to be a protective against people actually dying from melanoma.

GRAPEVINE: Which sounds like a bit of a paradox?

IAN: Yeah, it is. You run a higher risk of getting melanoma in a sunnier climate, but conversely, your risk of dying

from melanoma is reduced – because of the vitamin D impact.

GRAPEVINE: I can see why this sparked your interest! So now you couldn't leave the subject alone, right?



POWERFUL MEDICINE?

IAN: Right! I set up a Google alert at that time to get every single story on vitamin D that was appearing in the news. By the end of the process, when I actually came to write the book, I had thousands and thousands of studies at my fingertips. To give you an idea, there are about 4,000 studies a year being published on vitamin D. It's huge.

GRAPEVINE: How long were you gathering material before you started writing the book?

IAN: About seven years. I'd wanted to write it for some time, but because it wasn't a current affairs book and it wasn't time sensitive, I'd put it off and focused on other things. Then when I suddenly had all this time on my hands I thought, well, I've got loads of information here, I should actually put something out. I started looking into it in depth ... and I was stunned.

GRAPEVINE: What was it specifically that stunned you? I mean, we've known for years that vitamin D is pretty important, right? So this must've been impressive stuff!

IAN: Well, where do I start? You're right though, we have known about the power of vitamin D in preventing things like rickets for over a century. So the central focus of our health systems world-wide has been on that aspect of it up until about the 1980s or 90s. It's only been in the last couple of decades that we've known about vitamin D's other properties.

As researchers expanded their studies into genetics, they started discovering that the human body has vitamin D receptors all over it, in every single organ of the body. That tells them this is not

just a random ingredient you need to get from eating a piece of fruit, but rather there's a specific need for vitamin D, and our bodies are designed to process it no matter which organ you're looking at.

GRAPEVINE: Okay ... that does sound pretty impressive!

IAN: Exactly. So the researchers thought, okay ... what can this possibly influence? And they started to realise that a lot of modern illnesses had links to a *lack* of vitamin D.

GRAPEVINE: Modern illnesses? So a lack of vitamin D hasn't always been a problem?

IAN: No. You see, our entire lifestyle as humans changed about a century ago. We started moving *into* office buildings and *out* of the fields. The resulting issues are what you might call 'industrial diseases' – a whole range of complaints, from cancer and heart disease to fatigue and high blood pressure.

GRAPEVINE: I gather it's also been linked to Alzheimer's?

AN ALZHEIMER'S LINK?

IAN: Yes ... Alzheimer's is a big one. There was a group of Alzheimer's patients in the States, and their carers decided to take them out into the sun for an hour or so a day, just to give them a change of scenery. After they'd done this for about six weeks they noticed that the effects of Alzheimer's were being reversed. These people were more alert and were retaining more of their memory. That observation led to scientific research on the effect of vitamin D on Alzheimer's, and there's now very strong evidence saying that you may even be able to prevent it by keeping your vitamin D levels up.



“Our entire lifestyle changed about a century ago. We started moving out of the fields and into office buildings. The result? A whole range of ‘industrial diseases’, from cancer and heart disease to fatigue and high blood pressure.”

Given that the disease is incurable and that it affects up to half of elderly people, I think everybody who’s over the age of 40 should be looking to get their vitamin D levels sorted!

GRAPEVINE: Sounds like good advice!

IAN: Allergies and asthma are also heavily impacted by vitamin D – particularly by a person’s own levels in early childhood, and their mother’s levels during pregnancy. People who have high levels of vitamin D are less likely to suffer from colds and flu.

In 2010, a Harvard University professor of medicine led a team of researchers in testing the umbilical cord blood from 922 new-born babies from New Zealand.

They found that one in five of the babies was born seriously deficient in vitamin D, and those born with this deficiency were nearly 2.4 times more likely to have suffered an infection by the time they were three months old. Children with the lowest vitamin D had more than double the risk of developing wheezing by their fifth birthday!

Then there’s hospital superbugs! Studies have been done in the States and in Israel showing that you’re far less likely to suffer from superbugs when you go to hospital, if your vitamin D levels are high when you go in.

GRAPEVINE: You also uncovered some fascinating info about Multiple Sclerosis.

