Antiplatelet therapy and atherosclerotic events. Commentary is inaccurate

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What do you think is a non-disease?

Pros and cons of medicalisation

Editor—The BMJ’s decision to extend participatory democracy to the question of disease is important not so much for the results but because it happened at all. To a previous generation the idea of asking consumers to decide on these matters would have been incomprehensible. Doctors decided which conditions were legitimate and which should be consigned to the outer darkness. In the debate about the nature of neurasthenia at the end of the 19th century all protagonists were in the medical profession and their debates were published in journals. The views of a few well educated and well heeled patients may be inferred from diaries and fiction, but their voices were largely unheard and unheeded.

Now of course medical authority is in retreat everywhere and the final arbiter of “non-disease” is fast becoming the patient. All this is well and good, so why the outrage of so many respondents? I suspect it comes from a failure to recognise the different concepts of illness and disease.

Taking chronic fatigue syndrome as an example from the debate,1 few could now question that it is indeed an illness. It has a nosological status and is clearly associated with suffering, ill health, and disability. The patient's voice must be and is paramount. But is it a disease—that is, has a specific pathological process been identified to account for the above? Chronic fatigue syndrome is not yet a disease because no unambiguous evidence has yet been presented that has commanded widespread acceptance by the scientific community, which remains the arbiter.

Of course, the syndrome may plausibly make the transition from illness to disease like many other illnesses have done. Or it may not. The traffic is not entirely one way in which illness entities inevitably receive the stamp of scientific approval, usually after a period of being falsely labelled as psychological. Previously apparently sound entities have lost their disease status under the cold light of scientific scrutiny.

The concept of labelling also generated a lot of heat in this debate. People behave according to the labels that are ascribed to them, a process seen as largely negative. Some respondents rightly echo this, citing examples in which the act of labelling distress as something medical (pathological) carries with it a host of adverse consequences.1–4

But more commonly the act of giving a name to symptoms and disability brings relief.5 The acknowledgement by the medical profession that a patient's condition has a name and is a legitimate illness is immensely reassuring and enabling. It also ends the battle of diagnosis—“If you have to prove you are ill you can't get well.”6

Giving a condition a name is an intervention in itself with costs and benefits.7,8 Crudely handled, medicalisation can perpetuate disability and exclusion. But used constructively and appropriately it is the first step towards recovery.

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Defining non-diseases to avoid medicalisation is throwing the baby out with the bath water

Editor—Having read the list of non-diseases I am not sure I fully understand the rationale behind it.1 However, as a person who experiences chronic fatigue syndrome, fibromyalgia, obesity, and several other conditions included on the list I have a vested interest in the outcome.

I agree that the medicalisation of certain diseases, illnesses, and conditions has impacted negatively on those who experience them. I also accept that it might be better not to treat certain conditions in certain circumstances. This is true of both diseases and non-diseases and I see no automatic correlation between disease and treatment and non-disease and no treatment.

Few people would probably argue that having big ears is a disease, so its inclusion as a non-disease poses few problems. This does not mean, however, that it automatically requires no treatment. That decision surely depends on various factors, including the extent to which the condition impinges on the life of the person experiencing it. Conversely, cancer is (arguably) a disease that often benefits from highly aggressive treatment, but in some cases less aggressive treatment or no treatment at all might be better.

Moreover, despite the best efforts of certain egotistical members of the medical profession to convince us that they have all the answers, many conditions are not understood enough to be able to label them disease or non-disease. Perhaps a condition should be labelled a non-disease rather than erroneously be called a disease. I think, however, that any rush to label a condition of unknown origin a non-disease could have negative effects.

Historically, conditions that have no known origin have attracted labels such as psychosomatic and psychological, stigmatising those experiencing them as lacking or weak at best and mad at worst and defining treatment. For example, before the organic origin of multiple sclerosis was discovered patients were often labelled as having psychological difficulties and treated inappropriately. This is still the case with conditions such as chronic fatigue syndrome and myalgic encephalitis.

Labelling conditions as non-diseases could also have far reaching consequences. In the United Kingdom a person's entitlement to receive state and other benefits when unable to work because of ill health is largely dependent on the recogni-
tion of a pre-existing condition. Clearly, the label of non-disease might well negatively affect the amount of benefit paid.

