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Nutrition education

This article has important messages which are applicable to both the USA and the UK.

In both countries, there has been an acknowledgement of the key role that nutrition plays in the causation and management of disease; there has been much interest in the scientific evidence about the role of nutritional changes in the prevention of disease. Faulty nutrition plays a key role in the development of coronary heart disease and in the causation of certain cancers.

Yet, in spite of all the current evidence, teaching about nutrition appears to be given a low priority. This is regrettable when it is acknowledged that the greatest impact on disease prevention and health promotion can be made in family medicine.

The paper describes a controlled trial which demonstrates that a fairly modest allocations of time in a family residency programme (four sessions over 5 months) for teaching about nutrition resulted in a marked increase in the participants' knowledge. The intervention groups had mean scores of 54.7% pre-test rising to 70% post-test, whilst the control group had figures of 43.4% pre-test and 42.1% post-test.

For many years now, educators have bemoaned the amount of material which has to be covered in both undergraduate and postgraduate programmes, and few dispute their arguments. Surely, then, it is essential that planners of educational programmes prioritize the use of curricula time, and given the fact that health nutrition is vital to promoting health and faulty nutrition is such an important cause of ill health, the time spent teaching about it should be given a higher priority.

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Source: Kirby RK, Chauncey KB, Jones BG. The effectiveness of a nutrition education programme for family practice residents conducted by a family practice resident - dietitian. *Fam Med* 1995; 27: 576-580.

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Social inequality and mortality

Mortality rates in cities tend to be higher than elsewhere. This is largely explained by causes of death which are more common in low-income areas. Thus, mortality rates are higher because there tends to be a concentration of poorer people in major cities. Amsterdam is the largest city in the Netherlands, with a population of about 700 000, and its overall mortality is well above the Dutch average. During the study period, 1986-1990, the number of deaths below the age of 65 in the least favourable socioeconomic third of boroughs was 46% (803 deaths) higher than would be expected on the bases of national mortality rates, compared to 5% (103 deaths) in the most favourable third and 27% overall. These excess deaths provide a startling measure of social injustice.

By matching data on socioeconomic status and age-standardized mortality for each of Amsterdam's 22 boroughs, it is possible to show that the main causes of the excess mortality in low income areas for men are classified as 'ill-defined' and 'external';

for women, these are 'smoking related' and 'ill-defined'. External causes include suicide, homicide and all accidents except those involving motor cars. Smoking-related causes include cardiovascular disease, lung cancer and chronic obstructive pulmonary disease.

The ill-defined category is interesting and appears to be used most in low-income areas with high immigrant populations. Notification of a death without a cause occurs if a Dutch resident dies outside the Netherlands and these deaths are included in the ill-defined category. The excess in poorer areas may be explained by immigrants travelling to their country of origin and dying of infectious diseases or in traffic accidents.

In contrast, the 365 AIDS deaths recorded during the study period affected Amsterdam's relatively affluent gay community differentially and this has gone some way to reduce the socioeconomic mortality gradient for men.

The aim of the study was to provide information which could lead to a better targeting of interventions to reduce urban socioeconomic mortality differences. Suggestions include better care for psychiatric patients, especially those who are also homeless or drug addicts, health education on non-violent conflict solving, and special care for school drop-outs. Smoking cessation programmes could be specifically targeted at women in low-income areas, and immigrant communities could be provided with more information on the risks involved in travelling and how to avoid them. The major structural determinants of social inequalities in health demand remedial action at a national level, but nonetheless, there is scope for effective local interventions.

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Source: Reijneveld SA. Causes of death contributing to urban socioeconomic mortality differences in Amsterdam. *Int J Epidemiol* 1995; 24: 740-749.

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Gastroesophageal reflux

This multicentre study from primary care in the United States was sponsored by GLAXO. It is the first large, prospective, nationwide primary care evaluation of ranitidine as treatment for gastroesophageal reflux disease (GERD). The study looked at 590 patients with mild to moderate GERD assessed on symptoms alone. The group was randomized, and treatment was double-blind and placebo controlled. The outcome measured quality of life effects and symptom relief after 6 weeks of treatment. Inclusion criteria were a minimum age of 18 years with a minimum 3-month history of heartburn and at least four episodes of heartburn in the week prior to the start of treatment. Exclusion criteria were previous history of endoscopically proven erosive oesophagitis or GERD refractory to previous treatment, and patients requiring prescribed for GERD in the previous 30 days. Patients with gastric or duodenal ulcer, gastric outlet obstruction, Zollinger Ellison syndrome or upper gastro-intestinal cancer were also excluded. Other grounds for exclusion were scleroderma, Barrett's oesophagitis, oesophageal stricture, previous gastric surgery, H₂ receptor allergy, and regular use of aspirin or NSAIDs.

