EXERCISE – A PRESCRIPTION FOR HEALTH?
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We publish here the proceedings of our conference held at the Royal Society of Medicine in June 1978. The aim of the conference was to discuss and publicise the medical evidence for the benefits and risks of exercise. It was generously supported by both the Sports Council and the Health Education Council.

As organiser of the conference I was very conscious of the fact that many of the non-medical members of the audience were intrigued by the fact that the medical men had such difficulty proving the ‘obvious benefits’ of exercise. Some also seemed unhappy at the time given to the other side of the equation, the injuries and sudden death. During the discussion comments were made such as ‘Why is there no British research like that which the Americans produce at the drop of a hat demonstrating the benefits of exercise?’

What was perhaps not appreciated by these questioners is that in America there is a huge medical and paramedical exercise industry, performing much of the research which is supported with huge Federal and Local Grants. This ‘Industry’ has some very vocal, and academically extremely respectable critics. What may seem self evident to an addict of sport and exercise may appear to have very little scientific basis to the uninvolved bystander with a penchant for statistical analysis. The doctor sees sick people. He cannot see the benefits of exercise unless he goes looking for them. The athletes he sees have ‘self induced disease’. To have a medical conference on exercise without discussing this self induced disease, and the rare but important association of exercise and sudden death would have been a negation of medicine.

I hope that we included enough of the medical men who have gone out looking for the benefits, to balance the ones who stayed in the hospitals keeping a tally of the pathology. Unfortunately Professor Morris has been ill and so his contribution has had to be shortened and ‘ghosted’ from the tape recording of his paper. We wish him a full recovery.

The publication of these proceedings has been delayed by a variety of causes, for some of which I must give my apologies.

The delay in publication has however allowed even more evidence for the benefits of exercise to become available. Professor Morris discusses the ‘protective effect of exercise’ which seems to act independently of the major known risk factors for coronary heart disease, . . . smoking, hypertension and hyperlipidaemia, usually expressed in terms of the serum cholesterol.

There is now increasing evidence that although normal levels of exercise have little effect on the total serum cholesterol, if the cholesterol is divided into two fractions, high and low density, then exercise does raise the HDL cholesterol at the expense of the LDL cholesterol. Reanalysis of the Framingham data by Castelli has shown that a high HDL cholesterol seems to protect people from the effects of a high level of LDL cholesterol, so that a high ratio of HDL to LDL cholesterol in the blood means a low risk of developing coronary heart disease. Women have such a high ratio, and use of this ratio makes data from men and women comparable, removing the mystery from the sex difference between men and women in their experience of coronary disease. Exercise has an extremely beneficial effect on this ratio, and marathon runners have some of the highest levels of HDL cholesterol recorded. It is too early to say whether this is the major effect that exercise has in reducing the risk of death from coronary disease or whether its many other theoretical benefits, increasing the size of coronary vessels, encouraging the formation of collateral arteries, boosting the blood fibrinolytic mechanism, also have a part to play.

The conference was in no sense an exhaustive survey of the benefits of exercise and further reading is available from the reference list below.
REFERENCES