The classification of certain conditions as non-diseases to avoid the perils of medicalisation seems to be a case of throwing the baby out with the bath water. A holistic social approach to illness and disability that treats each person individually is far better than seeking a cover all solution replacing one label with another.

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Labels create legitimacy and produce dependence

**Editor**—The last decade has seen the development of an ever increasing role of patients as the primary decision maker in the management of illness. This approach has been encouraged by advocacy groups, the popular news media, and doctors who cater to the non-critical thinking population.

For those not trained to reign in their innate belief engines, the association of symptoms with a disease is encouraged by the production of labels. A symptom complex described by physicians as fibromyalgia, which is nothing more than a descriptive term for pain in muscles and fibrous tissue, now has the legitimacy of a disease as opposed to a panoply of symptoms. The near mass hysteria displayed by like-minded believers when these labels are challenged adds to the dependency on the labels as being legitimate.

Having evolved a mind that is designed for pattern recognition, resists changing beliefs in the face of new information, and encourages the production of cause and effect relations in the presence of associative phenomena, some human beings will always need labels to support their continued suffering in an unfair world. These non-diseases clearly contribute to the development of co-dependent suffering.

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Diet, lifestyle, exercise, spirituality, and the search for meaning are ignored at our peril

**Editor**—Much evidence supports the organic nature of many of the diseases mentioned in the list of non-diseases, particularly for myalgic encephalitis/chronic fatigue syndrome, fibromyalgia, and multiple chemical sensitivity.1 Evidence also supports shared symptoms in these and other medically puzzling and taxing disorders such as Gulf war syndrome and irritable bowel syndrome.

Linus Pauling argued that all diseases have a molecular basis. The validity of this statement is substantiated by many who advocate the existence of non-diseases. Yet in prescribing antidepressants, antiepileptic drugs, and agonists and antagonists of the major biogenic amines and neurotransmitters, they are changing the underlying physicochemical and physiological properties of organs and body systems, particularly the brain.

Illich has written perceptively about the medicalisation of life and its origins and consequences. Medical ignorance and arrogance dominated by rationalism seeks explanations of puzzling signs and symptoms and ends up creating spurious diseases and disorders that put the blame on patients or their caring family and friends.

Numerous examples of, and articles about, non-diseases were published in the medical peer reviewed literature by eminent people of their day. They were wrong. The advancement of scientific and medical knowledge has now identified the underlying biochemical and physiological disorders of, for example, diabetes, parkinsonism, and multiple sclerosis. The sufferings of patients imposed by these arrogant and rigid attitudes demean both patients and doctors and create mistrust.

The consequence of the triumph of such attitudes is now seen in the abandonment of any responsibility for one's own health. Lifestyle, however destructive, are pursued in the belief that medicine will somehow provide an answer. The drug industry and much of modern medicine seek new agents to modify or offset the consequences of excesses—for example, new anti-obesity agents for the epidemic of obesity and maturity onset diabetes.

The food industry also contributes to modern health problems with the widespread use of pesticides, plant and animal hormones, and genetically modified crops. Thus, even eating a healthy diet leads to an increasing burden of new man-made toxins, many of which have not been toxicologically assessed.

Diet, lifestyle, exercise, spirituality, and the search for meaning are all parts of our human condition. We ignore them at our peril.

What is required is a change of heart and mind leading to a change of practice that embraces human values of mutual respect, careful listening, and use of modern drugs effectively and not randomly. It also needs to recognise the possible benefits of alternative treatments in constructive and critical ways, examine diet and nutrition, and allow patients to decide how they live and die with their illness.

Let's return to being fully human.

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1 Non-disease. Results of ballot, and electronic responses. bmj.com 2002 (bmj.com/cgi/content/full/324/7334/DC1; accessed 4 April 2002).

Summary of responses

**Editor**—There were some who thought the exercise a joke, and in bad taste at that. Others couldn't see the point and complained that deciding what was, or was not, a non-disease was unworthy of a serious medical journal and did little more than toy with semantics.

And some thought that the process trivialised genuine suffering and was an excuse for airing prejudice and ignorance. The stigma of having a non-disease could only make that suffering worse. But aside from the long list of possible contenders—from burnout to fibromyalgia, and high cholesterol—the issue provoked vigorous debate about the purpose of medicine and what some saw as a narrow understanding of illness and the limited scientific paradigm.

