

**A SELECTION OF TEN CURRENT READINGS ON TOPICS RELATED TO
NUTRITION UPDATES AVAILABLE AS FULL-TEXT (SOME FREE AND
SOME REQUIRING FULL PAYMENT**

Selection of readings made by A/Prof Goh Lee Gan

Reading 1 - MEDITERRANEAN DIET: META-ANALYSIS

Sofi F, Cesari F, Abbate R, Gensini GF, Casini A. Adherence to Mediterranean diet and health status: meta-analysis. BMJ 2008; 337 (112): a1344.

URL: http://www.bmj.com/cgi/reprint/337/sep11_2/a1344 (free fulltext)

Department of Medical and Surgical Critical Care, Thrombosis Centre, University of Florence, Viale Morgagni 85, 50134 Florence, Italy. francescosofi@gmail.com

ABSTRACT

OBJECTIVE: To systematically review all the prospective cohort studies that have analysed the relation between adherence to a Mediterranean diet, mortality, and incidence of chronic diseases in a primary prevention setting.

DESIGN: Meta-analysis of prospective cohort studies.

DATA SOURCES: English and non-English publications in PubMed, Embase, Web of Science, and the Cochrane Central Register of Controlled Trials from 1966 to 30 June 2008. Studies reviewed Studies that analysed prospectively the association between adherence to a Mediterranean diet, mortality, and incidence of diseases; 12 studies, with a total of 1 574,299 subjects followed for a time ranging from three to 18 years were included.

RESULTS: The cumulative analysis among eight cohorts (514,816 subjects and 33,576 deaths) evaluating overall mortality in relation to adherence to a Mediterranean diet showed that a two point increase in the adherence score was significantly associated with a reduced risk of mortality (pooled relative risk 0.91, 95% confidence interval 0.89 to 0.94). Likewise, the analyses showed a beneficial role for greater adherence to a Mediterranean diet on cardiovascular mortality (pooled relative risk 0.91, 0.87 to 0.95), incidence of or mortality from cancer (0.94, 0.92 to 0.96), and incidence of Parkinson's disease and Alzheimer's disease (0.87, 0.80 to 0.96).

CONCLUSIONS: Greater adherence to a Mediterranean diet is associated with a significant improvement in health status, as seen by a significant reduction in overall mortality (9%), mortality from cardiovascular diseases (9%), incidence of or mortality from cancer (6%), and incidence of Parkinson's disease and Alzheimer's disease (13%). These results seem to be clinically relevant for public health, in particular for encouraging a Mediterranean-like dietary pattern for primary prevention of major chronic diseases.

Reading 2 - NUTRITION AND GROWTH IN KIDNEY DISEASE

Voss D, Hodson E, Crompton C. Nutrition and growth in kidney disease: CARI guidelines. Aust Fam Physician. 2007 Apr;36(4):253-4.

URL: <http://www.racgp.org.au/afp/200704/15746> (free fulltext)

Middlemore Hospital, Counties Manukau District Health Board, Auckland, New Zealand. dvoss@middlemore.co.nz

ABSTRACT

The Caring for Australasians with Renal Impairment (CARI) guidelines initiative is an Australia/New Zealand evidence based project that aims to provide high quality, evidence based clinical practice guidelines for the management of all stages of kidney disease. This article summarises CARI guidelines on Nutrition and growth in kidney disease and forms part of a series of articles on aspects of management of patients with chronic kidney disease.

Reading 3 - THERAPEUTIC LIFESTYLE INTERVENTION

Wister A, Loewen N, Kennedy-Symonds H, McGowan B, McCoy B, Singer J. One-year follow-up of a therapeutic lifestyle intervention targeting cardiovascular disease risk. CMAJ. 2007 Oct 9;177(8):859-65.

URL: <http://www.cmaj.ca.libproxy1.nus.edu.sg/cgi/content/full/177/8/859> (free fulltext)

Department of Gerontology, Simon Fraser University, Vancouver, BC. wister@sfu.ca

ABSTRACT

BACKGROUND: In this study, we tested the efficacy of a low-intensity lifestyle intervention aimed at reducing the risk of cardiovascular disease among mid-life individuals.

METHODS: We conducted a randomized controlled trial in which participants were randomly assigned either to receive a health report card with counselling (from a Telehealth nurse) on smoking, exercise, nutrition and stress or to receive usual care. The patients were divided into 2 groups on the basis of risk: the primary prevention group, with a Framingham risk score of 10% or higher (intervention, n = 157; control, n = 158), and the secondary prevention group, who had a diagnosis of coronary artery disease (intervention, n = 153; control, n = 143). The primary outcome was a change in the Framingham global risk score between baseline and 1-year follow-up. Data were analyzed separately for the 2 prevention groups using an intention-to-treat analysis controlling for covariates.

