AEA Technology chosen to be as close as possible to those identified in the case-control study as being at high risk of prostatic cancer. It shows that, while increased mortality from prostatic cancer is detectable in subgroups related to the case-control study, the all cause mortality and all neoplasm mortality in these groups are no different from those in the generality of employees, and most are significantly lower than the national average. The results of the case-control study cannot, therefore, be interpreted as showing an increased occupational risk overall. Rather it shows a significantly increased risk for one disease which is not sufficient to detract from a considerable "healthy worker" effect when all mortality is considered.

Secondly, we have examined the dosimetric aspects of exposure to the radionuclides associated with an increased risk of prostatic cancer in the case-control study, especially zinc-65, the putative carcinogen that attracts most speculation from Rooney and colleagues. When account is taken of the enhanced concentration of zinc-65 in the prostate, the increased radiobiological effectiveness of Auger electrons, the incorporation of these radionuclides into DNA, and practical limits on employees' intake of these radionuclides, radiation doses to the prostate from conceivable levels of contamination with zinc-65 are too low by a factor of about 50—and probably by more than 1000—to account for the observed excess of cases of prostatic cancer, assuming internationally accepted models of radiation risk. This implies that the radionuclides are acting as a surrogate for some other agent. Details of our dosimetric calculations will be published elsewhere.

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Repetitive strain injury

Examine working practices

EDITOR,—The subtitle of Peter Brooks's editorial on repetitive strain injury ("Does not exist as a separate medical condition"), if not the editorial itself, risks seriously misleading the medical profession to the detriment of people doing manual work.¹ The subtitle will reinforce the prejudices of those doctors who believe that all people who attribute their ill health to their work are malingerers or potential litigants. The editorial does, however, hint at a more positive approach to preventing the panoply of muscular aches and pains that occur in working people and that, if not managed appropriately, may lead to anxiety and more chronic disablement. This approach stems from listening to the patient's views on causation and investigating the relevant work practices.

Regrettably, investigation of work practices, which is essential, is beyond the competence of most doctors, who are unfamiliar with the methods taught to occupational physicians. It is therefore quite usual for workers such as musicians, laundry assistants, or hospital cleaners to develop forearm or wrist pain that is exacerbated by their continuing the tasks; to be given inappropriate treatment by a doctor or a series of doctors; and to receive conflicting prognoses from doctors, workmates, and union officials without anyone looking at the job and giving advice on its modification.

Ultimately the patients will meet an orthopaedic surgeon who may well believe that the syndrome "does not exist as a separate medical condition" and alienation from the medical profession or even litigation follows.

The doctor has an important role in preventing such problems arising, and the key to this is an examination of the work done. When doctors suspect muscular syndromes related to work they should consider consulting a local occupational physician or employment medical adviser, who is probably experienced in managing such conditions. These conditions do exist and are usually quite easily managed if caught early. Moreover, the presence of symptoms in one patient is often a pointer to similar problems in several other people from the same workplace and leads to opportunities for inexpensive modifications that in turn result in reduced sickness absence and improved morale in the organisation. Doctors can have a positive role when dealing with such conditions.

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- 1 Brooks P. Repetitive strain injury. *BMJ* 1993;307:1298. (20 November.)

A real occupational illness . . .

EDITOR,—Though Peter Brooks is well known in Australia for his non-conformist views concerning repetitive strain injury (a term long discarded among medical practitioners in Australia in favour of the occupational overuse syndrome), this seems a poor reason for asking him to write an editorial in the *BMJ*.¹ I would have thought that the few, one sided references in his editorial would have alerted the editor to the possibility of it not being a useful contribution. A more balanced approach is expected of an editorial.

Although Judge Prosser's views made headlines in Australia, they did so because they were deemed bizarre. Most people who apply for compensation for the condition succeed in Australia and, I assume, in Britain. Those who fail are generally those whose complaints are not believed and those who sue for negligence on the part of the employer. This does not end the debate, but it indicates how one sided Brooks's editorial is.

The absence of abnormal histopathological findings reflects the fact that almost no biopsies have been done in this condition; when they have been a few authors have found abnormalities.² Moreover, histopathological abnormalities and disease are not synonymous—a fact strikingly illustrated in the sudden infant death syndrome.

Brooks is a generation younger than me. That is why he is unaware of the similar epidemic which developed in many of the labour intensive electronics component industries in the 1960s. There are peaks of occupational illness and accidents accompanying many innovations. These abate not because of brain washing but because workers and employers modify the workplace and teach their employees how to avoid the problems. This applies as much to asbestos mining as to typing.

The only factor that all patients have in common, whether they be typists, steel workers, or self employed musicians, is long periods of uninterrupted muscle contraction. That is why the muscles most affected in typists are the extensors of the wrist, which "fix" the wrist during typing, not the finger flexors. Hence isometric contraction myopathy might be a better name for the condition. It is certainly an improvement on the meaningless term "regional pain syndrome."

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. . . that is misunderstood and misdiagnosed

EDITOR,—Peter Brooks's editorial on repetitive strain injury¹ promotes the contemporary Australian view of this condition, which is based on the apparent reduction of the "epidemic" of the condition after the denial of its existence. Arguments have been propounded, largely on semantic grounds, that an injury does not result from repetitive use of the arm. Instead it is conceded that "pain occurs in the workplace" and "endemic work related musculoskeletal syndromes remain," yet the problem is considered to be a "complex psychosocial phenomenon."

Such obfuscation is a disservice to the medical profession. Judge Prosser's judgment that repetitive strain injury does not exist as a separate medical condition seems to have been based on the confusing medical evidence presented to him in court. Any thoughtful health service professional would surely accept that overuse conditions result from excessive musculoskeletal activity to which the body has not made a satisfactory adaptive response. "Overuse injuries" are seen commonly in sports medicine and regularly in the workplace. To suppress the recognition of the condition and therefore its assessment and appropriate management, and thereby to deny its sufferers reasonable means of redress, represents medical omnipotence based largely on diagnostic incompetence.

The answer lies in improving skill in musculoskeletal medicine, which will lead to greater understanding. Unless it is recognised that conventional techniques of orthopaedic examination can be inadequate in providing a satisfactory diagnosis, procrastination will prevail. Until more clinicians who are consulted by patients with musculoskeletal problems are capable of assessing the cervical spine and arm (as are those with osteopathic training) and can thereby detect the more subtle signs the medical profession in general will continue to be bemused by the plethora of "unfathomable syndromes," (Has the time not come for the term syndrome to be rejected in favour of neurophysiological labels?)

Of course there are often psychosocial and socioeconomic overtones. What disease or injury is ever considered in isolation? Employers should continue to be made aware of their responsibilities, particularly with regard to providing sound ergonomic advice. If legislation exists to promote such good work practice why should appropriate enforcement procedures be criticised? The argument regarding nomenclature (repetitive strain injury; work related upper limb disorder) should be subservient to an emphasis on specialist medical assessment procedures.

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- 1 Brooks P. Repetitive strain injury. *BMJ* 1993;307:1298. (20 November.)

Pain linked to repetitive work

EDITOR,—Peter Brooks's editorial correctly concludes that repetitive strain injury is a pain syndrome rather than a defined injury.¹ Having seen several patients with alleged repetitive strain injury for medicolegal reports, I support this position. There is, however, a relation between symptoms in this condition and degree of repetitive work. Those carrying out continuous work of