Respondents struggled with definitions of their own, and Kazem Zarrabi, a postdoc-toral researcher at the University of Lund, Sweden, suggested that we should look to Darwin for guidance, regarding as disease any condition that interfered with our reproductive success and compromised our “inclusive fitness.”

Medicalising natural processes, such as normal childbirth, the menopause, and bereavement was not a healthy option, countered several correspondents, serving to boost the profits of drug companies.

And much of what we classify as disease is really a byproduct of ageing, suggested Dirk Ulbricht of the Centre Hospitalier, Luxembourg, including osteoporosis, said Iona Collins, specialist registrar in trauma at the John Radcliffe Hospital, Oxford.

But de-medicalising disease could deny those who had them the right to research and treatment, said Alex McLaughlin, a writer from Red Hill in Australia, and they could be dismissed as “somatisers.” The rub of the issue, she said, was whether medicine had the capacity and the moral authority to define what is and what isn't disease.

Others suggested that labels helped people cope better, gave them legitimacy, and signalled protected funding and physician time. Chronic fatigue syndrome was frequently suggested as rightfully belonging to the non-disease category, but it was also vigorously defended as having clear physiological changes.

And there were fears that state funding for disease that impaired mobility and the ability to work might be withheld if it were to lose its legitimate label. The UK government’s refusal to recognise repetitive strain injury as a disease, suggested Martin Wilson of Glasgow, denied people financial help.

Respondents worried that definitions were founded on shaky ground, guided as they are by constantly changing criteria: (lack of) knowledge, different cultural perspectives, where you lived.

And they were also subject to fads and fashion. A case in point is obesity, which was regarded as a sign of prosperity a century ago, pointed out research professor of chemistry, Joel Kaufmann, from Philadelphia, New Zealand patients' rights cam-
Chalder et al speculate that social networks, usually protective of healthting, worked perversely in the case of the Gulf war veterans. A major omission in their dis-
cussion was a lack of consideration of the role of the media in reporting Gulf veterans’
ilinesses. Although we are not suggesting that the media are solely the “infective agent” in their function as the “vector” of
disease in the Gulf war syndrome deserves comment. Media distortion and oversimpli-
fications of the issues are the rule and were exemplified when the Daily Telegraph of 31
August 2001, commenting on the paper by Chalder et al, ran the headline “One in six
veterans has Gulf war syndrome.” We have taken histories from many veterans who
attended the medical assessment pro-
gramme because of fears fanned by ill
informed and unbalanced media specula-
tion. Some of these men have post-conflict
dysfunction, but no Gulf war syndrome.

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J P Bolton medical advisor
Amanda J Bale database manager, Gulf veterans’ medical assessment programme

Gulf war syndrome may be post-conflict dysfunction

Editor—We have read the results of the
questionnaire based study by Chalder et al
from the Gulf war research unit at King’s
College.1 They found that 17% of the 2001
Gulf war veterans believe themselves to be
suffering from Gulf war syndrome, although
the group has found no evidence to support
such a syndrome.2 The veterans’ belief was
reinforced if they knew someone with
similar symptoms. We believe that this
represents post-conflict dysfunction expressed according to health beliefs pre-
vailing at the time the questionnaire was
administered.

Hyams et al investigated the health of
veterans without organic disease from
conflicts since the American civil war (“disordered action of the heart”).3 He
showed that veterans complained of a range
of physical and cognitive symptoms, the
nature of which was independent of the
conflict and gained diagnoses based on
the then current aetiological beliefs. The Gulf
veterans’ medical assessment programme of
the Ministry of Defence now provides a
robust clinical base.3 Of the 3000 who have
attended (6% of the deployed force), 80%
are well. The 20% who are ill account for
about 1% of the deployed force.4

Unwin et al showed that self reported
physical functioning in Gulf veterans is
broadly similar to that in a control group of
non-deployed forces and Bosnia veterans
but that the perceived quality of their health is
reduced.5 The difference between the 17%
of Chalder et al and our clinical findings
may be explained by the disordered health
perception and related behaviour.6 We think
that this, and the syndromes discussed by
Hyams and others, constitutes post-conflict
dysfunction.7

ICD and DSM are contemporary cultural
documents

Editor—In their riposte to my critique of
post-traumatic stress disorder Mezey and
Robbins cite me as advocating a “stiff upper
lip” approach to adversity.8 This is disingenu-
omous. I was pointing to the tension
between aspects of British identity tradition-
ally grounded in stoicism and composure and
the emergent demands of an expressive
individualism.

