



The

Scientific Newsletter

N° 42 • February 2010

« LIVING HEALTHY AND FEELING BETTER »

Edito

How far do we have to go back?

As the articles in this newsletter highlight, we are now confronting challenges affecting all our different sectors in the food chain, in nutrition and health. In the more affluent parts of Europe, life expectancy is going up by three months every year - reflecting not only how we live now and our better management of disease, but also our biological responses to this generation's early feeding practices. In growing up we were much thinner than today's children and had a very different diet and level of physical activity.

Now healthy living is becoming one of the top issues not only for politicians but also doctors. The whole issue of climate change is being negotiated with huge implications for the food chain and as we foresee the re-negotiation of the Common Agricultural Policy in the European Union. As illustrated in the articles below we have to confront not only the challenge of ageing but also of the diseases which affect us a long time before we finally die. Life expectancy can differ even within a single European country by 10 years, with the poor dying earlier yet living within a kilometre or two of their wealthy neighbours. They also have up to 20 years less of a disability and disease free life and diet is increasingly seen to play an exceptionally important part. Clearly we need to rethink the importance of the Mediterranean diet and some are even considering the Palaeolithic diet which probably had even more fruit and vegetables.

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Healthy lifestyle and preventable death: findings from the Japan Collaborative Cohort (JACC) Study

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Despite the established relationship between mortality and modifiable lifestyle risk factors, such as smoking, excessive drinking, obesity, and physical activity, it remains a difficult task to reduce the total number of deaths from these causes. From a public health perspective, a simple lifestyle assessment may be more feasible and can be readily applied to motivate the public to make lifestyle modifications.

We chose six healthy lifestyle factors (not currently smoking, not heavily drinking, walking one hour or more per day, sleeping 6.5 to 7.4 hours per day, eating green-leafy vegetables almost daily and BMI between 18.5 to 24.9) to examine the relationship with all-cause mortality. One point was credited for each of the healthy factors and points were totaled up to yield an overall lifestyle score ranging from zero to six points, with a higher score indicating a more favorable health-promoting lifestyle. Study subjects were those who participated in the Japanese Collaborative Cohort Study (JACC Study). There were more than 62,000 subjects included in the study, and the average follow-up period was 12.5 years.

Those with more healthy factors showed lower mortality risk

There was an inverse association between a baseline combination of six healthy lifestyle factors and the risk of all-cause mortality. Mortality risk for the highest group (score of six) was 0.43 among men and 0.53 among women, respectively, compared with the lowest group (score of 0-2). Even in the 60-79 year group, healthy lifestyles were associated with a significantly decreased risk of mortality.

Improved lifestyles could avoid 25% of deaths among men and 19% of deaths among women

The estimation showed that if all subjects would have altered all

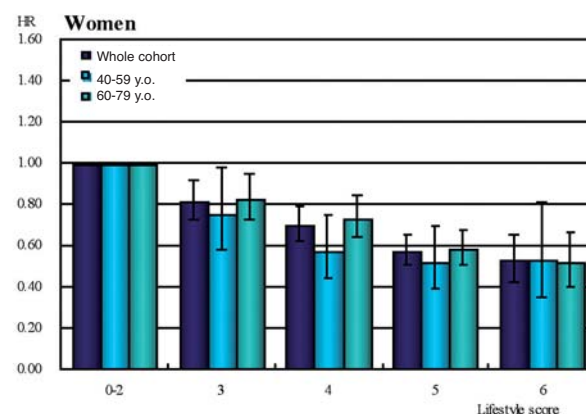
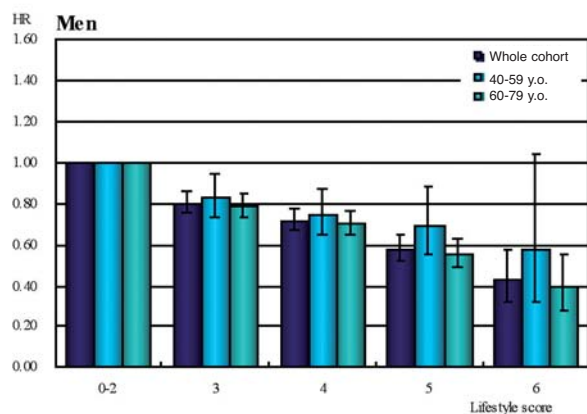
their six lifestyle factors to healthy categories, 49.4% of deaths among men and 29.8% of deaths among women could be avoided. Moreover, if all but the subjects with score six would have achieved a one-point increment in their lifestyle scores, it was estimated that 24.7% death among men and 18.5% death among women could be prevented.

