

1023 – An Overdose of Nonsense

As the hypocrites organising opposition to homeopathy become more and more desperate, they are relying on approaches which are less and less scientific.

There are two reasons why the 1023 ‘overdose’ stunt is unscientific nonsense. The first reason (A) is that the demonstration is an experiment which is not only incapable of proving their claims, but is actually only capable of *disproving* them. The second reason (B) is that the stunt is based on premises which do not stand up scientifically - or even in terms of the proponents’ own beliefs.

A. A scientifically useless test.

To begin with, 1023 is using terms unscientifically by referring to “homeopathic remedies” when they mean ‘potentised substances’. This is important because it is the *way* in which these substances are used which makes them homeopathic, and using them in any other way proves nothing about homeopathy. Crucially, potentised substances have an effect in only two circumstances:

1. When a person takes a potentised substance *at intervals* (not in one go), it will generally produce symptoms from the totality which that substance is capable of causing. This is called a ‘proving’ (from the German for ‘test’), and is the method by which homeopaths test substances to find their effects. The rapidity and scale of the reaction varies for different individuals, and only a few people react to a single dose or fail to react at all. This process is safe if properly conducted. However, because the body is being forced to react by the repetition of the dose, continuing to take the potentised substance after a reaction has begun can have serious long-term consequences.
2. When the person taking a potentised substance is already experiencing very similar symptoms to those it can cause, she or he will benefit from a single dose, though there may be need for a series of doses in some cases. This is the **ONLY** time when the substance can be called a homeopathic medicine (remedy), since it is only in this case that the substance is homeopathic to the case. However, this reaction to a potentised substance can be seriously affected by pathology or current and former orthodox drug

treatments (leading to aggravations), or by antidoting substances and events such as emotional upsets or accidents (which can stop its action).

Clearly a person will fail to react to a single dose (however large) unless they are sensitive to the substance, and such a lack of reaction is normal and simply proves that potentiation makes substances safe. On the other hand, any reaction indicates that the individual is sensitive to the substance, and that potentised substances have an effect on such individuals. In other words, absence of a reaction proves nothing, whereas the appearance of a reaction disproves 1023's claims. Scientifically this is a very foolish experimental design since it is incapable of proving what they want to prove.

B. Scientifically useless arguments

The premises underpinning this stunt are equally unscientific. In the first place (1) there is the assumption that potentisation is the same as dilution. In the second place (2) there is the assumption that evidence based medicine can rely on randomised controlled trials alone. Finally (3) there is the assumption that randomised controlled trials can prove effectiveness.

1. Potentisation involves dilution plus succussion, that is: $p = d + s$. Even primary school children can understand that in such an equation $p = d$ only if $s = 0$. So no matter how much the organisers of 1023 want to talk about dilution, they must prove that succussion has no effect before any discussion of dilution is scientifically meaningful. As it happens there is extensive, good quality, replicated evidence from experiments on cells, tissues, plants and developing animals that a substance which has been diluted and succussed has a significantly different biological effect from the same substance merely diluted. [1] Scientifically dilution is only relevant in that it appears to play a part in increasing the 'signal-to-noise ratio' during potentisation.
2. Evidence based medicine (EBM) depends both on evidence from trials, such as randomised clinical trials (RCTs), and on evidence from clinical practice. *It cannot, and specifically does not rely on RCT evidence alone.*[2] Evidence from clinical practice is absolutely necessary because treatment has to reflect the individuality of the patient. Any argument which relies on RCT evidence alone to prove the effectiveness of homeopathy or pharmaceuticals is a rejection of evidence based medicine, and a rejection of basic medical facts. In other words, quoting only RCTs as

evidence that homeopathy does not work is fundamentally flawed reasoning, and is categorically not a 'scientific' application of the principles of EBM.

3. RCTs have an important role in exposing harmful effects, because these effects are easily identified in increases in morbidity and mortality. Harmful effects are not individual except as regards the rate at which they occur. On the other hand, curative effects are fundamentally individual,[3] and any test of curative efficacy depends on using a scientific definition which takes individuality into account. No such definition has been produced by orthodox medicine. Instead RCTs use ad hoc definitions which narrowly define what is to be treated, and de-emphasise other aspects of the case. The inevitable consequence of this approach is that any beneficial effect is accompanied by side effects, arising from individual responses to the treatment. The extent of these individual responses is only fully revealed in clinical practice, which is why RCTs offer an inadequate basis for judging efficacy or effectiveness.

Clearly it is unscientific to claim that potentisation is dilution, or that RCT evidence is the sole basis of EBM, or that RCTs are able to prove that homeopathy is not effective.

Conclusion

The evidence above shows that the 1023 group does not understand basic mathematics, basic scientific principles, research evidence, the principles of research design, medical facts, the principles of evidence based medicine, or the principles of homeopathy. In short the group is profoundly ignorant of the subject it is making claims about, and its 'overdose' stunt is simply a propaganda exercise without any scientific basis.

References

1. For examples, see the uncorrected 'Memorandum submitted by Dr Peter Fisher HO 21' at <<http://www.publications.parliament.uk/pa/cm200910/cmsselect/cmsstech/memo/homeopathy/ucm2102.htm>>.
2. See David L Sackett, William M C Rosenberg, J A Muir Gray, R Brian Haynes, W Scott Richardson, 'Evidence based medicine: what it is and what it isn't', *BMJ*, 312 (1996), 71-72 (13 January), at <<http://www.bmj.com/cgi/content/full/312/7023/71>, accessed 6 December 2008.
3. See Simon Singh, and Edzard Ernst, *Trick or Treatment? Alternative medicine on trial* (London: Bantam Press, 2008), p. 23.