Mezey and Robbins pay lip service to the
role of social factors, but their argument
runs the other way. Their core defence is
institutional: post-traumatic stress disorder
must be valid because it is in the books—in
psychiatric classification systems such as the
International Classification of Diseases (ICD)
and the Diagnostic and Statistical Manual of
Mental Disorders (DSM). By this token they
would happily have diagnosed homosexual-
ity as a mental illness during the years when it
was classified, as such in the ICD or DSM.

Psychiatrists serve neither society nor
patients with psychiatric difficulties when they
uncritically endorse the medicalisation of
Adequate investigation for other physical causes of chest pain must be part of a comprehensive approach to this difficult problem.

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Hormone replacement therapy and the breast

Studies must determine the evidence

Editor—As active members of the Australasian Menopause Society, we are disappointed at the conclusions that Dixon drew in his editorial on hormone replacement therapy and the breast.1 Although it may be true that hormone replacement therapy makes mammograms harder to interpret, it is far from clear that it causes breast cancer.

A recent overview by Bush et al emphasises the weakness of Dixon’s argument, based, as it is, almost entirely on level three observational studies.2 Unlike Dixon’s selection of studies with the highest odds ratio, Bush et al’s review was of 45 studies assessing the association between use of hormone replacement therapy and risk of breast cancer. It found that risk was reduced (relative risk < 0.9) in 20% of the studies, did not change in 47% (0.9-1.1), and increased in 33% (1.1-2.0). In no study did relative risk increase above 2.0, and in the 20 studies where the relation between risk of breast cancer and combined oestrogen and progestin therapy was studied only four reported a significant difference in relative risk, with two showing an increased and two a decreased risk.

The heterogeneity of these data is in stark contrast to the homogeneity of the data on mortality from breast cancer in users of hormone replacement therapy that were reviewed: all 11 of the studies reported a reduction in risk. Unlike Dixon, the authors concluded that the likelihood of an adverse effect of hormone replacement therapy on breast cancer must be small.

The Australasian Menopause Society is a sponsor of the women’s international study of long duration oestrogen use after the menopause (the WISDOM trial), a large prospective 15 year randomised placebo controlled trial. The results of this trial, together with those of the women’s health initiative in the United States, will be used to answer the question of whether hormone replacement therapy has any effect (beneficial or adverse) on breast cancer.

Until then strong opinions will continue to be held about hormone replacement therapy and its relation to risk of breast cancer, often derived from selective quoting of the available literature. These opinions heighten the anxiety of women who have valid reasons for taking hormone replacement therapy and do not afford them the opportunity of informed choice.

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Women still want to have hormone replacement therapy

Ennour —I was dismayed to read Dixon’s editorial about hormone replacement therapy and its effect on the breast and have been provoked to respond by the anguished cries for help by both patients and colleagues. Dixon, in the words of Bernard Levin, has become a single issue fanatic. There’s more to women’s health concerns than breast cancer. Frightening women off hormone replacement therapy could have many unpredicted consequences. The lifetime risk for women of dying of breast cancer is only 1 in 26, with between three and 10 times that risk of dying from heart disease, depending on whether they are smokers or non-smokers. For all we know, hormone replacement therapy could protect many women from death due to cardiovascular disease and osteoporotic fractures than the worst estimates for the increased incidence of breast cancer. Furthermore, as Dixon concedes, many of these cancers in women receiving hormone replacement therapy are of a favourable phenotype. It is therefore altogether perverse to criticise hormone replacement therapy for making screening mammograms unparsable.

Surely, given an informed choice, most women would be glad of the excuse to opt out of the national screening programme, which is of questionable value, in favour of an intervention that improves short term and long term quality of life. Of course many women taking hormone replacement therapy have mastalgia and nodularity, but most of my patients are happy to live with this in exchange for the sense of wellbeing that they get from taking the therapy. Hormone replacement therapy also improves skin elasticity, mood, sexuality, and cognitive function.

Are we really asking women to give all this up so as to make the life of our screening radiologists more comfortable?

