



Sunday, 6 September 2009

Dear Dr Ierano,

Thank you for your letter.

Before delving into your specific questions, comments and claims, I should point out that the web page you are referring to quotes an article by Simon Singh. It was not written by Australian Skeptics, and I would have thought the preamble made that very clear. I am not sure why you choose to ask us specific questions about this article beyond "why did you see fit to publish this article". Despite the fact that you didn't ask, I'll answer that question: because Simon Singh has written an article supported by scientific evidence, and the British Chiropractic Association took offense. Rather than present scientific evidence that he is wrong (which they were invited to do), they sued him. They later compiled the best scientific case they could mount, and came up well short of being convincing to anyone but those already convinced without evidence.

I'll note up front that to the best of my knowledge chiropractic has only been shown to have a marginal beneficial effect on back pain, and no beneficial effect for any other symptom or disease. If you do respond to this claim, make sure to show the negative studies as well as the positive ones as it's the totality of evidence one has to look at, not just the evidence that supports one's view.

My comments are provided inline below and are marked in light purple to make them distinct enough from your text even when printed in greyscale.

I would appreciate your consent to publishing this correspondence on our web site. If you do agree, would you kindly provide links to your references (where possible) to make sure that readers can access the articles and make their own judgements.

Finally, I have taken the liberty of contacting Simon Singh and Edzard Ernst about your letter. Professor Ernst kindly agreed that if you put your case concisely (no longer than the original article) and provide evidence, he would be happy to publish it as a debate article for the journal FACT which he edits (<http://www.pharmpress.com/shop/journals.asp?a=1&cid=27>). Note that the article contains various key points and you may wish to explain which points you disagree with, and why:

- Chiropractic was originally based on a bizarre philosophy.

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- Some chiropractors still believe in this philosophy of subluxations as the cause of many conditions.
- Chiropractors do not have the evidence necessary to justify treating non-spinal childhood conditions.
- Chiropractic manipulation of the neck can carry a small but serious risk, and more commonly chiropractic can lead to minor adverse effects.

Yours,

Eran Segev

President - Australian Skeptics

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This is the start of the original letter. The entire text of the letter has been kept unmodified, and comments were added where relevant.

Dear Skeptics [sic]

Disturbingly, on your web pageⁱ you state:

Nevertheless, conventional therapy is still preferable because of the serious dangers associated with chiropractic.

1. Could you please explain why (and state your evidence) physiotherapy treatments are preferable to chiropractic? Please supply your evidence that physio is safer compared to chiropractic care? Do physios not manipulate the spine also and offer a one year postgraduate degree or are you not aware of this? Is their manipulation safer? If not are you going to suggest that physios should *not* manipulate and thus dictate their treatment protocol (medical advice)? Does this go for osteopaths? Does this hold for the manipulating members of the Australian Association of Musculoskeletal Medicine?ⁱⁱ

I think you can do much worse than read *Trick or Treatment*, for an answer to this question. Note that the book's key concern with chiropractic is the manipulation of the neck, a hallmark technique which seems likely to carry risks.

It would seem significant that Ernst has not attacked any of his medical colleagues, particularly European medical manipulators like Maigne, Biedermann, Lewit, Figar, Rychlikova, Gutzeit Kameith, Siefert Metz, Novotny and Hulse – especially those who manipulate in relation to paediatric and visceral conditions.

To find out why Professor Ernst hasn't attacked someone specific, you may wish to ask him rather than us.

If not, why are you focusing exclusively on 'chiropractic manipulation'?

We are focusing on chiropractic for several reasons – particularly because the BCA has sued Simon Singh before entering into a scientific discussion. Also, many chiropractors believe that there is a "life force" or that many diseases are caused by subluxations of the spine. This distinguishes chiropractic.

If spinal manipulation were a drug with such serious adverse effects and so little demonstrable benefit, then it would almost certainly have been taken off the market.

2. Have the sceptics questioned - in fervent sceptic manner beyond the opinions of one Simon Singh -

- a) the state health department authoritiesⁱⁱⁱ
- b) private health fund providers like HCF, MBF, etc
- c) the public federal Medicare allied health plan system
- d) three government-funded, reputable health care university systems^{iv} in this country

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e) the Department of Veterans Affairs

The article does not entirely condemn chiropractic, but raises concerns over the treatment of childhood conditions. Very few respected institutions would disagree with Singh's position.

