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## Exercise and fibrinolysis

ANALYSIS of the associations of coronary heart disease provides insight into the multifactorial and, some would say, uninterpretable nature of its aetiology. This Monitoring of Trends and Determinants in Cardiovascular Disease (MONICA) study examines new links clarifying the 'muddied waters'.

Hailed as 'unique', the epidemiological research paper describes a large cross-sectional study of both men and women, aged 25 to 64 years, selected by stratified random sampling; the aim of which is to measure specific components of the fibrinolytic system and their relationship to physical activity. The study demonstrates evidence of an association between leisure time, physical activity, and tissue plasminogen activator (tPA) and plasminogen activator inhibitor (PAI-1).

In isolation, tPA activity increased linearly with greater physical activity; a difference of 28.9% (95% CI: 0.10, 0.29) being demonstrated between sedentary and active men. For women, the percentage was 11.6% (95% CI: -0.07, 0.24), showing insufficient evidence of a difference and similarly wide confidence intervals. Taken together with co-risk factors, triglycerides and insulin levels, the significant associations between tPA and PAI-1 and physical activity were eliminated in men, but retained in women with respect to PAI-1 activity.

A critical appraisal of this study requires the reader to refer to three other related papers in order to ascertain the validity of sampling methods, examination techniques, and laboratory analysis. Further, the authors concede that their definitions of physical activity are crude and self-reported activity are unreliable.

While tPA is not exactly a 'side room' test, the discussion is relevant and well referenced, its main thrust striking at the hearts of those most at risk in Scotland.

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Source: Eliasson M, Asplund K, Evrin P-E. Regular leisure time physical activity predicts high activity of tissue plasminogen activator: the Northern Sweden MONICA study. *Int J Epidemiol* 1996; **25**: 1182-1188.

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## Death and religion

THIS study set out to explore a possible association between selected religious affiliations and all-cause mortality in middle aged men in Eastern Finland, adjusting for numerous potential biological, social, psychosocial, behavioural, and confounding factors. Of the 1624 men studied, 84% were Lutherans, 5.4% Eastern Orthodox, and 10% non-affiliated. The results of the study suggested that the Eastern Orthodox men had a higher all-cause mortality compared with Lutherans and the non-affiliated, and that adjustment for risk factors did not explain the differences. This result contradicted other studies in the Western World which show that religious affiliation has health advantages over the general population. (Some findings were dramatic; for example, Mormons had 35% lower mortality from coronary heart disease than the general population of the USA, and the Seventh Day Adventists in the USA, Netherlands, and Norway had a 50% lower mortality from coronary heart disease than the general population.)

It is a reasonable assumption that a religious affiliation ought to be associated with positive attitudes to a healthy lifestyle. It ought to bring a peace of mind which surpasses all understanding. It is puzzling, and as yet unexplained, why the Orthodox religion in Eastern Finland should be associated with a negative health effect. Perhaps, as a group, they have experienced greater stress (through war and migration) than could be estimated. Perhaps genetic factors played a part. Perhaps Pandora's box has been opened and somewhere inside is speculation on how the knowledge of health differences based on religious differences might be applied in the medical field with its implications for distribution of resources.

H W THOMAS

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Source: Räsänen J, Kauhanen J, Lakka TA, *et al.* Religious affiliation and all-cause mortality: a prospective population study in middle aged men in Eastern Finland. *Int J Epidemiol* 1996; **25**: 1244-1249.

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## Viruses and joint pains

THIS paper is a review written by two professors of rheumatology. It is not a systematic review, and it includes a large section on the role of hepatitis C in arthritis, which is evidently of interest to them and may prove of importance in the aetiology of a variety of rheumatic conditions.

