The GM furore: Who's to blame?

Dr Bernard Dixon, science writer and former editor of New Scientist magazine, is the winner of this year’s HealthWatch award for his many years of work in providing high quality information on scientific issues. After receiving his award at the HealthWatch Annual General Meeting in October, Dr Dixon gave HealthWatch members an illuminating and most enjoyable talk on what is possibly the most discussed yet least understood issue currently in the news.

It would be oversimplifying matters to blame the furore surrounding genetically modified foods entirely on the media. But they, along with many others, have played their part. Genetic modification is not new. The techniques were being developed twenty-five years ago when scientists voiced their concerns about possible dangers at a meeting at Pacific Grove, California. These were famously reported on in the American magazine Rolling Stone in an article entitled “Pandora’s Box”.

But the hysteria we have seen recently is a uniquely British phenomenon. And it was not until 10 August, 1998 that it was essentially triggered by a World in Action television programme. This described experiments in which Arpad Pusztai of the Rowett Research Institute, Aberdeen, had apparently demonstrated that mice developed stunted growth and an impaired immune response as a result of eating genetically altered raw potatoes. It seemed that Pusztai had inserted into the potatoes a gene coding for a lectin (a type of protein produced by many plants as natural insecticides). Amplified by banner headlines in newspapers and through television newscasts worldwide, World in Action’s theme was the horror of “Frankenstein food”.

There were, however, immediate grounds for caution over the practical significance of the Aberdeen work. Firstly, the results on potatoes were preliminary and unpublished. Secondly, even if the very worst interpretation were placed on this research, it scarcely justified the condemning of all GM food. However, the media claque which both preceded and followed the TV programme was not cautious. The Express ran a front-page splash, “Genetic crops stunt growth”, accompanied by an editorial on Frankenstein food (“The latest revelations... raise the prospect that scientists might be creating something truly dreadful”). The Daily Mail’s front-page story announced that the discovery undermined repeated assurances from manufacturers and governments that such foods posed no risks.

The furore quickly ended in farce. Barely three days after World in Action released its bombshell, Rowett Director Philip James announced that the experiments had not been done using genetic methodology at all, but by spiking potatoes with a lectin. Arpad Pusztai had been suspended.

The Daily Mail, to its credit, gave the same prominence to a front-page announcement that “Food scientist got it wrong” as to the original story. Other papers performed less creditably.

One clear lesson, at this stage, was that, just as scientists should not release data to the media until they have withstood appropriate critical scrutiny, so journalists need to question whether and where research claims have been published. While the refereeing process cannot guarantee absolute veracity, it undoubtedly helps to minimise error in the professional domain and needless alarm in the wider public forum.

Secondly, people commenting on genetic manipulation need to recognise that adverse effects coming to light during screening tests confirm, rather than repudiate, the effectiveness of those procedures.

**With rare exceptions, this was not an impressive episode in the media coverage of science.**

But then, six months later, it all erupted again. “Frankenstein food fiasco”, “Shops in fear over GM food” and...
"Safety fears at 70 sites testing GM crops" were typical headlines on 12 February 1999. The trigger was a Guardian report that 20 scientists had supported Arpad Pusztai in stating that mice suffered adverse effects when fed on raw potatoes containing a lectin gene. Unfortunately, neither The Guardian article nor a press conference later in the day revealed precisely what Pusztai had done. Speakers said they had written a report, but it was unavailable. And-six months after the original claim-the work remained unpublished.

Such niceties did not deter the many reporters (not science correspondents) who went into overdrive in the ensuing days. "Scientists back findings of ousted expert" announced The Daily Telegraph. "Scientists are veying to produce the ultimate in Frankenstein foods-plants and animals with human genes", added The Express two days later Then The Guardian published a list of "GM foods to avoid like the plague", with names of companies, brands and products.

Absent from all of this was any recognition that the term "GM food" had three very different meanings. Not one writer, over several days, explained that a cheese, sugar or oil made by a recombinant organism differs considerably from a product such as tomato puree containing denatured DNA, and in turn from a plant containing viable genes.

