



# How the public is being misled about complementary/alternative medicine

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Complementary/alternative medicine (CAM) is a hugely popular subject. Hardly a day goes by that the popular press does not report about one aspect of CAM or another. Currently there are approximately 41 million (!) web sites bombarding the public with information on this topic. Numerous studies have shown how unreliable, and indeed dangerously misleading, this information often is.<sup>1,2</sup> To make matters worse, patients cannot rely either on conventional healthcare professionals, who tend to be ill-informed about this subject,<sup>3</sup> or on CAM practitioners, who often over-estimate the value of their treatments.<sup>4</sup> They cannot even trust the UK 'official' patient guide<sup>5</sup> (sponsored by the Department of Health), which is promotional, uninformative and inaccurate.<sup>6</sup> It is hardly surprising, therefore, that despite the plethora of information, 77% of patients feel 'insufficiently informed about CAM'.<sup>7</sup> In this article, I will try to outline how the public is being misled about CAM.

## Natural equals safe

This misunderstanding is as widespread as it is dangerous. There is, of course, nothing natural about sticking needles into patients' bodies (as in acupuncture), nor in diluting substances *ad infinitum* such that the medicines contain nothing but dilutant (as in homeopathy). The fact that in the UK 'The Complementary and Natural Healthcare Council' recently started regulating many CAM practitioners<sup>8</sup> is therefore misleading in the extreme. Even if a treatment is based on what nature supplies (as in herbal medicine), we have to consider its risks seriously. Natural substances may have beneficial health effects but they also can cause harm. For instance, many herbal remedies have the potential to interact with prescribed drugs.<sup>9</sup> The risks of CAM are probably less serious than those of synthetic drugs, but they are by no means non-existent or negligible.<sup>10</sup> The implication that CAM is natural and therefore safe continues to be used as a powerful tool for misleading the public.

## CAM defies scientific investigation

Enthusiasts of CAM frequently claim that the scientific method is not applicable to their field.<sup>11</sup> Several reasons are offered for this notion, including:

- That the effects of CAM are too subtle to be quantified;
- That treatments need to be tailored to each individual and therefore cannot be submitted to testing in clinical trials;
- That the therapeutic approach is holistic, which means it cannot be evaluated with reductionistic science.

On closer inspection, these arguments turn out to be ill-conceived. They either represent deliberate attempts to deceive or they are based on profound misunderstandings of what science in general and the clinical trial in particular can achieve. Rather than addressing these issues in detail, it may suffice to point out that even CAM enthusiasts accept scientific investigations of their intervention – as long as their results are positive.<sup>12</sup> Yet a lay person may find it difficult to understand methodological issues and thus be easily persuaded by the claim that CAM defies science.

## There is no evidence

Opponents of CAM sometimes negate the existence of any sound evidence in support of any type of CAM.<sup>13</sup> This is clearly wrong. In fact, there are now thousands of clinical trials and in excess of 500 systematic reviews on the subject, many of which suggest that some CAM interventions do generate more good than harm.<sup>10</sup> On the other hand, proponents of the more exotic forms of CAM – such as Bach Flower Remedies or iridology – often claim that their treatment has not been scientifically evaluated; therefore nobody can say with any degree of certainty that it is not useful. This claim is also wrong. If we only bother to look closely, we do usually find at least *some* scientific evidence.<sup>10</sup> The

reason why enthusiasts negate its existence, I fear, is that it does not confirm their beliefs. Patients can therefore get confused by vociferous and misleading claims about the evidence.

### CAM saves money

If healthcare decision-makers could be convinced today that this notion were true, we would probably have CAM on the NHS tomorrow. Therefore many CAM enthusiasts try to persuade us that integration of CAM would be financially attractive.<sup>14</sup> Rigorous evaluations of the reliable evidence, however, show this belief to be little more than wishful thinking. On the contrary, the few data available to date suggest that CAM usually constitutes an additional expense, over and above other healthcare costs.<sup>10,15</sup>

### The 'establishment' want to suppress CAM

Proponents of CAM often claim that their treatments are victims of a well-coordinated attack by 'big pharma' and 'the scientific establishment'.<sup>16</sup> They seem to believe that these interest groups are secretly plotting to prevent patients from benefiting from effective treatments. This notion assumes that the medical profession is a malign clique who would withhold effective treatments from suffering patients for the sole reason that they were developed or discovered by people who do not belong to their profession. Despite the popularity of this argument, there is no evidence that it is true. On the contrary, there is plenty of evidence to show that doctors are more than willing to adopt any treatment that helps their patients, and that 'big pharma' takes little – if any – notice of CAM.<sup>17</sup>

### Anecdotes top evidence

This widespread feeling was recently put succinctly by Jeanette Winterson:

*'Above all, we should be careful of dismissing the testimony of millions who say the [homeopathic] remedies have worked for them.'*<sup>11</sup>

It is, of course, tempting to assume a causal relationship where only a temporal link exists between an intervention and a clinical outcome. Throughout history, medical progress has been hindered by this misapprehension. But medicine has moved on, and we now know (or should know) that millions can be entirely wrong when

assuming that this or that treatment 'has worked for them'. Clinical improvement can be due to a host of factors other than the specific effect of a treatment,<sup>18</sup> yet the anecdote remains perhaps the most effective method by which the press and others mislead the public.

### Conclusions

Consumers, patients and healthcare decision-makers are regularly being misinformed about CAM. Patients are frequently desperate and therefore vulnerable to such misinformation. Wrong therapeutic decisions are therefore likely. It is our responsibility to see that they receive factually correct information on CAM so that exploitation can be avoided and rational healthcare may be facilitated.

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