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Author’s reply

Truth or tact? You have to choose, most times they are not compatible

Eddie Cantor

Schizophrenia in ethnic minority groups

Selection bias in prevalence data is difficult to rule out

Ennour —To sociologists, Boydell et al find-ings are counterintuitive. One would expect economic deprivation (at neighbourhood level) to be a decisive factor for an increased incidence of mental illness. But it is surprising to learn that the lower the proportion of non-white ethnic minorities in a local area the higher the incidence of schizophrenia in those minorities (controlled for economic deprivation).

As an explanatory hypothesis the authors point to overt discrimination and institutionalised racism as sources of stress, which can be alleviated by people making use of social capital within the ethnic group. This hypothesis surely necessitates further testing and debate. It is a pity that non-white ethnic minority groups had to be considered as one homogeneous group on an aggregate level. The social networks and levels of social cohesion may be different for different ethnic groups, and follow up research should be able to distinguish these.

Boydell et al assume that all people with schizophrenia will come into contact with psychiatric services, but this requires closer attention. Members of an ethnic minority with a mental disorder who live in predomin-antly white neighbourhoods may be more likely to come into contact with psychiatric services. Probing for mental disorders might be more likely in predominantly white neighbourhoods than in non-white neighbourhoods. This is not necessarily ruled out by the fact that there is job mobil-itv of clinical staff, since institutional cultures can both consciously and uncon-
Antiplatelet therapy and atherosclerotic events

Commentary is inaccurate

Editor—We endorse the response of Baj
gent and others to Cleland’s commentary on the Antithrombotic Trialists’ antiplatelet meta-analysis.1,2 We would like to add some further comments in response to Cleland’s article and the editorial in the same issue.

Both suggest that the data in the meta-analysis were revised retrospectively. But the overview methods were planned prospectively. Differences between the data in trial publications and the dataset used for the meta-analysis occurred where trialists provided additional information on the numbers of patients originally randomised, or on unpublished or subsequently available outcomes for small numbers of patients. Minor differences between the current and previous antiplatelet overviews generally relate to additional, unpublished data from a few trials and do not affect any of the results or conclusions.

The claims by Reilly and FitzGerald that the absolute reduction in vascular events with antiplatelet treatment is smaller in acute ischaemic stroke than in other high risk conditions is incorrect. For every 1000 patients treated, about 10 events are prevented in the first month after onset of stroke, and just over one event per month is prevented with long term treatment thereafter.

Cleland finds it remarkable how seldom trials of antiplatelet agents have shown benefit on their selected primary outcome. Many early trials of antiplatelet treatment were too small to detect moderate benefits reliably, which is why the first meta-analyses were needed. Reilly and FitzGerald suggest that meta-analysis is no longer needed because large enough trials are now being done. This view fails to acknowledge that, firstly, meta-analysis of large trials can assess not just whether a treatment works but also for whom and by how much, and, secondly, trials comparing different antiplatelet regimens have rarely been large enough to detect the small differences expected.

Cleland says that inconvenient trials are ignored in the discussion section of the meta-analysis, citing an unpublished antithrombotic trial, which included fewer than 200 patients and recorded only about 50 vascular events in its comparison between aspirin and control. Including this trial in the meta-analysis would make no difference to the results. Cleland also cites an economic appraisal of aspirin, which he co-authored.

Risks and patients’ values need to be included in decision about aspirin for prevention of coronary heart disease

Editor—The updated meta-analysis by the Antithrombotic Trialists’ Collaboration confirms the benefits of aspirin in reducing non-fatal myocardial infarction, non-fatal stroke, vascular deaths, and total mortality in patients at high risk of vascular events.1 High risk was defined as patients with previous occlusive events or predisposing conditions (for example, diabetes) that led to risks of having a vascular event that were greater than 3% per year.

On the basis of these findings, the authors recommended aspirin for patients with high cardiovascular risks and low or average risks of gastrointestinal bleeding. In their discussion, they also recommended aspirin for patients at intermediate risk of vascular events (annual risk of 2–3%), including those with peripheral vascular disease, stable angina, or atrial fibrillation. They then concluded by saying that for most healthy people, for whom the risk of a vascular event is likely to be substantially less than 1% per year, daily aspirin may well be inappropriate.

We performed a systematic review and meta-analysis of the effect of aspirin in adults with no previous history of cardiovascular events for the US Preventive Services Task Force.2 On the basis of the results of five large trials that evaluated the use of aspirin for patients without cardiovascular disease, we concluded that aspirin reduced the risk of non-fatal myocardial infarction and deaths from coronary heart disease by 28%.