About the healthy lifestyle score

The selection of lifestyle factors (smoking, drinking, walking, sleeping, green-leafy vegetable intake and weight status) were based on the reviews of many epidemiological studies. These factors were key elements of recent health promotions initiated by many Governments. Dichotomous criteria within these lifestyle factors were improved from the standpoint of modifiability, i.e., a person in an unhealthy group could change his or her behavior to a healthy group if so motivated; thus, quitting smoking or drinking was categorized as healthy status. As a result, the healthy lifestyle score we adopted was simple, understandable, easy to calculate without any sort of clinical test, and corresponded to lifestyle improvement. It may serve to motivate both individual and health promoters.

Conclusion

Our study indicated that baseline healthy lifestyle combination was associated with a linear decrease in the risk of all-cause mortality among both men and women, as well as among both the middle-aged and elderly. Moreover, if subjects manage to improve their lifestyle by even just one variable, 24.7% of deaths among men and 18.5% among women can be prevented. Such knowledge should prove useful to anyone who considers improving his or her lifestyle as well as to health promoters who plan population-based strategy in health improvement campaigns.



Adjusted for age categories, education, stress, marital status, consumption of green-leafy vegetables, past history of stroke, MI, cancer.

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Living longer and feeling better

— Janas Harrington —

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Introduction

It has been known for some time that adoption of a number of core protective lifestyle behaviours, at an individual level, has a potentially large positive influence on population health. There is increasing recognition of the value of these behaviourally defined protective behaviours for health promotion and population health monitoring¹⁻⁸; advice on smoking cessation, healthy diet, physical exercise and moderation in alcohol consumption – all of which have been pillars of health education for many years. While anecdotally a perception exists, that adoption of a healthy lifestyle may impair quality of life as evidenced by the admonition “You won’t live forever, it will just feel like it”, recent evidence suggests that quality as well as quantity can be added to life through the adoption of relatively minor lifestyle changes⁵.

Results from previous studies reported the positive effects of a limited number of core protective lifestyle behaviours in relation to: the decreased risk in mortality¹; type two diabetes⁹; hypertension; dyslipidemia⁴⁻⁵; insulin resistance¹⁰⁻¹²; and increased life expectancy¹. Other studies¹³ showed that behavioural factors are associated with substantial differences in age-related decline in functional health, and the prevalence of those in good and poor functional health in the community.

Examining the effects of individual risk factors for chronic disease and poor physical and mental health is not a new concept; however, their combined effect on general and mental health is less well defined. The aim of this study was to examine the combined effect of practising four non-clinically defined lifestyle behaviours (being a non-smoker, being physically active, being a moderate drinker, and consuming five portions of Fruit and Vegetables (F&V) daily), on self-rated health and mental health.

The Survey of Lifestyle Attitudes and Nutrition

Using data from the Survey of Lifestyle Attitudes and Nutrition (SLÁN) 2007, a Protective Lifestyle Behaviour (PLB) score was constructed for 10,364 men and women (18+ years), and representative of the Republic of Ireland adult population (response rate 62%). The score

was based on the work by Khaw et al¹. Respondents scored a maximum of four points, one point each for being physically active, consuming five or more (F&V) servings daily, a non-smoker, and a moderate drinker.

Associations between protective lifestyle behaviours and feeling healthy

The association between PLB score, self rated health and better mental health adjusted for age, sex, education and social class is shown in Table 1. For self rated health and depressive state, clear and highly significant trends were observed across the five groups of study participants. Relative to those with zero PLBs, those with four were almost seven times more likely to rate their general health as excellent / very good (OR 6.8; 95% CI [3.64-12.82]). These trends persisted even when the model was adjusted for depressive disorders. Those with four PLBs were four times more likely to have better mental health (OR 4.4; 95% CI [2.34-8.22]).

The ‘causes of the causes’ of all-cause mortality

We know from longitudinal studies that protective lifestyle behaviours increase longevity¹; this study also shows that they are also associated with better self-rated health and better mental health. Conversely those who had fewer protective lifestyle behaviours, were ‘not only’ leading unhealthier lifestyles, they also perceived their overall health to be poorer and had a higher likelihood of having depression, than those with higher numbers of protective lifestyle behaviours. Our findings add to the evidence that we can achieve progress to address the ‘causes of the causes’ of all-cause mortality, mental ill-health and cardiovascular disease through small achievable lifestyle behaviour modifications. A key challenge for future research is to better understand the individual and societal determinants of health seeking behaviour. In conclusion, given the association between self-rated health, better mental health and higher numbers of protective lifestyle behaviours, we propose that the four lifestyle behaviours detailed in this study be used as outcome measures from which effectiveness of public health policy can be gauged.

