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haemorrhage in first and second degree relatives.

The 163 patients had 1290 first degree relatives and 3588 second degree relatives. History or cause of death was known in 1259 (98%) of the first degree relatives and in 3038 (85%) of the second degree relatives. Ten first degree relatives (of nine index patients) and four second degree relatives had subarachnoid haemorrhage (hazard ratio 6.6 (95% confidence interval 2.0 to 21); $P=0.001$). In addition, seven first degree relatives and 12 second degree relatives met criteria for possible subarachnoid haemorrhage (hazard ratio 2.7 (1.4 to 5.5); $P=0.004$). The cumulative incidence of subarachnoid haemorrhage is shown in the figure.

Comment

We found that subarachnoid haemorrhage occurs almost seven times more often in first degree than in second degree relatives. Even when possible episodes were included the risk was still significantly higher, despite the dilution effect caused by including patients without subarachnoid haemorrhage in both groups.

To our knowledge our study is the first to show this increased risk in first degree relatives. Three previous studies addressed the incidence of familial subarachnoid haemorrhage.^{2,4} In a study from Sweden the incidence of intracranial aneurysms among siblings of patients was similar to that in the general population but data were collected by means of a written questionnaire sent to survivors of subarachnoid haemorrhage.² In a study from Finland no distinction was made between first and second degree relatives.³ Case finding was probably less complete in both studies.^{2,3} In a case-control study from the United States no significant difference was found in the frequency of affected first degree relatives, but the family history was not verified.⁴

An important consideration in assessing the risk of subarachnoid haemorrhage in relatives of patients is the incidence expected from population studies; this comparison was not performed in two of the previous studies.^{2,3} We compared our results with those of the Oxfordshire community stroke project, which is a recent and reliable study of the incidence of stroke in Western Europe,⁵ and found similar rates for cumulative incidence in the second degree relatives (figure). This supports the notion that first degree relatives in particular are at increased risk of subarachnoid haemorrhage.

We conclude that a familial factor is important in the development of subarachnoid haemorrhage. First degree relatives of patients run at least a three to seven times greater risk than the general population. This

Top: Kaplan-Meier curves for cumulative incidence of subarachnoid haemorrhage in first and second degree relatives of patients with subarachnoid haemorrhage. Bottom: Kaplan-Meier curves for cumulative incidence of all subarachnoid haemorrhage including possible episodes in first (10 definite and seven possible cases) and second degree relatives (four definite and 12 possible cases) of patients with subarachnoid haemorrhage. Cumulative incidence in general population (Oxfordshire community stroke project; 19 definite and 14 possible cases according to our criteria) is shown for comparison

means that the lifetime risk of subarachnoid haemorrhage is between 2% and 5% in first degree relatives. Therefore, screening for unruptured aneurysms should at least be considered in first degree relatives of patients with subarachnoid haemorrhage.

The complete definitions of our different diagnostic categories of subarachnoid haemorrhage and the references from which they were derived are available on request.

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Conflict of interest: None.

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Health promotion by encouraged use of stairs

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The national fitness survey for England concluded: "the high prevalence of physical inactivity suggests that it may be even more important for public health than attention to cholesterol, arterial blood pressure or smoking."¹ The prevalence and risk of inactivity in the United States led the American College of Sports Medicine to issue guidelines suggesting that sedentary adults should have at least 30 minutes of accumulated moderate physical activity on most days of the week.² To achieve this target the members of the public should be encouraged to add activity into their daily routine at every opportunity.

This study investigated whether Scottish commuters or shoppers would respond to an intervention consisting of motivational signs encouraging them to walk up stairs rather than take an escalator.

Subjects, methods, and results

Signs saying "Stay Healthy, Save Time, Use the Stairs" were placed in a city centre underground station where stairs (two flights of 15 steps) and escalators were adjacent. Observers recorded the number of men and women using the escalators and stairs on Mondays, Wednesdays, and Fridays between 8.30 am and 10 am over a period of 16 weeks. Subjects carrying luggage or with pushchairs were excluded. Observations were made over one week before the signs were put up (baseline), over three weeks when the sign was present, over two weeks immediately after the sign was removed, and during the fourth and 12th

Pattern of stair use among men and women during study. Values are weekly sample percentages with 95% confidence intervals

week after the posters were removed. Subjects faced a binomial choice—that is, whether or not to use the stairs. A stepwise logistic regression was fitted with this choice as a response variable and the sex of the subject, the week of the study, and their interactions as potential explanatory factors.³ Simultaneous 95% confidence intervals were calculated to compare the percentage stair use at baseline with that during each of the seven subsequent observation weeks. This was achieved using a Bonferroni multiple comparisons procedure for men and women separately.³

A total of 22 275 observations were made. Overall stair use at baseline was around 8%. This increased to the order of 15%–17% during the three weeks when the sign was present. The figure shows that pattern of stair use for men and women during the campaign. Stair use by both men and women remained significantly higher than baseline values during the three intervention weeks. The motivational sign significantly increased

the percentage of men using the stairs from 12% at baseline to 21% throughout the duration of the intervention. The corresponding figures for women were 5% to 12%. Stair use decreased during the two weeks after the sign was removed. Twelve weeks after removal of the posters stair use remained significantly ($P=0.01$) higher than at baseline. There was, however, a downward trend suggesting a possible eventual return to baseline values.

The stepwise logistic regression showed a main effect for sex ($F=224$ v $F(1, \infty)$; $P<0.0001$), as well as week of study ($F=22$ v $F(7, \infty)$; $P<0.0001$). Women were more likely to use escalators than men at all times. The interaction between sex and week of study ($F=2.5$ v $F(7, \infty)$; $P=0.015$) and the day of the week ($F=3.2$ v $F(2, \infty)$; $P=0.04$) were also significant.

Comment

The motivational sign positively influenced stair use in a safe and well lit venue. The improvement in stair use was slightly greater than that found in a similar American study.⁴ Use of stairs can make an important contribution to an accumulated daily activity programme and is specifically mentioned in the guidelines of the American College of Sports Medicine.² Further study is required to establish whether sedentary people or those who are already active respond to these cues.

The Health Education Board for Scotland has distributed motivational stair walking posters throughout Scottish workplaces.

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Combined clinical and virological surveillance of influenza in winters of 1992 and 1993-4

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Influenza is a major public health problem. Some cases occur every winter; there have been six substantial epidemics in the United Kingdom during the past 25 years; pandemics following major shifts in the influenza virus occur less frequently but are particularly severe.¹

Most European countries support programmes of influenza surveillance.² In some countries—for example, France,³ the Netherlands, and Portugal—clinical and virological surveillance is undertaken in sentinel practices that monitor the incidence of influenza and obtain specimens for virological examination in the major virological laboratories. In the

United Kingdom the largest clinical surveillance network is the Royal College of General Practitioners' weekly returns service.⁴ Virological surveillance is based on the results of virological tests in patients admitted to hospital, with centralised reporting to the Public Health Laboratory Service.

Early identification of the organism responsible for epidemics of respiratory infection is important to facilitate the distribution of specific drugs when appropriate (for example, amantadine to elderly people in influenza A epidemics); vaccinate workers in essential services; to plan for the allocation of hospital beds; to grow new virus strains for the next manufacture of vaccine; and to provide the public with reliable, comprehensible information. We present the results of a project designed primarily to hasten recognition of an influenza epidemic.

Materials, methods, and results

During the winters of 1992-3 and of 1993-4, six practices in the weekly returns service sent nose and

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