Virtually no attention was given to the laborious vetting procedures of the Advisory Committee on Novel Foods and Processes. Also ignored were the committee chairman's public request for the potato/lectin results, her criticism of the way information had been released directly to the press, the Rowett Institute's rejection of the new claims as misleading and its call for open publication of the findings.

Instead of addressing reality, most otherwise serious programmes and publications took the simpler course of accelerating the bandwagon. The Sunday Times announced that "GM food is already widely available. Now scientists warn it could be a health risk"—suggesting that tomato puree or vegetarian cheese could be as dangerous to eat as raw, poisoned potatoes.

Such antics perplexed many scientists outside the UK (and many inside). Yet there were wider messages. One was the danger that national hysteria could not only jeopardise an entire industry in one country but create tidal waves elsewhere and indeed threaten international trade.

It is tempting to blame the media solely for Britain's GM food furore of 1998-9: there is much incriminating evidence. Yet others played significant roles, sometimes unwittingly. The furore was ignited not by a journalist but by a scientist, Arpad Pusztai. It was then supercharged by the group of 20 scientists in February 1999 whose protest, it later emerged, had been co-ordinated by Friends of the Earth.

Consider too the British Medical Association's report on The impact of Genetic Modification on Agriculture, Food and Health, issued in May 1999, and the ensuing media coverage—"Doctors on alert for GM diseases" (The Times) and "Doctors sound alarm on GM food" (The Independent).

But what did the BMA report actually say? One of its key conclusions was that "transgenic products may adversely affect people suffering from allergies. Soyabean containing genetic material from Brazil nuts cause reactions in individuals allergic to nuts". In fact, the single reference which the BMA used to back its claims was to a paper showing that an allergen from a food already known to be allergenic could be transferred into another food by genetic engineering. In other words, a screening test on a well recognised allergen, carried out specifically to exclude hazards of this sort, has been transformed in the public mind into the threat of unforeseen allergies lurking in our food. Neither the BMA report, nor any of the reports on the report, pointed out that one of the most valuable potential applications of genetic modification to food is to remove possible allergens by deleting the appropriate genes.

A quite different but nevertheless significant factor was the growing realisation that, with the increasing commercialisation of Britain's university science departments and publicly funded research institutes in recent years, it was now very difficult to find truly independent expertise for the evaluation of contentious issues such as the alleged risks associated with genetic modification.

Campaigning groups such as Greenpeace, Friends of the Earth and the Soil Association clearly played major roles too. (They might have been told that one of the principal motives for genetically modifying crop plants was to give them inbuilt resistance to attack by pests. This is far preferable to using chemical insecticides, and indeed is the very style of "biological control" which Rachel Carson advocated in Silent Spring in 1963.) So (inadvertently) did certain scientists who went over the top in dismissing public concerns as simply irrational.

Another significant voice was that of Prince Charles, who on several occasions spoke out against GM foods. A final, powerful influence was a circulation war between Britain's national newspapers, which no doubt helped to increase the temperature of sensationalism which characterised much of the media coverage.

The most regrettable feature of the UK furore over GM foods has been the pervasive insinuation that science in general is not positive but negative. Of course, the development of genetic modification, like every other discipline, will probably be accompanied by some risks—though none have come to light since the advent of recombinant DNA over a quarter of a century ago—mistakes will be made. But given the practical fruits of scientific research in healthcare, agriculture, environmental protection and other fields, the idea that science
simply creates problems which it cannot contain is absurd.


Chairman's report

Ambitious plans for the future

At the ninth Annual General Meeting of HealthWatch, held in London in October, Professor John Garrow handed over Chairmanship of HealthWatch to lawyer Malcolm Brahams. In his farewell address, Professor Garrow paid tribute to the committee members through whose dedication the organisation's aims are starting to bear fruit.