ACKNOWLEDGEMENTS

“We thank other SLÁN 2007 Consortium members for their contribution to this research. (<http://www.SLAN07.ie>)

FUNDING

SLÁN was funded by the Department of Health and Children

Table 1: Respondent’s likelihood of self-rated general health being excellent / very good / good compared to fair / poor; and the likelihood of not having depressive disorder compared to having depressive disorder by number of protective lifestyle behaviours adjusted for age, gender, education and social class.

	Excellent / very good / good self rated health vs fair / poor *			Not having depressive disorder vs depressive disorder *		
	Odds Ratio	95% CI	P-value	Odds Ratio	95% CI	P-value
0	1	-	-	1	-	-
1	1.7	0.95-2.95	0.07	2.0	1.12-3.77	0.02
2	2.8	1.60-4.82	0.00	3.2	1.75-5.69	0.00
3	3.3	1.89-5.70	0.00	3.6	1.98-6.40	0.00
4	6.8	3.64-12.82	0.00	4.4	2.34-8.22	0.00

*P-value for trend significant P<0.01

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Healthy Eating Index and abdominal obesity

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More than one billion adults worldwide are overweight with about one-third of them obese¹. Overweight and obesity are associated with increased risk of multiple chronic diseases and potentially reduced length and quality of life. Environmental, genetic, and behavioural patterns are key contributors to this epidemic. However, the ultimate reason for the disease is a progressive, positive energy balance. Diet is a modifiable risk factor for obesity. This article² focused on studying relationships between abdominal adiposity and dietary quality. A secondary data analysis was conducted with the third National Health and Nutrition Examination Survey (NHANES III) data for this purpose.

Measuring abdominal adiposity and the Healthy Eating Index (HEI) and HEI component scores among US adults

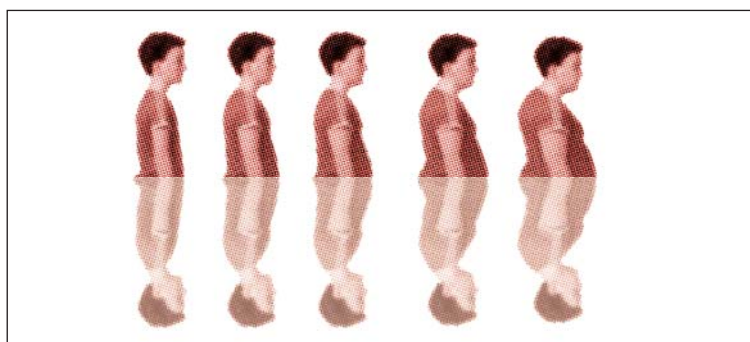
Standardized interviews that collected 24 hour recalls and physical examinations that recorded Waist Circumference (WC) measures were conducted by trained professionals during NHANES III. This study included non-pregnant NHANES III participants 20 years and older with HEI and WC data (n 15 658). The HEI data were based on 24 hour recall data and are publically available at <http://www.cdc.gov/nchs/nhanes.htm>. The total HEI score and ten HEI component scores were studied in relation to abdominal adiposity. The component scores were the following nutrition measures: (1) dairy, (2) fruit, (3) grain, (4) meat, (5) vegetable, (6) total fat, (7) saturated fat, (8) sodium, (9) dietary cholesterol, and (10) variety. WC values were utilized to measure abdominal adiposity, with abdominal obesity defined as a WC > 102 cm for men and > 88 cm for women.

Dietary measures related to abdominal obesity risk

The composite HEI score, saturated fat component score, variety component score, and fruit component score were related with risk of abdominal obesity. The rates of abdominal obesity were higher among women compared with men in this study, with more than one-third of the total sample with abdominal obesity. Improved overall dietary quality, measured by the composite HEI score, was related to reduced risk of abdominal obesity for both men and women. Lower saturated fat intake and greater dietary variety were associated with reduced abdominal obesity risk for men and higher fruit intake and was related to reduced abdominal obesity risk for women. Thus, overall dietary quality, as well as specific nutrition measures are related to abdominal adiposity and risk of abdominal obesity based on this study.

Implications for practice

Although the ultimate defense against abdominal adiposity is a diet and physical activity that result in energy balance, this study indicates that food consumption associated with improved dietary quality may be one mechanism to fight abdominal obesity. Further, gender differences appear to exist, with men benefiting from reduced saturated fat intake and greater dietary variety, and women benefiting from fruit intake that meets recommendations. Dietary intake that follows dietary recommendations appears to protect against abdominal obesity based on this study. These results are important because abdominal obesity has been associated with several chronic diseases and increased mortality risk³.



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