Treatment with ranitidine 150 mg or placebo was given twice

per day before bed and before breakfast for 6 weeks. Ranitidine treatment reduced heartburn pain scores and heartburn episodes within 24 and 48 h, respectively, and the effects were maintained for the 6 weeks of the trial. Ranitidine-treated patients also had more favourable scores on the general health status assessment.

This trial shows what most doctors and patients are aware of, that ranitidine is effective treatment for Gerd and that patients feel better when their symptoms are suppressed. It was interesting that 57% of the placebo-treated group had sustained improvement in their symptoms compared to 79% in the ranitidine treated group, a difference of 22%. Although this is a significant difference, the placebo response is very high when treating this condition. It is also well known that severity of symptoms in Gerd are a poor guide to the degree of underlying pathology, the choice of subjects based on symptom scoring is probably unreliable and endoscopic evaluation on the untreated symptomatic patient is the best method of assessing disease severity. The results compare ranitidine with placebo and cannot be extrapolated to other H₂ receptor antagonists, and it would have been far more useful to have included other H₂ receptor antagonists in the trial. Unfortunately, when a trial such as this is sponsored by the manufacturer of the key drug, the motives have to be suspect. Finally, the timing of ranitidine dosage for the treatment of any acid-related disorder is crucial as acid suppression is not gastrin fast; dosing before a meal such as breakfast is probably ineffective, and therefore, no better than placebo.

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Source: Rush DR, Stelmach WJ, Young TL, et al. Clinical effectiveness and quality of life with ranitidine vs placebo in gastroesophageal reflux disease patients: a clinical experience network (CEN) study. *J Fam Pract* 1995; **41**: 126-136.

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Dangers of exercise!

Those with an aversion to strenuous physical exercise will appreciate this paper, and will also find something useful in it for counselling patients taking up energetic sports — especially marathon running — and those working in physically demanding jobs.

Acute exertional rhabdomyolysis is caused by skeletal muscle injury resulting in release of myoglobin and other cellular contents in the circulation. It is more common and more serious than previously realized, causing biochemical disturbance, disseminated intravascular coagulation, renal failure and compartmental syndrome.

Particular risk factors are high ambient temperature with high humidity and inadequate consumption of drinking water, intense military or similar training, long-distance running and weight lifting, sporadic vigorous exercise by those in poor physical condition (weekend warrior syndrome), and medical problems like sickle cell trait, renal insufficiency, recent viral illness, and use of cocaine or alcohol.

The most memorable case reported in this paper is of a 32-year-old physician who was accustomed to running 30 miles a week but who had not trained in hot environments. He attempted to run a marathon when the daytime temperature was 85 °F, and collapsed after 9 miles with severe pain in the calves and thighs.

He later required renal dialysis and took 6 months to recover.

Awareness of the syndrome amongst athletes and manual workers is emphasized, as is prevention by encouraging training with prolonged submaximal exercise, high carbohydrate intake and rest periods, and adequate hydration.

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Source: Line RL, Rust GS. Acute exertional rhabdomyolysis. *Amer Fam Phys* 1995; **52**: 502-504.

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High school pupils' attitudes to HIV and AIDS: study from South Africa

This study from South Africa has its merits, first, for continuing to ensure a high level of awareness of issues surrounding the human immunodeficiency virus (HIV) and the acquired immune deficiency syndrome (AIDS), and secondly, for providing a fascinating insight into black African teenagers' attitudes to sexual health.

The study, conducted among 223 black male and female high school pupils aged between 15 and 19 years, investigated students' knowledge of and attitudes towards HIV and AIDS, and their risk behaviour.

Over half of the teenagers were sexually active, 50% of whom had had their first sexual intercourse when aged less than 16 years. Whereas most pupils knew that condoms could prevent pregnancy, only a quarter knew that they could prevent HIV infection. Misconceptions were common: between 10 and 30% of the group thought that HIV could be transmitted by kissing or spitting.

The author rightly mentions that culture is an important determinant of behaviour and she implores health workers to take this into account when formulating health programmes. The recommendations made are sensible; for example, encouraging parental and family input, as well as input from teenagers, when devising programmes about safe sex. The availability of condoms at school is also mentioned, although I can imagine much resistance to this proposal in the United Kingdom.

My main criticism is that much of the discourse is outdated; for example, categorizing risk groups into 'prostitutes, homosexuals and drug addicts'. Moreover, there is a supposition that use of condoms is the answer to all the problems. Despite this, the article is well structured, clear and with salient messages.

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Source: van Aswegen E. AIDS-related knowledge — attitudes and behavioural practices among high school pupils. *S Afr Fam Pract* 1995; **16**: 307-318.

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