It is now nine years since HealthWatch became a Registered Charity. That status was achieved by a lot of unpaid work done by Malcolm Brahams, now to be our Chairman. As a mark of our appreciation he was made an Honorary Life Member. For many years he was the only holder of that distinction, but this year your Committee voted unanimously to confer this status also on Caroline Richmond, who was the prime mover in the formation of the Campaign Against Health Fraud. We changed our name to HealthWatch because the Charity Commissioners thought CAHF did not sound very charitable.

This is a suitable moment to review our present aims, the extent to which we have achieved them, and the opportunities that lie ahead. Our formal aims are set out in a box in every issue of the Newsletter. They are (1) to promote proper testing of treatments, whether "orthodox" or "alternative"; (2) to try to protect the public against misleading healthcare claims; and (3) to educate the public and media concerning the characteristics required for valid clinical trials.

Nine years ago these were novel and ambitious objectives for a small charity whose funding relied on the modest subscription paid by about 200 members. Our first objective is now very fashionable, and marches under the banner of Evidence-Based Medicine (EBM). The military allusion is justified, since this year we have seen the emergence of NICE, a powerful organisation which seeks to ensure that NHS money will not be spent on treatments which have not been shown to be cost-effective (see Newsletter 34 and this issue). There is general support for this principle, but we now have a good demonstration of the problem which arises when it is applied in practice. NICE has decided that an expensive anti-flu drug has not been shown to be cost effective, so it cannot be prescribed on the NHS. They have incurred the wrath of the public and predictably) the pharmaceutical industry. It will be interesting to see how the politicians assess the risk versus benefit of defending the principle of EBM. Many treatments, and methods of diagnosis, lurk in a grey area between the shining uplands of having been shown to be effective and the Stygian depths of having been shown to be ineffective. Some of conventional medicine, and most of alternative medicine, is in this grey area in which it has not been convincingly shown to be either effective or ineffective.

The battle for the principle of EBM has been won, but the fight is now about the correct application of this principle. This is an arena in which HealthWatch cannot directly affect the outcome. However we have not fled the field. For example the Royal College of Physicians of London has a working party on the relationship of alternative and mainstream medicine, and House of Lords Select Committee on Science and Technology (Sub-committee III) has a group chaired by Lord Walton addressing similar issues. In today's climate it is mandatory that everyone should respect the views of everyone else, regardless of the weight of evidence supporting the views of either side, so leaders of the medical profession need to be seen to be open-minded about alternative medicine. HealthWatch has taken the opportunity to remind them that this should not obscure their duty to support the proper testing of treatments in both conventional and alternative medicine.

Our second objective, the protection of the public against misleading claims, was a central plank in the platform of CAHF. Members of HealthWatch who are expert in relevant fields continue to help Trading Standards departments in prosecutions of entrepreneurs who make misleading claims for their medicinal products. Some of the fees for this work go to supplement the income of HealthWatch that would otherwise be seriously overspent. I hope this work will continue, not merely as a source of income, but also because we need to be able to show the public and media the mischief which can be caused by misinformation in advertisements. One of the dangers in exposing charlatans is that they may reply with a threat of libel: this danger is reduced if a court has already found them guilty of misleading the public.

Our third (and to my mind most important) objective is to convince the public and media that valid clinical trials are possible and necessary for a reliable assessment of healthcare claims. It seems that no other body takes this important task seriously. Here are glorious exceptions: several of the winners of our Annual Award (including Dr Bernard Dixon, whom we welcome today) have used their journalistic skills to present scientific argument to the public in a comprehensible manner. Regrettably the public seems more excited by magic and mystery than by rational argument. Even more regrettably the media seem willing to provide material on which anti-science flourishes-but we will be hearing more on that topic from Dr Dixon.
So what has HealthWatch done in the past to achieve the third objective, and what can it do in the future? One small step is to honour those people who have championed the cause of reason in matters of healthcare, as we are doing this evening. Our Newsletter, ably edited by Mandy Payne, seeks to inform our members, and the journalists to whom complimentary copies are sent, about the principles of valid clinical trials, and the mess which ensues when these principles are abandoned as, for example, in the di Bella cancer fiasco (see Newsletter number 31 and number 34).

