

Exercise & Ensuring M.E. Patient Safety

Did you know?

“like pharmaceutical therapies, prescribing exercise as therapy, an activity that is gaining in acceptance throughout the medical community, must be predicated on understanding the risks and benefits of exercise as thoroughly as possible.”

Cooper DM *et al.* Journal of Applied Physiology ⁱ

“randomised controlled trial data is notoriously poor at reporting adverse events”

Fiona Godlee, editor in chief, British Medical Journal ⁱⁱ

Evidence for the efficacy of graded exercise in M.E. lies in the published findings of a relatively small number of randomised controlled trials.

However the relevant trials recruited people with fatigue, which was considered to be ‘chronic fatigue syndrome’ [CFS]. No trial using more M.E. specific criteria has ever reported a beneficial outcome for exercise.

In stark contrast, feedback from M.E. patients who have tried to exercise consistently indicates that a substantial proportion have been made worse.

- Harms from drugs are often only spotted outside trials, one reason being that participants in trials are often not representative of all those affected by an illness in the general population. ⁱⁱⁱ
- This is why the Yellow Card reporting system for adverse events exists. However there is no similar system for regimes such as graded exercise, increasing the importance of survey data. ^{iv}
- The CMO’s Working Group Report ^v records that *“substantial concerns exist regarding the potential for harm”* based on patient reports;
- Clinical opinion on the Working Group was far from unanimous, with those who endorsed exercise citing *“the evidence base”* – rather than their clinical experience;
- Because of the extent and consistency of survey findings indicating that patients are made worse and not better by exercise, their Report states that the findings of published trials clearly *“do not reflect the full spectrum of patients’ experience.”* ^{vi}

“Lynn was put on a course of graded exercise. Her condition steadily worsened as she strived to stick to the programme. She tried to explain that the more she pushed the worse she felt, but no one listened. By May that year she was totally bedridden and tube-fed with many severe and debilitating symptoms.”

Kay Gilderdale, mother of ME patient Lynn Gilderdale ^{vii}

This heartfelt plea for appropriate care for people with M.E. is echoed by patients and carers through the UK. It helps illustrate the very real human suffering that underlies the statistics.

- Other examples of patient suffering following advice to exercise: ^{viii}
 - “I participated in Graded Exercise therapy via the <name of an NHS ‘CFS/ME’ specialist unit>. This led to a relapse, at home, and made me unable to sit upright for 1 year due to pressure in my head, and chest pain. I then relapsed and ended up in my local NHS Hospital in a cardiac care unit.”*
 - “Graded Exercise Therapy worsened me dramatically and I have no doubt had been a large factor in my being severely affected after 20 years.”*
 - “I worked with a physiotherapist, who also had no experience of M.E. I began to seriously deteriorate, and 4 months in, suffered a major relapse. I had a kind of undiagnosed ‘stroke’, collapsed, and became incapable of looking after myself. When I went to the hospital I could walk 100 yd., feed, wash and dress myself. When I left I could not weight bear at all, had no leg muscles to speak of, and needed two people to transfer me on and off the toilet and in*

and out of bed. I had little use of my hands and was totally bed bound. I could not tolerate sitting upright against the pillows, conversation was beyond me, and I could barely manage to feed myself by picking up food in my hands - cutlery was out of the question. Nine years later I have improved, but I'm still bed bound."

- In a 25% ME Group membership survey, 82% of those who had undergone graded exercise reported that it had made them worse, including some who were *not* severely affected before trying 'Graded Exercise Therapy'.^{ix}

"The most important thing about exercise is not to have patients do aerobic exercise. I believe that even progressive aerobic exercise is counter-productive. If you have a defect in mitochondrial function and you push the mitochondria by exercise, you kill the DNA."

Dr Paul Cheney, medical director of the Cheney Clinic USA^x

A range of published biomedical investigative studies form a body of evidence that people with M.E. exhibit an abnormal response to exercise.

- Mitochondrial defects have been documented for many years; the evidence continues to grow.^{xi}
- Asked about the implications of his finding of cardiac diastolic dysfunction^{xii} for advocacy of exercise, Dr Cheney provided a considered response, including advice that patients should "move within the limits of your illness". On graded exercise he was unequivocal:
"The whole idea that you can take a disease like this and exercise your way to health is foolishness. It is insane."

"from the medico-legal point of view, health professionals who prescribe exercise programmes must do so with just as much caution as would be taken with medication."

"The medical defence organisations have repeatedly warned doctors that prescriptions for exercise must be given with exactly the same care as with a prescription drug. Failure to do so is likely to result in litigation if harm occurs as a result of inappropriate advice. The MEA continues to receive reports from people with ME/CFS whose condition has relapsed following inappropriate advice about exercise"

Charles Shepherd, Medical Adviser, ME Association^{xiii}

The publication of Clinical Guideline 53 in August 2007^{xiv} has proved catastrophic for people with M.E. in the UK. Despite strong feedback on the draft, the final version failed to address the concerns of patient charities - including the 25% ME Group and the ME Association. Of particular concern is the advocacy of exercise.