4 Cathie Sudlow. Welcome clinician scientist. csudlow@skull.dcn.ed.ac.uk

Authors’ reply

Editor—We agree that our findings are pre-
liminary and demand both replication and
further investigation. We are currently
studying social capital in the area and hope
to be able to measure this separately for the
larger ethnic minority groups. Regarding the problem of selection bias, we examined
incidence (number of new cases) rather than preva-
elence (number of cases). Several studies, including one from the area we
studied, have shown that a very high percentage of people with schizophrenia
have contact with psychiatric
services.1

Different processes of self selection in contacting health services or looking for
particular types of treatment may operate in
different areas. It might be that in mainly
non-white neighbourhoods, which often are
also the most economically deprived areas, mental health issues among non-white
groups are considered to be “luxury”
problems compared with other health or
social problems. As a result, incidences
might be underestimated. The risk of being
diagnosed as mentally ill in white (and often
better off) neighbourhoods might be higher
because of cultural-institutional factors.

The findings of this study are interesting.
Sociologists signal different levels of toler-
ance, or willingness to label someone as
deviant (for example, as “ill” or “insane”), according to the social setting.1

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1–3


Aspirin had little effect on thrombotic strokes or all-cause mortality over the three to seven year duration of the trials. The risk of coronary heart disease of patients in the five trials ranged from 0.36% to 1.24% per year, well below the high risk patients studied in the BMJ review. We found that the harms of aspirin included increased risks of haemorrhagic stroke and gastrointestinal bleeding that were similar to the levels found in the trials with patients at high risk.

We concluded that the number of potential reductions in events of coronary heart disease exceeded the number of potential precipitated adverse bleeding events when patients have an annual risk of 1% or greater of events of coronary heart disease. Numbers of adverse effects approached the numbers of beneficial effects when the annual risk of coronary heart disease was 0.2% or less. The balance of beneficial and adverse effects was closer for patients with risks of 0.2-1.0% per year. Providers and patients can easily measure such risks by using any one of several cardiovascular risk calculators available on the web, including our own site (www.meddecisions.com). We recommend that providers and patients incorporate both risk and patient values about those risks into their decisions regarding whether or not to use aspirin.

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Can these problems with usually pharmacological doses of folic acid (1-50 mg daily) be avoided with minimum food fortification? The only evidence I know of is a review of 38 patients with vitamin B12 deficiency treated with ≤1 mg folic acid, 30% of whom showed a significant haematological response. None of 25 patients treated for 7-19 days developed nervous system disorder, whereas six of 12 treated for 90-930 days did. Isolated examples of a reticulocyte response and neurological deterioration occurred with doses as low as 0.3-0.5 mg daily. Because of the very active blood-brain barrier for folate the vitamin enters the nervous system slowly and the duration of the treatment is just as important as the dose, which is highly relevant to food fortification. 

Folic acid does much more than interfere with the metabolism of antiepileptic drugs. Experimental studies have confirmed that folates are highly convulsant if the blood-brain barrier is circumvented. The risk to patients is small because of the barrier mechanism, but the bigger the dose, the longer the duration, and the greater the damage to the blood-brain barrier then the higher the risk.

I do not agree that the benefits of fortification are clear. They may be relatively clear with respect to the prevention of neural tube defects, but not all such defects are preventable with folic acid. The Department of Health's report estimates that fortification with 240 μg folic acid/100 g flour would prevent a further 74 cases (41%) in the United Kingdom. Given the potential risks to others, the policy of universal food fortification seems disproportionate.

Other, potentially much greater benefits of food fortification exist (including in vascular disease and to mental health), which have yet to be clarified. The possible benefits for mood, cognitive function, and ageing are considerable but have not been evaluated.

For all these reasons field trials are advisable before the whole population is exposed to a prolonged increase in folic intake.

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Fortification has several potential risks

EDITOR—Wharton and Booth recommend carrying out a field trial before a policy of fortifying flour with folic acid is implemented, but both they and the Department of Health's report underestimate the potential risks of the policy to the nervous system. In people with vitamin B12 deficiency, giving folic acid does much more than mask any anaemia. The response of pernicious anaemia to folic acid is usually suboptimal and temporary and often followed by relapse. The vitamin precipitates not only neurological complications, sometimes after some initial temporary improvement, but also anaemia, although not necessarily to the same degree or in the same time scale.

