of vigorous exercise on the probability of dying from coronary heart disease, and for several years the Civil Service Department Medical Advisory Service has been attempting to put into practice the lessons learnt from them. In a large scale screening exercise starting in 1975 a target population of 100,000 London based civil servants aged 35 and over was asked to complete questionnaires detailing symptoms of cardiovascular, respiratory and gastro-intestinal disease together with medical and family history and tobacco and alcohol consumption. Those identified as being at risk are asked to undergo examination including electrocardiogram, chest X-ray, blood pressure, height, weight, wide biochemical screen and Vitalograph. One major drawback has been the low response rate in the grades where morbidity is concentrated. Only 30 per cent of messengers respond compared to 90 per cent of executive officers and above. The findings so far support those of the South East London Screening Survey⁸ where mortality and morbidity in a screened population followed up for several years have been found to be no better than in a control unscreened group. We believe now also that the detection of hypertension should only be carried out in settings in which adequate therapy and long term follow-up observation can be arranged⁹. For these reasons the London Survey has been halted meantime.

In the health education field we have been pointing out to cigarette smokers any impairment of the Vitalograph with the offer of repeating it and demonstrating its return to normal after a prescribed period without cigarettes. This is undoubtedly effective, though the first such study of this technique in the civil service¹⁰ has not yet shown any difference in mortality in the intervention group. It may be that the main thrust of medical education has to start much earlier.

The most effective way of altering attitudes and behaviour in a hierarchical organization may be the lobbying of senior members of the organization. Professor McDermott in his 1978 Hunterian Lecture at the Royal College of Surgeons showed how seat belt legislation was procured by the concerted lobbying of politicians by the medical profession in Australia. Preventive measures may be best effected through the people who decide what the smoking policy for an organization is going to be, or how much resources are to be devoted to providing facilities for exercise, or decide the contents of canteen food.

RESEARCH IN SUPPORT OF PREVENTION

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The Army Occupational Health Research Unit (AOHRU) is part of the Applied Physiology Division of the Army Personnel Research Establishment. The Unit's contribution to this field of study is therefore largely concerned with clinical and physiological measurements of a relatively fit and predominantly young occupational group. Whilst relatively ready access to subjects is a favourable feature of Army research in IHD related factors, two important constraints determine the type of study which we can undertake. These are the relatively

short periods of service undertaken by most soldiers and the small size of any precisely defined occupational group within the Army.

AOHRU is now undertaking three studies related in part to the epidemiology of IHD.

The first of these is an investigation into the proportion of the energy value of the military diet derived from fats and the distribution of fatty acids, estimated by gas chromatography. This study is directed at periods of service in which military catering is dominant in a soldier's total feeding habit; these are, in peacetime, largely junior leaders, apprentices and recruits.

The second is a cohort study of student officers from the Royal Military Academy, Sandhurst. Several hundred had been assessed since 1977 by a battery of questionnaire, clinical measurement, physiological measurement and a haematological and chemical blood profile.

The third study is concerned with aerobic power, IHD risk factors and running performance in male personnel aged 35-49 years. This study is being carried out in relation to the Army's mandatory programme of fitness training and testing applicable to this age group.

Discussion and conclusions

The discussion was directed by the Postgraduate Dean towards finding an action programme for prevention. In his opening remarks he asked first whether there was any person present who believed that nothing should be done. In the apparent absence of such dissenters the discussion then ranged widely across a great variety of aspects illustrative of the multi-factorial nature of IHD causation; obesity, smoking, stress, lack of physical fitness, dietary fats and food intake generally. In the last analysis, said the Chairman, any proposed intervention had to convince the Commanders of all three Services that what was recommended would be both worthwhile and cost effective. Finally the Chairman directed the meeting along two principal lines of action, namely smoking and dietary control. The Services' operational need for a high standard of physical fitness and a low level of obesity was considered to be sufficiently self-evident to make further emphasis on the preventive role unnecessary.

RECOMMENDATIONS FOR ACTION

The agreed recommendations, under the two headings of smoking and diet, were incorporated into a series of resolutions to be proposed as Services medical policy. They are:

Smoking

Smoking, cigarette smoking in particular, was probably the most important risk factor in the causation of IHD. Action to reduce smoking throughout the Services was a most worthwhile aim; it would do good to all and harm to none

thus fulfilling the important requirement that preventive action should have no ill effects.

The Medical Services have a duty to set an example to others. This includes not only doctors but all support staff (particularly nurses who remain a group of relatively heavy smokers). There should be no smoking on medical premises. The only exception to this rule should be the separate accommodation set aside for smoking staff and smoking patients.

Particular emphasis should be given to the smoking habits of instructors and staff at Service Apprentice Colleges and other establishments for young servicemen. A "No Smoking" example at this stage in a military career was of paramount importance and would justify measures to select trainers who were non-smokers.

All concerned should work towards the creation of "smoke free zones" and clearly defined "smoking permitted areas". Every effort should be made to change the climate of opinion from that where smoking is an accepted feature of everyday life to a situation where smoking is the exception, permissible only in designated (and perhaps suitably unattractive) smoking rooms.

The Medical Services' view on duty free cigarettes is clearly one of disfavour, but political overtones make action difficult.

Diet

The proportion of the daily energy intake derived from fats should not be more than 35 per cent of the total. Action should be taken to educate the serviceman towards the enjoyment of a less fatty diet.

A long-term programme of Services nutrition education should be instituted with the aim of reducing the intake of polysaturated fats and encouraging the consumption of foods with a lesser density of energy and a greater content of fibre. In the present state of knowledge there is little to be said in favour of a transition from butter and other dairy foods to polyunsaturated formulations.

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