- The guideline development process entailed looking at the findings of controlled trials;
- Biomedical evidence of abnormalities contra-indicating exercise fell outwith the purview of the Guideline Development Group;
- Feedback from patients who had been made worse and not better by exercise was likewise not considered in the Clinical Guideline Development Process.

It has fallen to patients and their representatives to continue to draw attention to well founded concerns and try to protect people with M.E. from harmful advice.

- For example, *Reporting of Harms Associated with Graded Exercise Therapy and Cognitive Behavioural Therapy in Myalgic Encephalomyelitis/Chronic Fatigue Syndrome* [ref 3] is authored by Tom Kindlon, Information Officer at the Irish ME/CFS Association.
- This publication also covers the general failure of clinical trials publications to get to grips with recording harms:

"Evidence across various medical domains suggests the reporting of harms in clinical trials has been especially inadequate and receives less attention than efficacy outcomes. As one group of authors noted, 'Reporting harms may cause more trouble and discredit than the fame and glory associated with successful reporting of benefits.'" xv

REFERENCES

- ⁱ *Dangerous exercise: lessons learned from dysregulated inflammatory responses to physical activity* DM Cooper et al. 2007; 103: 700–709
- ⁱⁱ Speaking on Radio 4, The Today programme, Saturday 22nd March 2014
- ⁱⁱⁱ *Reporting of Harms Associated with Graded Exercise Therapy and Cognitive Behavioural Therapy in Myalgic Encephalomyelitis/Chronic Fatigue Syndrome* Tom Kindlon, Journal of the International Association for CFS/ME Fall Bulletin 2011, Issue 19(2): pages 59-111
- ^{iv} *ibid.*
- ^v *A Report of the CFS/ME Working Group: Report to the Chief Medical Officer of an Independent Working Group.* London: Department of Health, 2002.
- ^{vi} *Annex 3: Patient evidence* page 3.
- ^{vii} *An Appeal for Appropriate Care* available for download at the 25% ME Group website
- ^{viii} Crowhurst G. *25% ME Group Submission to the Gibson Inquiry.* 2005. www.stonebird.co.uk/gibson.doc
- ^{ix} *Severely Affected ME (Myalgic Encephalomyelitis) analysis report on questionnaire;* 25% ME Group 1st Mar 2004.
- ^x Lecture, Florida, International Congress of Bioenergetic Medicine, 5th-7th February 1999. Dr Cheney has a wealth of clinical and research experience: Speaking in 1993, he reported “*We have carefully evaluated in the three years of our existence over 1,200 cases from 44 states and 6 foreign countries or territories.*” [Testimony to the US Federal Drug Administration Scientific Advisory Committee]
- ^{xi} Including:
- Electrophysiological studies in the post-viral fatigue syndrome* Jamal GA & Hansen S Journal of Neurology, Neurosurgery & Psychiatry 1985;48:691-4;
- Mitochondrial abnormalities in the postviral fatigue syndrome.* Behan WM et al. Acta Neuropathol 1991; 83: 61-5;
- Possible upregulation of hypothalamic 5-hydroxytryptamine receptors in patients with postviral fatigue syndrome* Bakheit AM, et al. BMJ 1992;304: 1010-12;
- Mitochondrial dysfunction and molecular pathways of disease* Pieczenik SR & Neustadt J Exp Mol Pathol 2007; 83: 84-92;
- Chronic fatigue syndrome and mitochondrial dysfunction.* Myhill S et al. J. Int J Clin Exp Med 2009;2:1-16;
- Mitochondrial dysfunction and the pathophysiology of Myalgic Encephalomyelitis/Chronic Fatigue Syndrome (ME/CFS).* Booth NE et al. Int J Clin Exp Med 2012; 5: 208-20
- ^{xii} 2010 CPD accredited Invest in ME Conference, London, 24th May. Dr Cheney had reported finding diastolic dysfunction in almost every case, manifested on head up tilt table test. Some, he said, would not be out of place on a cardiac ward awaiting transplant.
- ^{xiii} British Journal of Nursing, vol 15, No 12, 2006, pp 662-669; response to draft clinical guideline from the National Institute for Health & Clinical Excellence 2007
- ^{xiv} *Chronic fatigue syndrome/myalgic encephalomyelitis (or encephalopathy): diagnosis and management of chronic fatigue syndrome/myalgic encephalomyelitis (or encephalopathy) in adults and children* National Collaborating Centre for Primary Care, August 2007.
- ^{xv} *Balancing benefits and harms in health care.* Cuervo LG, Clarke M. BMJ. 2003;327:65-6