MS & AUTISM?

IAN: Yeah, the research on that is huge. New Zealanders are prone to MS – particularly in the South Island. It's recognised world-wide as a 'latitudinal disease'. In other words, the further you get away from the equator, the more instances there are of MS. Study after study is showing that people who have this disease can drastically reduce the number of attacks they get, if they boost their vitamin D levels. The question now is ... can we actually prevent it by ensuring adequate vitamin D levels during pregnancy and early childhood, so that the brain and nerve systems develop properly and get what they need?

GRAPEVINE: Big, but exciting questions! And then the links to autism – that also made interesting reading ...

IAN: Twenty-five years ago, there was a one in 1,800 chance of giving birth to an autistic child. These days, it's about one in 60. The increase in autism over the last 20 years happens to correspond with increasing advice to avoid the sun. Correlation doesn't automatically prove causation, but there are several other pieces of research and information adding to the theory. Children with vitamin D deficient rickets also have several autistic tendencies that apparently disappear with high-dose vitamin D treatment. Autism levels are considerably lower in places around the world where high levels of oily fish – a well-recognised vitamin D source – are consumed. And a Californian study revealed that pregnant women whose first trimester fell in the winter months are more likely to have an autistic child.

There are also strong links to heart

disease, depression, Crohn's disease and type 1 diabetes ... you name it really. Across the range of conditions there's a need of vitamin D at virtually every level of human health – and most people are not aware of that.

It makes you feel better at a mental/emotional level, but having adequate levels of vitamin D circulating in the bloodstream also boosts the immune system. It helps turbo-charge your immunity, so that white blood cells and other protective units move more quickly to deal with things like rogue cancer cells.

Interestingly, they've found that vitamin D has a big impact on breast cancer in particular. They treated a breast cancer tumour in a lab with high doses of vitamin D and the tumour died.

GRAPEVINE: That's amazing. Have they done studies on how it's affected women who already have breast cancer?

BREAST CANCER, TOO?

IAN: A fascinating study out of the States just recently, where they focussed on women who'd been diagnosed with breast cancer. They followed them for 10 years and found that those women who maintained high levels of vitamin D in their blood, and had high levels when they were diagnosed, were far more likely to be alive at the end of 10 years. Whereas the women whose vitamin D levels were low or hadn't been maintained, they had a 73% greater risk of dying within those 10 years and the cancer was 94% more likely to spread over that time.

GRAPEVINE: Wow! So then, what we really want to know is ... how much vitamin D do we actually need?



“While New Zealand and Australia have the highest melanoma rates in the world, our fatality rate from melanoma is actually one of the lowest. Vitamin D or sunlight appear to protect against people actually dying from melanoma.”

IAN: This is where things get interesting. In New Zealand your GP can prescribe supplements if you're deficient by Ministry of Health standards. You take one tablet per month, which equates to about 1,300 *International Units* of vitamin D per day. The trouble is, based on the latest scientific research around the world, that's nowhere near enough to achieve some of the health protection goals. Internationally now, they're saying we need between 3,000 and 4,000 IU a day – and in some cases, more – depending on the conditions you've got. New Zealand needs to catch up in this area – our guidelines are out of date.

GRAPEVINE: But surely we can't have too much of a problem with deficiency in New Zealand – don't we get enough of it through the sun?

IAN: Because the New Zealand health system is hanging on to an old fashioned version of what vitamin D deficiency is, their definition of what's deficient is set at a much lower level than what the rest of the world regards as adequate. To put that in perspective, the common view around the world now is that 75 nanamoles or less is deficient, so you need to have that or above. In New Zealand, the bar is set at 50 nanamoles. So even if you're between 50 and 75, as far as our health system is concerned, you're absolutely fine – even though the rest of the world would suggest that's deficient. And they trot out the statistics saying that only a small number of New Zealanders are deficient. But it's because the numbers and the definition don't tell the true story.

I'm confident though, that the

emerging scientific research is going to force them to change at some point.

GRAPEVINE: So it's obvious then ... we don't get enough of it through the sun?

SUNSHINE & SLIP-SLOP-SLAP?