Largely through the efforts of Professor Arnold Bender, who sadly died in February this year, we received a grant from the Swiss-based charity ISFE in recognition of the role of our Newsletter in nutrition education. This grant has done wonders for our solvency, as you will shortly be hearing from our Treasurer, John Hanford. The scion of the Bender family, Dr David Bender, has set up a web page for HealthWatch at no cost, by permission of the Biochemistry department of University College London. This carries full text of past issues of the Newsletter, and is frequently used as a resource by journalists who wish to know more about the structure and functions of HealthWatch. Our telephone helpline, formerly manned part-time by Sheila Smith in the department of Professor Vincent Marks, is now a dedicated line being manned full-time by Michael Allen. These developments have made HealthWatch more effective in offering guidance to the public and media about the proper testing of healthcare procedures and products.

Now that our finances are less constrained we are able to develop two new initiatives to advance our educational objectives. We would like to set up a prize for undergraduates in training for healthcare professions who show skill in assessing clinical research protocols. Sadly many doctors, nurses and alternative practitioners lack the ability to distinguish between sound and flawed research protocols, so they are unable to decide if evidence of efficacy is valid or not. The training schools that teach these skills, and the students who are motivated to acquire them, deserve every encouragement, since Evidence-Based Medicine is a mockery if practitioners are unable correctly to evaluate the evidence. The other initiative which we would like to develop, but which must wait for further funding, is to set up training courses for doctors, nurses and journalists which would help them to see the need for well-designed clinical trials, and how the common pitfalls in trial design can be avoided.

These are ambitious plans for an organisation as small as ours. They would have no chance of success if it were not for the skill and dedication of the Executive Committee with whom it has been my privilege to work for the past three years. Two of the Bender family have already been mentioned, but I must record our special thanks to a third, Mrs Deborah Bender, who has been our tireless Membership Secretary throughout the life of this Charity, but who is now obliged by ill health to retire from the committee. I spoke to her recently, and she was sorry to be unable to attend this meeting to say goodbye personally to you all. Her work as membership secretary is being taken over by Mrs Shirley Churchman with whom I worked even before the birth of HealthWatch. Dr Geoff Watts, the first of our Award winners, has agreed to be Vice-chairman. It only remains for me to thank all the members of the Executive Committee for their hard work and unfailing support and friendship while I have been Chairman. It is good to retire as Chairman with the sure knowledge that HealthWatch is in safe hands, and will continue to strive towards our stated objectives. I will continue to support this work to the best of my ability.

John Garrow
HealthWatch Chairman 1996 to 1999
19th October 1999

Opinion: Not so NICE after all?

_The government wants the health service to benefit from evidence-based medicine. But is NICE the way to deliver the goods? Dr Neville Goodman voices his doubts._

The National Institute for Clinical Excellence (NICE) started its work last autumn (see Newsletter number 34) by not allowing doctors to prescribe the anti-flu drug zanamavir on the NHS. The manufacturers, Glaxo-Wellcome, were upset.

For some days, the media carried stories of strong hints that the company would pull out of the UK, and even darker hints that the rest of the pharmaceutical industry would follow unless NICE was kinder in the future. In fact, never mind getting into trouble with the drug companies, NICE is likely to upset just about everyone it touches unless it treads very carefully as it starts to roll out its guidelines over the coming months and years.

NICE is one of the government’s answers to the perceived failure of the National Health Service. There have been some highly publicised disasters in professional and institutional practice. Certain aspects of the NHS, notably the treatment of cancer, are certainly struggling. But considering that this country spends less of its GDP on health than almost any other First World nation, it is difficult to see why wholesale reorganisation and managerial control is the solution, nor why the government should be quite so keen to paint the NHS in such a bad light. Where is the evidence that, taken as a whole, the NHS fails its population more than the health services of the other nations fail theirs?