In any case you are heading in a completely wrong direction, but one which is typical of alternatives to medicine. The only places we need to go to are, for example, PubMed, the Cochrane Collaboration, and relevant scientific publications. All of the organisations you mentioned consider a lot more than just science (e.g. the health funds base their decisions on demand). Note that the emphasis is on the lack of benefit. If chiropractic could demonstrate some benefits in the areas of concern it might have been worth the risk.

- on why chiropractic has not been 'taken off the market', why it is regulated, and is part of all above schemes. Have they records of lethal outcomes? Have you contacted the respective universities (scientific places that have been known to encourage scepticism) to ask why they teach '*lethal*' health care? Or is your scepticism apparently satisfied with stopping at Simon Singh's opinion?

I hope you will understand that as an organisation of volunteers, we do not go and investigate every single claim someone makes. We especially trust claims backed up by research, such as that done by Professor Ernst. However, it is interesting to note that many chiropractors in the UK have withdrawn their claims since Singh's article was published concerning childhood conditions.

If vaccine manufacturers pay millions in compensation (and they do), does that mean they should stop administering them? If no, why should chiropractic throw its benefits out for a small percentage of risk? Do sceptics think that the known risk of heart failure for Vioxx[®] warrants its banning? Or is your logic exclusive to chiropractic care? Do you think that all drugs which have a capacity to kill have been withdrawn to date, before killing anybody? Do you want a list of the drugs that can kill or seriously harm you that have *not* been withdrawn? Did you know that NSAIDs are known to kill people on a daily basis and have never been withdrawn *en masse*? 'Oh but they have benefits', you say. Really, have you seen *all* the studies? Or did you miss the one that showed chiropractic was safer?^{v vii} Now all we have to prove is some efficacy.

Most of what you wrote is difficult to follow, but I liked the last sentence. "Now all we have to prove is some efficacy". Indeed you do.

Have you done your own literature search on chiropractic benefits, or are you relying on Ernst's and Singh's?

We are definitely relying on research done by other people. Don't you? Even if we were an organisation of working scientists, which we are not, science does not work by every person doing everything from scratch. Reliance on work of others is the driving force of scientific progress.

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This should be a major concern for health officials, particularly as under-reporting will mean that the actual number of cases is much higher.

3. Should it be? Why? Do you think under-reporting goes on elsewhere in medicine? Have you asked the health department how many complaints chiropractors get per capita compared with medicine? Are all vaccine reactions reported? Are all patients receiving vaccines given legal informed consent as our chiropractic association recommends?

I suspect under reporting goes on elsewhere too. How does that change the claim that chiropractic is probably even more dangerous than direct evidence shows? Also, from 'Trick or Treatment' – "This problem was highlighted in 2001, when a team of researchers, including Edzard Ernst, asked members of the Association of British Neurologists to report cases of neurological complications referred to them that had occurred within twenty-four hours of neck manipulation. They identified thirty-five cases, which included nine strokes, over the course of one year. Ernst and his colleagues were shocked to find that none of these cases had hitherto attracted any attention, inasmuch as they had not been reported in the medical literature or anywhere else."

Some practitioners claim it is a cure-all, but the research suggests chiropractic therapy has mixed results – and can even be lethal, says Simon Singh

How is chiropractic therapy "lethal"...what is your evidence? Simon's assertion good enough for the sceptics is it? Or are you not quite as sceptical as I? Do you realise he is giving medical advice and he is not a qualified health care practitioner?

I note that you again ignore the claim of no efficacy. If you read Simon's book you'll also become aware of the evidence for lethal treatments. And please don't say you are sceptical. If you were, you wouldn't be practicing a modality that has magic for foundations and no evidence of efficacy for most conditions it aims to treat.

Is chiropractic 'lethal' in an absolute sense or in the legal sense that practitioner error was at play? Should aircraft be rid of pilots if they are a known contributor to air crashes? Or does an air-crash usually involve a set of individual circumstances worthy of individual merit and investigation without bringing the whole airline industry into disrepute? It would be shameful logic to condemn an entire profession.

I think if you read the book you'll be aware that the claim is that in certain situations chiropractic neck manipulation is dangerous pure and simple, not due to malpractice. Note again that some risk is acceptable when there are benefits, but since there are no demonstrable benefits, the risk becomes unacceptable.

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You also state: *not only in the UK but also across the globe.*

4. Do you think chiropractic is a problem in Australia in this same way?

Yes we do. Chiropractic is a problem because there is no evidence that it is efficacious, beyond some marginal effect on back pain.