IAN: The normal process for developing vitamin D happens when the sun strikes our bare skin (uncovered by clothing or sunscreen). The UV rays are quickly processed into vitamin D, which is then modified through the circulatory system – and the various organs process it into forms that they can use. So the sun is, traditionally, where humans are supposed to get their vitamin D. But we haven't been doing that since we've had the slip, slop, slap campaign – because everybody's been scared of getting skin cancer.

That was one of the other clues in this whole study. When researchers looked at the rise in these diseases, they found that it tallied nicely with the beginning of the *slip, slop, slap* campaign world-wide. It seemed that the focus on getting out of the sun was coinciding with a whole lot more of these health problems and sicknesses that we hadn't been seeing before that.

GRAPEVINE: But surely there was plenty of research behind a world-wide campaign like the *slip, slop, slap* one?

IAN: Well, you'd think so. What the research shows is this: sunscreens have been scientifically proven effective at preventing most *minor* skin cancers; they're also really good at preventing solar ageing of the skin. So on that basis (although the studies never showed any *improvement* in terms of melanoma rates), the researchers and *slip, slop, slap* people in Australia and New Zealand

figured that, because it's working against the smaller cancers, it must be working against melanoma.

So for 30 years they've been proceeding on this precautionary principle: "*We think it works.*" What's worse, most of the recent studies suggest that people who use sunscreen are up to *three times more likely to get melanoma!* So far from protecting you ... it may actually hasten the onset of melanoma. It's like the Emperor's New Clothes – it doesn't actually work against the main thing you want to protect yourself from. Which goes a long way, logically, towards explaining why New Zealand's melanoma rate has continued to rise despite the *slip, slop, slap* campaign running for the last few decades.

GRAPEVINE: That's pretty shocking. Especially if the studies are saying you're *more* likely to get melanoma. Why are health authorities continuing to promote the use of sunscreen?

IAN: Here's what I think: From time to time, I talk about the book on radio stations, and last Christmas I did just that and shared some information from the scientific studies on breast cancer. The radio station got a complaint – an anonymous complaint from a guy at a private Hotmail address. He said that what I was talking about was a load of quackery and that "*Wishart should be taken off the radio*"... "*what was the radio station doing associating itself with this sort of crap*", etc. They forwarded me the email from this anonymous person and I was able to track the email address. I discovered that he was a senior executive with a very large pharmaceutical company. And, in fact, it's a very large pharmaceutical company involved in breast cancer treatment.



you can imagine any business facing a 30% drop in income, that's not to be taken lightly.

Here you have this vitamin that according to all of the scientific research shows enormous promise in fighting cancer. But the powers that be – the ones who make the expensive cancer treatments – are understandably not happy. Vitamin D comes essentially free from the sun, or not very expensive as a supplement. It's certainly not the hundred thousand dollars per treatment, as it is for cancer drugs. So people aren't going to make huge sums of money out of it – therefore, there's resistance with the pharmaceutical companies when it comes to talking about vitamin D. They don't like it.

GRAPEVINE: That doesn't exactly explain the promotion of sunscreen, though.

“The sun is, traditionally, where humans are supposed to get their required vitamin D. But we haven't been doing that since we've had the slip, slop, slap campaign – because everybody's been scared of getting skin cancer.”

GRAPEVINE: So you think there's a financial conflict of interest?

VITAMIN D & MELANOMA?

IAN: Let's look at this objectively. If what the scientific studies are saying is correct – namely, that vitamin D can decrease the incidence of cancer in the community, even just by 30% (and don't forget some of the studies are showing up to 77%) – that's a massive drop of income for the big pharmaceutical companies whose stock and trade is making very, very expensive cancer drugs. If

IAN: Well, I then found that the main sponsors of some of these melanoma organisations are sunscreen companies and pharmaceutical companies. And if the research is correct, it's a bit like a tobacco company supporting the lung cancer society – and that society saying the way to get rid of lung cancer is to use our sponsor's product. Maybe not exactly, but it's pretty close to that. These people have had a free run for three decades without the scientific evidence to back up their claims. In fact, the scientific evidence goes *against* their claims, by and

large. In my view, and this is strictly my opinion, it's an outrage.