NICE will face many problems, not the least of which is failure to face up to them. The Chief Executive of NICE,
Andrew Dillon, addressed a meeting in Exeter in November to explain the workings of NICE. The audience was composed mainly of clinicians and managers who had been trying for most of 1999 to get to grips with Clinical Governance, for which NICE is intended to provide ‘best practice guidelines’. Mr Dillon opened his talk by saying how pleased he was to have the opportunity to talk to us, because feedback from those on the shop floor was always valuable. Yet NICE was completely unable to find anyone to attend an earlier conference, at the Royal College of Physicians in September, whose sole purpose was to pose some serious questions of how NICE would function. Because of an administrative mistake, invitations were not sent to NICE until July, but the reason for non-attendance seemed to be that the talks were ‘hostile’ to the purpose of NICE, and that the conference was ‘inopportune’ timed because it was just as NICE was starting work. Those of us who spoke thought that this was the best time to face up to difficulties.

So what are the difficulties; what is wrong with the fine-sounding National Institute for Clinical Excellence? There is much wrong. Full discussion can be found in the forthcoming book of the conference (see reference), but two aspects worry me in particular: the robustness—or lack of it—of national guidelines of any sort, and the confusion of clinical effectiveness and cost effectiveness. Bear in mind first that the Chair of NICE, Professor Sir Michael Rawlins, has put it on record that health professionals could get into trouble for ignoring NICE’s guidelines. All doctors know, however, that clinical guidelines of any sort will inevitably involve value judgments. Unless the guidelines are set from unequivocal evidence about uncontentious conditions (in which case, why set up NICE in the first place?), there will be value judgments during their setting, and further value judgments during their application. And that is just for a single condition; what if a patient suffers more than one condition and the guidelines for those conditions clash? Medical record keeping could become a list of reasons for not applying guidelines.

There are already many bodies and organisations providing guidelines. What are medical textbooks if not guidelines? One of the unanswered problems we spoke about at the conference was why NICE’s guidelines, simply because they come from NICE, be more ‘correct’ than anyone else’s.

Considerations of money introduce further problems. Those in charge of NICE insist that NICE is not there to ration healthcare, but that decisions sometimes have to be made on how best to spend limited amounts of money. This is playing with words. We do not have unlimited resources and we need to admit it. A symptom of limited resources is postcode prescribing, and everyone—Mr Dillon, Professor Rawlins, the previous Secretary of State Frank Dobson and now Alan Milburn—insists that NICE will see its end. This does not make sense. When Health Authorities make decisions not to buy expensive drugs for expensive diseases, they buy less expensive treatments for other diseases instead. If Health Authorities are compelled by NICE to buy expensive treatments, the money will have to be taken from treatments for the other diseases. Rationing by postcode prescribing will become rationing by favoured disease. Current ministerial pronouncements suggest that it will be better to have cancer or heart disease than arthritis.

In fact, there is no rational way to make decisions about expensive treatments; there are only pragmatic ways. A National Institute for Clinical Excellence is a badly named organisation if part of its role is deciding who will receive treatment. There is no such thing as cost-effectiveness: a treatment either works or it doesn’t; society then has to decide whether to spend the money or not.

HealthWatch wishes people to make informed choices in healthcare. Pretending things are simpler than they are appeals to politicians but in the end simplification is unhelpful. Choices in healthcare are often difficult, and cannot please everyone. Evidence is useful, but the evidence (which NICE will assess) cannot tell us when it is better to ignore the evidence. Central control of the clinical practice of individual practitioners may not be what patients want. Decisions about spending healthcare money, on the other hand, can only be made centrally. Patients wishing, in the current idiom, to become empowered need to work with their doctors. There should be freedom for the doctor and patient to work together within the constraints laid down by those who hold the purse-strings. In the end, it is our money that they, and we, are spending. If we want more, we will have to pay more for it. But are we sure that NICE is the best way to spend it?

