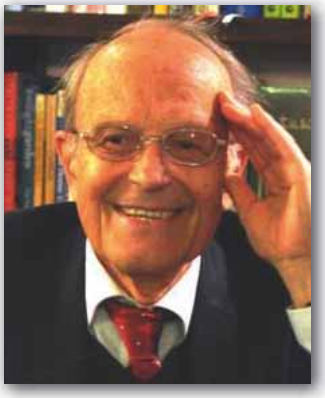
EDITORIAL



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Lifestyle for cardiovascular prevention. How relevant to the health needs of South Africa?

Relevance to risk factors and guidelines

The concept that the ideal lifestyle changes will improve heath and longevity may only be feasible for the fortunate few who have time, knowledge and energy to devote to this important health issue. I have called the critical five lifestyle factors the "Big Five" to help in spreading the concept.[1] Such mnemonics sound good and we all know of the health benefits but, as the saying goes, "the spirit is willing but the flesh is weak." What is practical? How do the lifestyle Big Five fit in with the better known Risk Factor concept and the increasing number of guidelines?

Lifestyle factors

This is the basis of self education and self help.[1] The five crucial lifestyle factors are based on scientific background provided by the definitive data that come from the US Nurses and Health Professionals Study in which 120 877 women and men free of chronic diseases and not obese at baseline, were followed for up to 24 years.[2-4] These are the five components of the ideal lifestyle which are easy to understand but often need self-determination to apply, all this being essentially a self-management project which in practice is often best put into practice by the active support of the partner/spouse.

Risk factors

Risk factors on the other hand, include measured entities of cardiovascular relevance such as LDL- and HDL-cholesterol, blood glucose, HbA1c, blood pressure, measures of inflammatory markers such as the ultrasensitive C-reactive protein, and indices of obesity besides the immutable risks of age and gender. These are mostly based on the Framingham study, now updated from observations on the Framingham offspring.[5] To asses the significance of risk factors with any accuracy requires consultation with an experienced medical doctor or dietician or other health professional who ideally has a suitable computer programme to work out which medication and/or lifestyle change could best remedy as many as possible of the deviations from the ideal.

Guidelines

Guidelines are again different. They include a mixture of the measurable risk factors, lifestyle advice, and even wishful thinking. For example an untreated BP of less than 120/80 mmHg is the ideal for all Americans.[6,7] But if the resting value is 125/84, and the person concerned is already at ideal weight,

follows the DASH diet or modifications of it, and in addition is well exercised, what exactly should be the advice that a cardiologist would give? Drug therapy would be out of the question as there is no evidence-base to support pharmacological therapy at that level, though an expensive placebo might do the trick.

Who are the target audiences for guidelines?

Women, having been neglected, rightly come to the fore with their own gudelines.[6,8] There are no American Heart Association (AHA) publications addressing these issues in men, so we fall back on the National Goals for Cardiovascular Promotion and Disease Reduction,[7] while bearing in mind that there will soon be AHA Guidelines for Secondary Prevention. In the meantime, we need to pay special attention to the 30-year follow up to the Framingham study in which men had more than twice as much hard cardiovascular disease (CVD) event rates, which were 7.6% for women and more than double at 18.3% for men.[5] Standard risk factors (male gender, systolic blood pressure, antihypertensive treatment, total and high-density lipoprotein cholesterol, smoking, and diabetes mellitus), measured at baseline, were significantly related to the incidence of hard CVD and remained significant when updated regularly on follow-up. Body mass index was associated positively with 30-year risk of hard CVD only in models that did not update risk factors.

Of the five factors, what is the ideal diet?

The health professional in the Nurses Health and Health Professionals study all lived in the USA. There the use of olive oil, important in the Mediterranean diet that I support,[1] is relatively rare whereas non-smoking is now the norm in North America and much of Europe. New information on the effects on weight of dietary changes and lifestyle has just appeared.[9] The new findings link three dietary items, namely potatoes, meat and sugar-sweetened beverages to weight gain, even more so when associated with long television watching sessions.[10]

Potatoes were bad, whether fried or boiled or baked or mashed. Conversely, increased intake of nuts, fruits and yogurt (mostly low-fat or no-fat), and increased exercise were linked to weight loss.

How applicable are those results for South Africa? Perhaps some of the health conscious minority may respond to clarion calls to change their diet to reduce weight. But then many, the potato and meat eaters and drinkers of sugared-beverages, will argue that they are hungry and need to eat and drink cheaply. Yet in all ethnic groups the increasing trend is towards weight gain. What messages do we give and how to get it across?

Potatoes and tilling the soil

Are potatoes really that bad? After all, they are the staple diet of many South Africans. If we go back to 1885 when Vincent van Gogh painted the first version of his Potato Eaters (Figure 1), he wrote as follows: "You see, I really have wanted to make it so that people get the idea that these folk, who are eating their potatoes by the light of their little lamp, have tilled the earth themselves with these hands they are putting in the dish, and so it speaks of manual labour and – that they have thus honestly earned their food. I wanted it to give the idea of a wholly different way of life from ours." We now know that

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FIGURE 1: The Potato Eaters, sketch by Vincent van Gogh 1885. (in the public domain)

increased exercise, which clearly would in South Africa include manual labour such as tilling the fields and underground mining, can largely offset the offset of the health hazards of excess potatoes and meat.[9]

Practical messages for peri-urban South Africans

The average black labourer will therefore unknowingly limit the harm of the potato cheap diet by the high levels of exercise associated with physical work. Furthermore, a healthy diet can be cost-effective. Pretorius and Sliwa paved the way (see article in this issue).[11] They found that urbanisation and moving to Soweto was associated with a more Westernised diet, higher in energy sources, but with more salt, saturated fats and sugar. Intake of fruit and vegetables decreased while that of alcohol and tobacco increased. But these researchers could construct a good and balanced diet costing a little less than the current consumed Westernised diet (see Table 1 of their paper). Thus "healthy eating" does not mean expensive eating. You don't have to eat Norwegian salmon to be healthy.

How to spread the message

Here the extensive scientific information must be translated into a coordinated push that spreads "one simple message" which could concentrate on the food message.[12] Whatever the "simple message", it should come from several sources, including mass media, doctors (especially cardiologists), dieticians and even supermarkets who need to modify their point-of-purchase prompts.[12]

But, for us in South Africa, what is the lifestyle message? In the US Health Studies, non-smoking gave the greatest benefit and reduced the risk of death by 28%, while the combination of exercise and ideal

diet together account for 31% of the risk. All three could account for almost 60% of the risk. Thus we can reduce the message to three: non-smoking, exercise, and diet. Cell phone text messages are an excellent means to help in smoking cessation[13] and could be used to warn those in supermarkets of wrong dietary choices. That leaves the need for a simple message on smoking, diet and exercise diet for South Africa. To refine the message, to cone down from three aims to two, and then to get it across would require input from cardiologists (via South African Heart Association) working with all others willing to fight for better cardiovascular health. These would include the Hypertension Society, the Ministry of Health, the Medical Research Council, sports scientists and, last but not least, the Heart and Stroke Foundation of South Africa. The latter is very aware of the negative influence of point-of-purchase influences which in most of our supermarkets promote junk foods strategically placed on either side of the queue waiting for the till. In summary, the first step is to decide on the "simple message" and then plan a well-coordinated move to get that message across.

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