The paper covers the pathogenesis of viral arthralgias and then deals with individual viral arthritides. The main message of the paper is that viral arthritides rarely cause a destructive arthritis (possible exceptions are parvovirus B19, chronic hepatitis B, and hepatitis C), usually resolve within six weeks of onset, and that extensive investigation for rheumatoid arthritis and complex immunological conditions should be delayed until then. The authors explain that there is no characteristic pattern of joint involvement, but if the distal interphalangeal joints are involved, rheumatoid arthritis can be excluded.

Treatment should be with analgesics and non-steroidal anti-inflammatory drugs (NSAIDS), although the use of aspirin should be avoided in children with the varicella-zoster virus in case Reyes syndrome occurs, and NSAIDS should be avoided in patients with hepatitis, owing to possible resulting liver damage. When investigation is undertaken it should include hepatitis serology and liver function tests. It is not necessary to test for other viruses as the virus usually clears rapidly.

The paper includes a helpful table that outlines the viral causative agents (rubella virus, parvovirus B19, mumps virus, varicella-zoster virus, entoviruses (adenovirus and arboviruses), and hepatitis A, B, and C) and their rheumatic manifestations.

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Source: Siegal LB, Gall EP. Viral infection as a cause of arthritis. *Am Fam Physician* 1996; **54**: 2009-2015.

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### General practitioners in Ireland

This article is very much set in the Irish context. It is, however, a subject of great interest in the United Kingdom (UK) in view of the doubts being expressed about the numbers of graduates from vocational training schemes who actually enter general practice. It also has the enormous advantage that the authors have been able to survey the whole of the output of the Irish vocational training programme since its inception. The survey was carried out on those who completed between 1971 and 1992; they were able to identify 97% of the total and received replies from 80%.

The main findings of the survey were that the vast majority (96%) were still actively practising medicine, and most of them (82%) were still in general practice. As in the UK, the number of women in practice had increased from 6% in 1971 to 60% in 1992. However, the proportion that remained in general practice was significantly lower than their male colleagues, and the authors appear to have uncovered a systematic discrimination that is going on within the Irish health care system. They also describe the lack of co-ordinated workforce planning for general practice in Ireland.

Many of the issues raised in this paper, the UK share in common with Ireland. In particular, the lack of a co-ordinated workforce planning system, which takes into account in a realistic way the career patterns of women graduates who are making up an increasing proportion of those undergoing training in general practice.

Finally, the authors comment on the lack of hard data published in Europe in this area, and were only able to quote studies in the UK. They were unable to find any published data on this subject from elsewhere in Europe. In the current situation of free movement of doctors, this is an area which will need addressing in the future, in order that medical workforce planning can be properly carried out.

JUSTIN ALLEN

*Joint Hon. Secretary, Joint Committee on Postgraduate Training for General Practice, London*

Source: Bradley F, Murphy A, Lambe S. A national survey of career pathways of all graduates of vocational training programmes in GP in Ireland. *Eur J Gen Pract* 1996; **2**: 157-161.

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### Prophylaxis after HIV exposure

THIS paper covers the provisional recommendations for chemoprophylaxis after occupational exposure to HIV, which was published in the MMWR (Morbidity and Mortality Weekly Report from the Centre for Disease Control at Atlanta). This 1996 publication was well received in this country and is enlarged upon and discussed in some detail in this paper. The subject is variously referred to in the literature as recommendations for post-exposure prophylaxis and reaction to needlestick injury and HIV. It basically gives advice as to what physicians, nurses, and other health care workers should do in the event of exposure to various levels of contamination by blood or fluids thought to be infected with HIV.

At first sight it might seem that the reaction to such exposure should be straight forward, but this is not so. There are very many complications, not least the level of exposure experienced, and the table included in the paper is useful in listing which complication should be considered as qualifying for some sort of prophylaxis and which should not. In this context, it is interesting to note that there are three levels: 'not offer', 'offer', and 'recommend'. Clearly, 'recommendations' occur when percutaneous exposure has taken place, and 'not offer' is suggested when simple skin contamination with body fluids other than blood has occurred. The category of 'offer' relates to either mucous membrane or percutaneous exposure to fluids, including blood.