Neville Goodman
Consultant Anaesthetist, Southmead Hospital, Bristol

Complementary Medicine, Belfast’. Admission was free, and the concluding event was a prize draw for 3 months Intestinal Cleansing Program!

Amongst the speakers was Phillip Day on "Cancer Treatment Alternatives, the good news". Mr Day began by pointing out that he was a journalist and not medically trained.

He then told us that there was no reason why anyone has to die of cancer or AIDS. He assured us that the HIV virus does NOT lead to AIDS, and that cancer [any cancer] is a chronic metabolic deficiency disease.

He told us three hundred thousand people are "killed" in US hospitals each year. He exposed the "links" between the pharmaceuticals and the tobacco companies, how the pharmaceutical companies pay for the medical training of doctors, and why it is, therefore, in their interests to keep us sick with cancer. This was backed up with his assertion that cancer is a disease of industrial societies and rises with GNP.

Then he gave us the "simple cure" and the "only effective treatment for both cancer and AIDS".

This is "Laetrile/Amygdalin/B17 with supplementation by Metabolic Therapy". (Laetrile/B17 is a compound synthesised from apricot kernels. Metabolic Therapy apparently consists of B17, vitamin A & E emulsion, pancreatic enzymes, supported by a pineapple a day and/or papaya.) This information, however, has been suppressed, Day alleged, in order to keep the government, the pharmaceutical industry and the medical profession in money and employment. According to Mr. Day, a named Mexican Cancer Clinic claims a success rate of 20% of patients who have been "sent home to die" by "allopathic medicine".

Day had with him for sale in the lecture hall some bottles of product, apparently Metabolic Therapy, and his web site could be accessed for further purchases. At one stage he walked about the room holding up a small bottle which he said contained DMSO, saying that, "this was it," and he "could be arrested for having it".

Mr. Day mentioned many names of authors, doctors, websites, countries, clinics. Yet evidence was in short supply-no randomised controlled trials, just anecdote and testimonial.

Furthermore, all the paperwork was available on the day to enrol in courses costing up to £3,048 for a one-weekend-a-month-over-two-year course in Homoeopathy and/or Naturopathy.

I brought my concerns to the attention of the Hospital management who responded, via one of the secretaries, along the lines of, "They neither condemn nor condone the practices". I also telephoned The Medicines Helpline, who kindly sent me lots of information on Laetrile, all of which confirmed that Laetrile is not a proven cancer cure not to mention a remedy for AIDS/HIV.

The hospital is failing the public with this response, particularly since this hospital is taking over the management of all oncology services in Northern Ireland.

One final piece of news—it is hoped to bring Charlotte Gerson of Mexican Cancer Clinics to Northern Ireland next year. I sincerely hope her talk will not be given in the grounds of an NHS hospital.

Harriett Moore

The CN&CM, is registered in England, number 3521446, although the address given was 39 Lakeland Rd, Hillsborough, Co Down, NI.

Web address is: [http://www.naturopathy-uk.com](http://www.naturopathy-uk.com) and e-mail info@bestcare-uk.com.

Phillip Day's web site is at [http://www.credence.freeserve.co.uk](http://www.credence.freeserve.co.uk).

News and media: Healing on television

Sceptics have been getting a fair hearing recently, if two recent BBC programmes are anything to go by. On the 22nd September BBC2's "Living with the Enemy" visited Glastonbury's extraordinary Shambhala Healing Centre, run by Isis (a woman) and Argon (a man) who describe the place as a combination of "hotel, health farm, sacred site and gateway to higher consciousness." Their guest was Patricia, whose antipathy to alternative medicine resulted from losing her husband to cancer after being, she felt, misled by healers, homoeopaths and psychic surgeons who, she claimed, promised but failed to cure him.

A week at the centre costs £500 including "treatments". Patricia gamely went along with a few therapies but understandably drew the line at re-birthing, which would have involved being naked in a tank of water with Argon.