Do any medical doctors you've ever come across ever harm patients? "But doctors help people" you cry. Yes and they know virtually nothing about back treatment, a fact that can be supported with evidence from the literature.^{viii} Not satisfied that this is the case in Australia? Consider this article from The Australian newspaper by journalist Adam Cresswell on January 6 2007 where he writes:

"ANATOMY tuition in medical schools has been cut back so much trainee physiotherapists and chiropractors spend a far greater proportion of their courses studying how the body works than do future doctors."

He quotes academic lecturer Amanda Neill, who has taught anatomy at a number of universities to students from all three disciplines, said "trainee physiotherapists and chiropractors spent 20 per cent of their course learning anatomy. However, the study of the body's structures now took up just 5 per cent of many medical students' courses."

The entire reason for Simon's article was the chiropractors routinely claim to treat conditions such as colic in babies. If there was evidence that it works, we wouldn't have a problem with it. I don't know enough to judge whether what you are saying regarding the amount of anatomy taught in various disciplines is true, but I suspect that medical students know a lot more than just anatomy. They also train for much longer than either chiropractors or physios, so any comparison is probably invalid.

The fundamentalists argue that they can cure anything, including helping treat children with colic, sleeping and feeding problems, frequent ear infections, asthma and prolonged crying – even though there is not a jot of evidence.

5. Please supply evidence that there is 'not a jot of evidence' to this. This statement is false.

You wrote: "...not a jot..."?

Are you sure? Or are you influenced by Singh's assertions without a trace of scepticism?

Would you like to repeat that? We need to provide evidence that there is no evidence? How about you just provide evidence and save us the use of double negatives? We now know how true this statement is because the BCA put together their best case for showing that chiropractic works for things other than mild back pain. What they came up with, despite obvious cherry picking, was well short of what would be considered evidence for any treatment, let alone one that is based on magic.



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Please let me know if you wish to reconsider your notions as they are not entirely true, and worthy of examination by a relevant government body. Even a case study is still a significant piece in the hierarchy of evidence, mind you.

It is scientifically true that if one case study of death or medical harm is written up, reported and seen as significant, then equally one observation of success must be treated with equal merit, without emotional attachment you display to the 'negative' reports.

Even if you were right in what you say about positive and negative case studies, you would still have to show that results of the case studies are measured correctly. The reason you are wrong about case studies is because a negative case study that shows a direct effect of the treatment (i.e. the mechanism is explained) is much more powerful than a positive case study where the measurement is subjective and the mechanism is either unclear or based on magic.

Can you choose, as so-called 'sceptics', to ignore one benefit on one patient published in a journal and make a bold sweeping statement because world-wide a few people have died in extenuating circumstances? Chiropractic does not kill. It is people that kill and people succumb to what we commonly call human error. Same as going to a hospital wont kill you. But death occurs there at an alarming rate due to 'human error'.

I answered that already. Please read the book.

In this case, your views are quite extremist. You want to throw out the baby with the bathwater, it seems.

You don't know what our views are – or at least you did not until now. You are quoting from a Simon Singh article, yet you continue to treat it as if someone from Australian Skeptics wrote it. Well, the long and short of it is that our views are that there is no evidence that what you practice is a valid form of treatment for most conditions, if at all. You may call that extremist, but you'd be wrong, because there is no evidence that this very murky bathwater has ever had a baby in it.

Consider:

Of Spinal Manipulation, prominent Orthopaedic Surgeon and Honorary Professor, Centre for Psychosocial and Disability Research, University of Cardiff, Dr G Waddell stated^{ix}

“What matters is the balance of the effectiveness versus risk, and that is strongly in favour of manipulation”

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Is this man deluded? Or has he just not read Singh's book yet?

I have no reason to suspect he is deluded, but have you considered that he could be wrong without being deluded? Please note that Singh's article is most critical about chiropractic in relation to childhood conditions unrelated to back pain. Does Dr Waddell support this?

The most recent article examining the risks of stroke and chiropractic stated clearly:^x

“VBA [vertebro-basilar-arterial] stroke is a very rare event in the population. The increased risks of VBA stroke associated with chiropractic and PCP [medical care] visits is likely due to patients with headache and neck pain from VBA dissection seeking care before their stroke. We found no evidence of excess risk of VBA stroke associated chiropractic care compared to primary care.”

Would even the Sceptic's society negate an article published in the prestigious *Spine* journal? Why did this one elude you?