The case studies are interesting and illustrate the relative risks of different types of exposure, giving relevant references. Some of the comments are reassuring, especially the advice that urine, sweat, saliva, and tears do not usually transmit HIV. Contrarily, there are some slightly alarming examples of the transmission of HIV by human bite and the information that fluids that are highly cellular increase the risk of HIV transmission — such fluids including blood, semen, faeces, sputum, vomitus, and other body fluids. Overall, however, the risk of transmission is low, that of percutaneous transmission being between 0.3% to 0.4% (depending upon other factors such as degree of penetration and seriousness of condition of patient).

One of the major problems with guidelines of this sort is that changes are likely to be rapid, and that keeping up-to-date is extremely difficult. There will clearly be more recommendations to follow. Other problems include the difficulty of translating recommendations into practice and the importance of having expert advice available when such exposure takes place on a Friday evening or over a Bank Holiday. Also to be considered is the degree of anxiety experienced, which is only briefly mentioned at the end of the article.

This article is relevant to practice world wide, but UK guidelines are shortly to be issued by the Expert Advisory Group on Aids in the Department of Health. These guidelines have been awaited for some time, but are likely to be similar in concept to the American guidelines and perhaps more useful to those of us working in the UK. They are also likely to be taken up by trusts and health authorities, and to be translated into available services. Having seen the draft of the UK guidelines, I think that they may well be slightly more user-friendly and relevant to UK personnel.

One of the problems that academic articles always have, and which guidelines from government departments themselves never address, is the requirement for simplicity and decision at a time of crisis. It is to be hoped that the increasing amount of information will be translated into local practice at an early stage. Certainly, this paper gives some very clear messages which will be well received by a lot of practising doctors, nurses, and healthcare workers.

Interestingly, prophylaxis following sexual exposure is not considered in either the UK or the US recommendations, although the risk is acknowledged. This may turn out to be important in the future.

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Source: Perlmutter BL, Harris BR. New recommendations for prophylaxis after HIV exposure. *Am Fam Physician* 1997; **55**: 507-514.

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### Helping the rural registrar

THIS is an excellent contribution to the literature on training for general practice, especially for rural practice, and will become more relevant to the UK if the recommendations of more rural involvement in training<sup>1</sup> are followed. The paper is particularly valuable as it has been written by one of the rural doctors involved in the Ontario scheme. Residents join this scheme for six months of their two years of family medicine training and its success can be measured by the fact that 80% of the first three groups have settled in rural areas.

In the introductory period, great emphasis is placed on safe management of patients and on seeking help from the preceptor. In the UK, registrars in general practice are declared to be supernumerary, but the Canadians rightly strive to impress on the residents that they have to develop responsibility and have a service role as they gradually build up a mini-practice.

Although it is mentioned that the residents arrive 'with other family members' I am surprised that the paper does not mention the huge amount of work that the preceptors, their spouses, and the practice staff undertake to ensure that the families are also integrated into the local community; this was well demonstrated in Shanghai in June 1996.<sup>2</sup>

Although North America gave the lead in video monitoring of learner consultations, it is interesting that this group, after installing all the equipment, are veering away from it and going back to having the preceptor sitting in the consulting room. Patient preference seems to have had a role in this change.

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*(member WONCA Working Group on Rural Practice)*

Source: Kelly L. Integrating family medicine residents into a rural practice. *Can Fam Physician* 1997; **48**: 277-286.

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2. Rourke J, Rourke L. *Settling in the resident's family.* (Presentation at 1st World Rural Conference.) Shanghai: WONCA, 1996.

ACKNOWLEDGEMENT: The June issue of the *BJGP* contained a digest item on malignant melanoma in Norway. The source for this commentary was: Bentham G, Aase A. Incidence of malignant melanoma of the skin in Norway, 1955-1989: Associations with solar ultraviolet radiation, income and holidays abroad. *Int J Epidemiol* 1996; **25**: 1132-1138.