As the week progressed, Patricia's cynicism grew to frustration as her attempts to extract information on efficacy, training and the like were not only unsuccessful, but interpreted as hostility. Eventually Patricia's hosts appeared unwilling to even remain in the same room as her "Living with the Enemy" makes good viewing because it can be fun to eavesdrop on clashes between people with extreme views. In this case, Patricia appeared pretty
reasonable, while the undoubtedly well-intentioned Isis and Argon came over as quite daft.

On BBC1 Northern Ireland, Kilroy's "A Healer Changed My Life" on 2nd November featured psychic surgery, laying on of hands, and even a woman who claimed to be able to heal over the telephone. Kilroy made no effort to disguise his scepticism. "I can't believe a word of this!" he exclaimed repeatedly when interviewing the man who claimed his lower back pain was relieved by a man wielding an invisible scalpel. The healers couldn't win.

The more down-to-earth of their members claimed they always ask patients to continue with orthodox medical treatment, prompting the inevitable response, "so it was the doctor that cured, not the healer". Psychologist Chris French countered the anecdotal evidence with the response, "If these effects are so powerful then why don't they come through in controlled studies?" Why indeed.

Postal charge: our apologies

An oversight resulted in the mailing of the October issue of the HealthWatch newsletter being sent out with postage just short of the correct weight. We understand some members had to pay excess postage.

HealthWatch would like to offer our sincere apologies for any inconvenience and expense that resulted to some members. We shall ensure that it doesn't happen again.

NCAHF is now NCRHI

Long-standing members will remember that we started as the Campaign Against Health Fraud, but for legal and other reasons, including a desire to be less confrontational, we changed our name.

Our former name was inspired by our US counterpart, the National Council Against Health fraud. They have now changed their name to the National Council for Reliable Health Information.

They publish a good newsletter, which complements ours. Details from PO Box 1276, Loma Linda, Ca 92354-1276,

or visit their web sites on http://www.ncahf.org. or http://www.quackwatch.com

Caroline Richmond

HealthWhich? slams gadgets

Many promises made for health gadgets don't stand up to scrutiny and some are misleading, HealthWhich? have warned.

Nine gadgets that made health-type claims were bought from mail-order catalogues, a magazine, and a newspaper supplement. These included gadgets that claim to treat insomnia, relieve pain, or leave teeth and gums cleaner and healthier. HealthWhich? then asked for the manufacturers' evidence behind the claims.

Not once did the experts think the evidence supplied was sufficient to justify the claims being made.

Two products from the Innovations catalogue were found to be faulty-one, the Rio Tens machine, claims to be 'a new approach to pain relief'. The other, the Facial Ionic Toning System, claims to help prevent spots, blemishes and wrinkles.

In one case, Innovations was heavily criticised for claiming it was conducting a 'serious trial' on a gadget called NONO-which claims to help cold sores, mouth ulcers and spots-in order to help 'assess effectiveness'. One expert described this approach as 'wholly inappropriate', another thought it was 'ethically questionable'.

The experts criticised the advertising and product literature that accompanied many of the gadgets for being misleading.

HealthWhich? December 1999

Book review
Acupuncture: a scientific appraisal

deprecated by Edzard Ernst and Adrian White
ISBN 0 7506 4163 0 Price £19.99
Published by Butterworth-Heinemann, 1999

The fact that a remedy is ancient commands the same sort of respect in complementary medicine circles as does the fact that it is natural, yet the history of medicine shows quite clearly that mankind is capable of continuing for centuries with remedies that are not only having no real effect but which may even be delaying recovery. And, as for being natural, what could be more unnatural than sticking needles into people? Then there is the question of fashion. Why has acupuncture repeatedly gone out of fashion both in China and in Europe? Would this happen if it was as effective as its proponents say it is? Are there any recorded examples of treatments-now agreed by everyone to be important and effective-where phases of enthusiasm have alternated with phases of disfavour? Many patients who improve would have got better anyway. Or they have responded to the power of "suggestion". Or they have not really improved as much as they say they have. They don't want to disappoint the therapist. And they are a bit in love with the idea of responding to something that carries a whiff of magic and the practice of witch doctors. Something to tell the neighbours.