Fortification of flour with folic acid

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Treatment of intersex needs open discussion

Editor—It is excellent to see surgery for ambiguous genitalia and intersex being openly discussed.1-3 These articles prove what patients have been saying for years, that surgery can, and does, cause damage to sexual function. This research is long overdue and most welcomed by patients and parents. I agree that cosmetic genital surgery needs to be reassessed.

Parents and patients need to have all the facts explained before opting for irreversible genital surgery. This is especially so in the changing NHS that is aiming to be more patient led. Fully informed consent is important (particularly after the Bristol and Alder Hey scandals), and may be lacking in patients with ambiguous genitalia or intersex as surgery is often done on children before they can give consent. If parents are to make these decisions they need the full facts or they will end up with feelings of extreme guilt for damaging their child’s sexual function by having early surgery. Ambiguous genitalia or intersex are nothing to be ashamed of; being more open can only help people lead better lives. More research is needed into whether leaving surgery until adolescence will have psychological effects compared with surgery in early infancy as it is current practice in the thought that it reinforces sexual identity. This gives rise to the necessity for multidisciplinary treatment centres to treat the conditions with a more holistic approach encompassing surgery, endocrinology, and psychology.

Two conferences in 2000 brought together professionals and patient support groups to present their views. Universities have also invited patient groups to speak to medical students to learn from patients the effect on lives of people with ambiguous genitalia.

Support groups are professional and not disgruntled haters of doctors. They work closely with the medical profession to improve treatment, raise awareness, and support patients. Patients have the opportunity to air their views only in the media, which can often distort important issues.

When doctors come to our conferences and take time to listen to patients, parents, and support groups, they learn more than they do in the few minutes of a consultation. Patients are more likely to open up and talk to doctors who take an interest in how conditions affect people’s quality of life and everyday living.

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4 Creighton SM, Minto CL. Managing intersex. BMJ 2001;323:1264-5. (1 December.)

Doctors’ knowledge of radiation exposures is deficient

Editor—We read with interest Adams’s personal view and share her concerns.1 At one of our hospitals a young boy with splenic trauma received serial computed tomography scanning of his upper abdomen to assess the degree of splenic laceration. The scans were discussed at a multiple disciplinary meeting, and a query was raised regarding the radiation dose received by that patient. It became clear that the requesting doctors were unaware of the dose.

We compiled a simple questionnaire and interviewed 130 doctors of all grades, including consultant radiologists. They were asked for an approximate dose of radiation to the average patient having chest radiography. This was then used as a unit of 1 to calculate how many units a patient would receive for a wide variety of investigations carried out in a busy radiology department of a district general hospital (17 examinations in total).

The results were appalling. With a pass mark of 50% only three doctors (2%) passed, and that was with a generous marking scheme—20% error allowed and no negative marking. Many doctors were able to score at all only because they realised that ultrasound examinations do not use ionising radiation. The degree of knowledge was inversely proportional to seniority, with consultants scoring less than junior colleagues. It was clear and worrying that doctors have no real knowledge of radiation doses that their patients receive.

The fact that computed tomograms of the entire body can be performed on a single breath hold over a matter of seconds does not mean the patient is getting a lower radiation dose than they would have received 10 years ago. Although the Ionising Radiation (Medical Exposure) Regulations 2000 are in place, which means that it is a legal requirement to keep radiation exposures as low as possible and that they should be justifiable, it seems that knowledge is still seriously lacking.

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Prevalence of surnames in each letter affects order of authors

Editor—Chambers et al’s study of the order of authorship in a study seems to be lacking in at least one way. I have observed that surnames, especially those with a British origin, tend to begin with letters from the first half of the alphabet. For example, among the research group to which I belong, surnames begin with A, B, C, H, J, K, L, M, P, R, S and T. According to probability, a random drawing of three of my colleagues’ names to determine the order of authorship would be more likely to result in the first author having a surname beginning with a letter in the first half of the alphabet than in the second. The graph in Chambers et al’s paper presents only the percentages of names in their study; it does not indicate (except for Q and X) what the prevalence was for surnames beginning with each letter. Thus it unfortunately does not allow us to evaluate whether adjustments are needed. This study could be enhanced by adjusting the analysis for the higher prevalence of surnames that begin with first letters from the first half of the alphabet.

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