It could very well be that in the end that article could prove to be correct, but one article is not enough. In science, the totality of evidence (and the totality of published literature) needs to be considered. In any case, I note that you avoided the question of efficacy, again. You may be interested in the critical assessment of this paper at: <http://www.sciencebasedmedicine.org/?p=170>

Because there is usually a delay between the vertebral dissection and the blockage of blood to the brain, the link between chiropractic and strokes went unnoticed for many years. Recently, however, it has been possible to identify cases where spinal manipulation has certainly been the cause of vertebral dissection.

Now, my being a self-professed genuine sceptic, I would judge that the reason is not that it went 'unnoticed' - how do you not notice a stroke after a manipulation? Can you give us the proof that it has 'certainly been the cause'?

Simon did not say the stroke goes unnoticed – straw men are a poor choice of argument technique when debating real sceptics who can spot logical fallacies. As a “self-professed genuine sceptic” you should be able to do that too, but I believe I have already commented that your claim to scepticism is damaged somewhat by practicing unproven treatments based on magic.

Undeniably, with vastly increased utilisation of chiropractic, a litigious society and better medical imaging there has been created a combined effect of seeing greater numbers of harm, just as it has for more extensive medical prevention programs. So should we stop vaccination? If vaccinated communities still exhibit outbreaks of the diseases they were highly vaccinated for, should we curb vaccination programs?^{xi xii xiii xiv xv} 'No', say I, and most probably you. So your opinion is as valid as mine, and each as worthy of equal scepticism.



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Thank you for raising the issue of vaccinations. Vaccinations have side effects; in some rare cases those effects are serious; but they are tolerated because vaccines are one of the most effective treatments ever developed by medical science. The number of lives saved by vaccines is measured in millions. Per year. Chiropractic may have some marginal effect on the back of geeks like me who sit down for too long. Are you sure you want to keep that comparison?

The fact is that the patient may walk into the chiropractors office *with* the dissection, and it is triggered by either the following recorded, evidence-based forces:

- a) turning the head to back out of the driveway (gentle cervical rotation)
- b) getting a hair wash on a salon sink basin
- c) forceful cervical rotation

And if you want the facts on which profession causes strokes you can find that in the reported literature, a study by Wenban^{xvi} found that, astoundingly-

“The largest group of providers, 18/36 (50%), linked to injury through their use of SMT (spinal manipulative therapy), were orthopaedic surgeons.”

Orthopaedic surgeons! This echos previous data from Professor Terrett, world renknowned authority on the subject, that chiropractors are commonly blamed for all manipulation that goes wrong. Did the sceptics source that article?^{xvii}

These are not “facts”. This is one article, which does not even report on original research; rather, it is a literature review. And your choice of quote is rather suspect as the review clearly focused on finding cases where an injury reported as due to chiropractic may have been so reported in error. The statement about you quoted is almost incidental and is not a main conclusion of the study.

In any case, of course that study may be correct, but orthopaedic surgeons also help a lot more people with very serious conditions - not just back pain. Once again, efficacy is a good enough reason to allow some risk, but chiropractic offers nothing in the way of efficacy, so is not worth any risk.

Now the only defence left for your article is that there are little or no benefits and that chiropractic is ‘lethal’. These asserstions do you very little credibility as you discredit a whole profession for the few that tout benefits they cannot deliver. And these should rightly be reported to your local health care complaints commissioner.

Once again, this in not “our” article, but in any case your statement that there are “few that tout benefits they cannot deliver” is misleading on two counts: one is that the basis of chiropractic is that spinal subluxations cause all disease, so the essence of your profession is problematic to say the least and it is up to you to show that the majority of chiropractors have moved away from it. My experience is that all but one chiropractor I ever spoke to believe they can do a lot more than treat back pain, and

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chiropractors feature heavily in the anti-vaccination movement. The second is that the evidence for any efficacy of chiropractic is limited to back pain, where none-magical treatments such as physiotherapy are just as effective or better. I therefore see no justification to withdrawing any criticism of the chiropractic profession, even if there are some well meaning, well educated professionals (like you, no doubt) who object to making spurious claims and make sure they remain within the realm of true evidence based treatment.

Yours in Science,

Joseph J. Ierano BSc DC BAO MACC

Doctor of Chiropractic

Board Certified Atlas Orthogonist (Sweat Institute, USA)

Member Australasian College of Chiropractors

Member Chiropractors Association of Australia

References:

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ⁱⁱ www.musmed.com

ⁱⁱⁱ Health Care Complaints Commission (HCCC)

^{iv} Royal Melbourne Institute of Technology, Victoria; Macquarie University, Sydney, New South Wales; Murdoch University, Perth, Western Australia

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