And if in comparative clinical trials there is a proven slight advantage, this might be because various aspects of the way it is given act as a sort of psychological boost.

Exactly the same thing can be true when comparing two mainstream remedies of doubtful value. Hence the need for all randomised trials, if possible, to be "double-blind", in which neither the therapist nor patient knows which treatment is being given. But with acupuncture this is full of difficulties and, in any case, unless careful checks of this point are made, trials that are supposed to be blind may not be.

And there is another suspicion that nobody likes to voice. In randomised trials, whether in mainstream medicine or in complementary medicine, there could sometimes be some bending of the evidence, perhaps done almost unconsciously, either in the recording or the analysing of the data, but enough to change the findings from a negative result to a marginally positive one. The danger of this must be especially great if there are strong commercial pressures (as is just as likely with complementary medicine as it is with the big drug companies of mainstream medicine) or if someone has such unshakeable faith in the value of a remedy that they are not going to let their belief be shaken by mere data. This is more likely to happen in complementary medicine, but could happen in mainstream medicine, too.

Sadly it seems that there are few trials in which both the collection of data and the analysis are carried out by totally independent observers with no vested interest in the result.

Finally, are the conditions that respond to acupuncture those that general experience shows often respond to placebo treatment? They are. This does not, of course, actually prove anything—but it further weakens the case for acupuncture.

Editors Edzard Ernst, Professor of Complementary Medicine at Exeter University and his colleague Adrian White contribute nearly half the text of this new book on the subject. As befits a University Department, but sadly does not always apply these days, both they and the seven other contributors come across not as mere sceptics, nor as believers, but as aiming to be objective, fair and open-minded. They have certainly taken a lot of trouble and their book is warmly recommended.

After a huge amount of work (something like 600 references are included in this slim paperback) the clinical importance of acupuncture remains as doubtful as ever. There does not seem to be any good evidence of any actual reversal or healing of any disease process. And where trials show greater benefit than occurs after sham treatment, the size of the benefit—though it may be statistically significant—is usually not impressive.

Many different techniques and variants—with their history and their theories (which often contradict each other)—are described in some detail. Did you know that more than fifty different methods have been described for setting light to the dried leaves of moxa in order to achieve moxibustion, regarded as closely related to acupuncture? There is also a lot of detail about modern scientific research into possible pathways by which pain, especially, might theoretically be eased.

What about harm? Any publicity is good publicity so long as harm does not hit the headlines. It seems that studies that merely report a remedy to be ineffective are more likely to boost sales than diminish them. Given the present craze for acupuncture (ten million treatments given annually in the USA) the incidence of adverse effects appears to be very low. Nevertheless, perhaps acupuncturists are lucky that the media do not seem to have carried any scare stories about occasional serious adverse effects. One of these is pneumothorax—when a lung is accidentally punctured and the air pressure that builds up endangers breathing. In a survey of 1,135 doctors and 197 non-medically-qualified acupuncturists, 21 doctors reported 25 cases of pneumothorax and 4 acupuncturists reported 8 cases.

Ernst and White conclude from their painstaking review of the literature that the only compelling evidence that acupuncture is efficacious is for the treatment of backache, nausea and dental pain. They have earlier pointed
out that such evidence does not mean the results in these conditions are necessarily any better than they are with other treatments, but that they are apparently better than a sham treatment.

Thurstan Brewin

(The book may be ordered from Customer Services Department, Heinemann Publishers Oxford, PO Box 382, Halley Court, Jordan Hill, Oxford OX2 8RU. Telephone 01865 314627, fax 01865 314091)

See also Edzard Ernst's article in Newsletter no 37

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