GRAPEVINE: So, how might these sunscreens actually cause melanoma?

IAN: What the studies are showing is that when the sun hits organic sunscreens, the creamy ones, it tends to break down the active ingredients in your skin – and those active ingredients go on to create free radicals in the sunlight. It's those free radicals that cause DNA damage – and the DNA damage causes cancer. The damage is being done by the chemicals as you sit in the sun. The other twist is that when you use a sunscreen, you don't get sunburnt and so you think you're okay. But plenty of damage is possibly being done.

KEEPING FAMILIES SAFE IN THE SUN?

IAN: Well, the point of my book was not to say that I have a solution to this. If I did, I'd be a very rich man! The point was to raise the issue so that families everywhere can be aware of what the limitations of sunscreens are. Don't go off to the beach and think that because you're slapping on the latest sunscreen you're protecting your kids from melanoma. It may be a false sense of security.

Ironically, the old-fashioned way – from the days of working in the fields during springtime – may be our best option. As the sun grew a little bit stronger

“Families should be aware of the limitations of sunscreens. Don't go off to the beach and think that because you're slapping on the latest sunscreen you're protecting your kids from melanoma. It may be a false sense of security.”

Additionally, even the broad spectrum sunscreens are not entirely effective against cancer-causing UVA radiation. So although you are not getting sunburnt, you are still being radiated, if you follow the logic, without any warning signs.

GRAPEVINE: What about those 'mineral' sunscreens that people are using now?

IAN: They're coming under scrutiny too. There's emerging evidence from the scientific world that they may be breaching the skin barrier and causing genetic damage in the flesh and the circulatory system. So again, nothing is perfect.

GRAPEVINE: So what do we do then? It seems we're damned if we do and we're damned if we don't!

we developed a gradual tan. The sun increased into summer, but we didn't get burnt because we were tanned. The tan is potentially our best protection against melanoma, but you can't just get it by being a 'weekend warrior'. You can't stay cooped up all week and then go out and bask in the weekend sun and get sunburnt ... which is what we tend to do! You've got to build these things gradually and slowly.

GRAPEVINE: So ... build up a gradual tan?

IAN: Yes. And be sensible – don't get sunburnt! Don't *not* use sunscreen – it's a valuable tool, but it's limited. Be aware of the limitations of everything.

GRAPEVINE: But, ideally, we need to have some time in the sun each day without sunscreen, right?

IAN: Right. And the more of your body that's exposed to the sunlight, the less time it'll take for your body to get the adequate vitamin D levels. So if you go out there with just your legs and arms uncovered, you might have to spend twenty minutes in the sun. If you go out there with your whole torso exposed, in shorts or a bikini, you might only have to spend eight to 10 minutes in the sun – and you're done for the day. You'll have the benefit of the vitamin D boost, you'll have the benefit of the slight tanning that builds up over time, and your overall health will be better for it.

You don't need any more unprotected time in the sun after that, because your body stops making vitamin D after about half an hour.

GRAPEVINE: What has the response been to your book?

IAN: The reaction from the public has been huge. The book has sold something in the region of 14,000 copies in New Zealand, and I get calls from readers on a fairly regular basis with news of how they've made changes and are better for it. One guy rang me recently; he'd had psoriasis for years. The specialists had told him time and time again that

you can't cure it. But on the strength of the book he decided to take 4,000 units of vitamin D a day. He said within two weeks the psoriasis had gone.

GRAPEVINE: What does the medical profession say to those stories? What's their response been?

IAN: I've had excellent feedback from professionals working on the frontline. Many have bought the vitamin D book, and because it's scientifically referenced they can go directly to the studies and pull up the information they need. They're satisfied that they have an evidence-based reason for prescribing vitamin D.

GRAPEVINE: Ian, after reading your book I've felt quite challenged as to how I look after myself and my family this summer. What would you recommend *Grapevine* readers do?

IAN: Get informed. Read the book. Have a look at the research. That way you can make wise decisions for you and your family.



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Your **BEQUEST** will keep working long after you've gone, ensuring Kiwi families will continue receiving encouragement and inspiration from Grapevine for decades to come. Please consider it.

Thanks so much – John Cooney (founder)

