

This month ● cervical screening ● aerobics in pregnancy ● electromagnetic fields ● iron supplementation

Cervical screening in elderly women

CERVICAL screening is an established practice in medicine but despite this the death rate from cervical cancer remains high. This paper looks at the reasons for this and challenges the rationale behind curtailing regular follow up when women reach 64 years of age.

In the past the Department of Health and an intercollegiate working party have made two recommendations:

1. There should be no upper age limit for women who have never had a smear.
2. Screening is not necessary for women over the age of 64 years provided such women have had three consecutive smears and the most recent one was no more than three years previously.

Despite this 50–80% of older women have never had a smear and in those who have, there is insufficient evidence to assess how many fulfil the criteria of an adequate screening history. It may be that doctors are lulled into a false sense of security in that the incidence of cervical intraepithelial neoplasia (CIN) I and CIN II falls with age. However, the same does not apply to CIN III. Is it perhaps that older women are less likely to attend for screening? Should the general practitioner be carrying out opportunistic screening in this age group?

Whatever the reasons this paper suggests that opportunistic screening in this neglected group would save lives and improve five year mortality by 63%. It remains to be seen whether this type of opportunistic cervical screening is acceptable to these patients and it may be that they will always remain a difficult group to include in the screening procedure.

(M K)

Source: Fletcher A. Screening for cancer of the cervix in elderly women. *Lancet* 1990; 335: 97-99.

Aerobic exercise during pregnancy

IAM occasionally asked by antenatal patients for my opinion about exercise during pregnancy and I usually recommend swimming. However, I find it difficult to advise keep fit enthusiasts. This is more of a dilemma for the family physician in the USA where up to 67% of women exercise regularly. This article reviews the current literature on aerobic exercise in pregnancy and provides some useful guidelines.

The author states that there are no studies on exercise and well being during pregnancy and so the benefits and risks

are largely hypothetical and based on animal studies. It is suggested that aerobic exercise might improve well being, maintain physical fitness, improve ability to endure labour, limit excessive weight gain and improve glucose homeostasis. However, on the negative side aerobic exercise might cause prolonged intermittent fetal hypoxia, fetal temperature elevation, premature labour, premature rupture of membranes or placental abruption. Although regular exercise during pregnancy has not been shown to have any clinically significant effect on pregnancy outcome large prospective studies are required to clarify the situation.

In the meantime the guidelines of the American College of Obstetricians and Gynaecologists might reasonably be given to low risk patients. These are that maternal heart rate should not exceed 140 beats per minute, strenuous activities should not continue for more than 15 minutes, no exercise should be performed in the supine position after the fourth month of gestation, exercises that employ the Valsalva manoeuvre should be avoided, calorie intake should be adequate to meet not only the extra energy needs of pregnancy but also the exercise performed and maternal core temperature should not exceed 38°C.

(F S)

Source: Snyder JL. Aerobic exercise during pregnancy. *J Am Board Fam Pract* 1990; 3: 50-53.

Health effects of electromagnetic fields

RECENT media publicity has led to concern among patients about whether the electromagnetic fields induced by power lines on pylons can cause cancer. An epidemiological study in 1979 with poor controls suggested that there was an increased incidence of cancer in children living near electrical wiring configurations, but this increase could have been due to other factors.

In an editorial the chief medical officer of the Central Electricity Generating Board discussed the effects on health of electromagnetic fields. Studies of the incidence of cancer among electrical workers were analysed, but the results were inconclusive as the term 'electrical workers' includes many who work with chemicals, and clerical workers. The electric and magnetic fields under consideration are very weak and the electric currents normally found in the human body, as demonstrated for example by the electrocardiogram, are much greater than those induced by an external source. Biological work has been performed with

cell cultures, chick embryos and rodents, using a variety of direct and alternating currents, and magnetic fields of far greater intensity than are normally present in the environment, but again the results were inconclusive.

The author concludes that although no ill effect from electric or magnetic fields has yet been detected, it is possible that an effect may be found in the future. However, his opinion is that the electromagnetic fields of power lines and domestic wiring are so much smaller than those normally present in the human body that patients can be reassured that there is no danger.

(G P)

Source: Cox RAF. Health effects of electromagnetic fields. *J R Soc Med* 1990; 83: 63-64.

Gastric delivery system for iron supplementation

IRON deficiency is one of the most prevalent nutrient deficiencies in the world. However, iron supplements often cause severe gastrointestinal side effects which patients are unable to tolerate.

This paper describes a gastric delivery system for iron supplementation. Ferrous sulphate incorporated into a gastric delivery system was studied radioisotopically in nine volunteers and showed a three-fold higher absorption of iron than ferrous sulphate elixir. A double-blind placebo-controlled trial in 200 women showed that a single dose of iron in a gastric delivery system capsule provided the same amount of absorbed iron as conventional ferrous sulphate given three times a day and did not appear to produce gastrointestinal side effects.

The cost of the ingredients for the gastric delivery system is low and the material could be sold in bulk and encapsulated regionally. It would therefore be possible to implement iron therapy using this system at no greater cost than conventional ferrous sulphate with better absorption and fewer side effects.

(M K)

Source: Cook JD, Carriaga M, Kahn SG, et al. Gastric delivery system for iron supplementation. *Lancet* 1990; 335: 1136-1139.

Corrigendum

In the digest item 'Breast cancer and screening' (June *Journal*, p.264) the reported reduction of mortality following screening in trials in New York and Sweden of 30% was in women aged 50–65 years not 50–55 years as printed.

Contributors: Moya Kelly, Glasgow; Frank Sullivan, Glasgow; Gus Plaut, York.