“Exercise prescription for health”.

Summary: Exercise prescription for health has been shown in many studies to be as beneficial as pharmacological agents in controlling some diseases. It has also been shown to prevent the onset of many major diseases of the Western life style. It is now time for medical doctors to lead this initiative as they did with smoking cessation.

Large studies from the USA have shown that low cardio-respiratory fitness is the single biggest risk factor for all-cause mortality. The importance of sports medicine, in particular the benefits of physical activity in non-communicable disease prevention and chronic disease management, should be incorporated in the core undergraduate medical programme and into a postgraduate speciality of Sports Medicine.

Preamble

We are in the biggest epidemic of the 21st century. In case you have not noticed it, it is obesity. It is contributed to by lack of exercise, excessive alcohol intake and to a lesser extent cigarette smoking. What can we do about it? Physical inactivity is the biggest health problem of the 21st century.
We need to get the population moving again.
Should we spend more money on health? No, but we should look at where the resources are spent.
Should more resources be diverted? Yes, to the prevention and treatment of disease.
Does this mean there is a call for more resources for health? NO! We can reduce the cost of healthcare by applying one of the oldest remedies, known to Aristotle and Plato 3,000 years ago, in the Western World. **“Exercise prescription for health”.**

Introduction

Why not apply this simple solution? There are only athlete/patient benefactors. There is no drug, but it compliments the use of drugs. There is no large corporation that will benefit. Ministries of Health, Health Administrators and 3rd party payers will directly benefit by the reduction in health care costs.

Scientific Data

The data of a scientific nature is compelling. The beauty of an exercise prescription is that it only requires a person with the knowledge of exercise and how it works (a doctor trained in sports medicine) and a willing “athlete / patient” who will participate in an exercise program. The make up of their exercise supervisors as far as exercise prescription can be divided between medical practitioners (who know the risks and

can monitor the benefits, adjusting drug intake if needed). The medical practitioner, after a history, physical examination and appropriate tests writes the prescription in METS (metabolic equivalents of exercise) and other exercise trained non-medical personnel (who know the type of exercise that will dictate the amount of METS) sets the exercise program.

Side-effects of exercise

Exercise is not medicine for all participants. Sudden cardiac death is as common as 1:100,000 in the healthy gently training groups of athletes and as high as 3:100,000 in athletes who participate in heavy exercise. This can rise to as high as 1:5,000 in patients with clinical conditions that are susceptible to sudden cardiac death.

Inflammation is another side effect of exercise. This is most often seen on the Pulmonary system causing Exercise Induced Bronchospasm (EIB). Although it is rear, brain inflammation after a concussion is another. Improper exercise participation may cause mechanical soft tissue injuries.

Health Benefits of Exercise

The role of the medical director of a group of doctors prescribing and non-doctors demonstrating exercise for health must identify the practitioners best qualified to prescribe for the various groups. Physical exercise can help prevent heart disease, hypertension and stroke. It reduces the risk of developing type II diabetes. It helps in weight control and prevents obesity. It has beneficial effects on depression and anxiety disorders. In elderly it improves body balance and reduces falls and fractures

These studies showed that exercise is a powerful form of prevention for ongoing health problems. There are other studies that show we can prevent disease and prevent progression of established disease by using the simple exercise prescription.

Sports medicine deals with two different but related topics. Sports medicine is involved with diagnosis and management of musculoskeletal disorders and Internal Medicine issues related to exercise and aims to use increased physical activity to prevent and treat disease.

Education

Internationally, the practice of sports medicine is increasingly recognised as an independent specialty with benefits to primary and secondary care, public health, and care of amateur and professional sportspeople. In Europe, there is a 4 year postgraduate curriculum tested by examination and continuous assessment, leading to the award of a certificate of specialist training by the National Sport Medicine Association (SMA) and by the European Medical Specialists Union (UEMS) Multiple Joint Committee.

Sports medicine is recognised as a specialty in 21 European countries and specialist training takes 2–5 years. Interest in sports medicine is increasing in the European undergraduate population, with meetings often organised by students themselves.

A sound understanding of sports medicine would help practitioners to manage the workloads of general practice and orthopaedic and accident and emergency medical

services. Up to 20% of consultations in European general practice involve musculoskeletal complaints, and patients with minor soft tissue trauma are often referred back to their family doctor from accident and emergency medicine services.

An informal survey of sports medicine practitioners was undertaken in recent years, which suggested that there was no substantive teaching of sports and exercise medicine in the core medical curricula in Greece, Italy, the Netherlands, New Zealand, Australia, Canada, South Africa, or the USA. Some ad-hoc teaching was offered, mainly by motivated staff, but this rarely exceeded 6 h during a course, apart from a few centres in the Netherlands where 10 h is offered and South Africa where one institution offers an undergraduate elective in sports and exercise medicine. About half the countries offered intercalated degrees in topics related to sports and exercise medicine during medical training, but these opportunities were not offered in all institutions.

Exercise moves Europe

An example of prescription for health

DR Name and address date of prescription
Contact numbers

Rx Original prescription

1.Cardio-respiratory

FITT	Minimal	average	High
• Frequency/week	3	5	6
• Intensity	light sweat	medium sweat	heavy sweating
METS	3.5	5-7	>7
	Assistance from gym instructor to attain goal		
• Type	walking	light jogging	heavy jogging
	Assistance from gym instructor for alternatives e.g. running		
• Time	30 minutes	40 minutes	50 minutes
• Warm –up	5 minutes	7 minutes	10 minutes
• Cool down and flexibility	10 minutes	15 minutes	20 minutes

2.Strength

Circuit training in under gym instructor for heavy, medium and light weights. Starting with light weights and high repetitions, progressing under gym instructor

- **FITT** Frequency Intensity / Time Type of Training
- **METS** Metabolic Equivalents of Exercise

Follow up in 3-6 weeks

Stop and reconsult your doctor sooner if new symptoms

Signature

Exercise the health prescription