RESULTS: Within the primary prevention group, there were statistically significant changes for the treatment group relative to the controls, from baseline to year 1, in Framingham score (intervention, -3.10 [95% confidence interval (CI) -3.98 to -2.22]; control, -1.30 [95% CI -2.18 to -0.42]; p < 0.01) and scores for total cholesterol (intervention, -0.41 [95% CI -0.59 to -0.23]; control, -0.14 [95% CI -0.32 to 0.04]; p < 0.05), systolic blood pressure (intervention, -7.49 [95% CI -9.97 to -5.01]; control, -3.58 [95% CI -6.08 to -1.08]; p < 0.05), nutrition level (intervention, 0.30 [95% CI 0.13 to 0.47]; control, -0.05 [95% CI -0.22 to 0.12]; p < 0.01), and health confidence (intervention, 0.20 [95% CI 0.09 to 0.31]; control, 0.04 [95% CI -0.07 to 0.15]; p < 0.05), with adjustment for covariates. No significant changes in outcome variables were found for the secondary prevention group.

INTERPRETATION: We found evidence for the efficacy of an intervention addressing multiple risk factors for primary prevention at 1 year using Framingham risk score report cards and telephone counselling. (Requirement for clinical trial registration waived [enrolment completed before requirement became applicable].).

Reading 4 - REDUCING WEIGHT IN CHILDREN

Sanigorski AM, Bell AC, Kremer PJ, Cuttler R, Swinburn BA. Reducing unhealthy weight gain in children through community capacity-building: results of a quasi-experimental intervention program, Be Active Eat Well. *Int J Obes (Lond)*. 2008 Jul;32(7):1060-7. Epub 2008 Jun 10.

URL: <http://www.nature.com/ijo/journal/v32/n7/pdf/ijo200879a.pdf> (free fulltext)

School of Exercise and Nutrition Sciences, Deakin University, Geelong, Victoria, Australia. andrea.sanigorski@deakin.edu.au

ABSTRACT

BACKGROUND: Be Active Eat Well (BAEW) was a multifaceted community capacity-building program promoting healthy eating and physical activity for children (aged 4-12 years) in the Australian town of Colac.

OBJECTIVE: To evaluate the effects of BAEW on reducing children's unhealthy weight gain.

METHODS: BAEW had a quasi-experimental, longitudinal design with anthropometric and demographic data collected on Colac children in four preschools and six primary schools at baseline (2003, n=1001, response rate: 58%) and follow-up (2006, n=839, follow-up rate: 84%). The comparison sample was a stratified random selection of preschools (n=4) and primary schools (n=12) from the rest of the Barwon South Western region of Victoria, with baseline assessment in 2003-2004 (n=1183, response rate: 44%) and follow-up in 2006 (n=979, follow-up rate: 83%).

RESULTS: Colac children had significantly lower increases in body weight (mean: -0.92 kg, 95% CI: -1.74 to -0.11), waist (-3.14 cm, -5.07 to -1.22), waist/height (-0.02, -0.03 to -0.004), and body mass index z-score (-0.11, -0.21 to -0.01) than comparison children, adjusted for baseline variable, age, height, gender, duration between measurements and clustering by school. In Colac, the anthropometric changes were not related to four indicators of socioeconomic status (SES), whereas in the comparison group 19/20 such analyses showed significantly greater gains in anthropometry in children from lower SES families. Changes in underweight and attempted weight loss were no different between the groups.

CONCLUSIONS: Building community capacity to promote healthy eating and physical activity appears to be a safe and effective way to reduce unhealthy weight gain in children without increasing health inequalities.

Reading 5 - DIETARY COUNSELLING FOR WEIGHT LOSS: META-ANALYSIS

Dansinger ML, Tatsioni A, Wong JB, Chung M, Balk EM. Meta-analysis: the effect of dietary counseling for weight loss. *Ann Intern Med*. 2007 Jul 3;147(1):41-50.

URL: <http://www.annals.org/cgi/reprint/147/1/41.pdf> (free fulltext)

Tufts-New England Medical Center, Boston, Massachusetts 02111, USA. mdansinger@tufts-nemc.org

ABSTRACT

BACKGROUND: Dietary and lifestyle modification efforts are the primary treatments for people who are obese or overweight. The effect of dietary counseling on long-term weight change is unclear.

PURPOSE: To perform a meta-analysis of the effect of dietary counseling compared with usual care on body mass index (BMI) over time in adults.

DATA SOURCES: Early studies (1980 through 1997) from a previously published systematic review; MEDLINE and the Cochrane Central Register of Controlled Trials from 1997 through July 2006.

STUDY SELECTION: English-language randomized, controlled trials (> or =16 weeks in duration) in overweight adults that reported the effect of dietary counseling on weight. The authors included only weight loss studies with a dietary component.

DATA EXTRACTION: Single reviewers performed full data extraction; at least 1 additional reviewer reviewed the data.

DATA SYNTHESIS: Random-effects model meta-analyses of 46 trials of dietary counseling revealed a maximum net treatment effect of -1.9 (95% CI, -2.3 to -1.5) BMI units (approximately -6%) at 12 months. Meta-analysis

of changes in weight over time (slopes) and meta-regression suggest a change of approximately -0.1 BMI unit per month from 3 to 12 months of active programs and a regain of approximately 0.02 to 0.03 BMI unit per month during subsequent maintenance phases. Different analyses suggested that calorie recommendations, frequency of support meetings, inclusion of exercise, and diabetes may be independent predictors of weight change.

LIMITATIONS: The interventions, study samples, and weight changes were heterogeneous. Studies were generally of moderate to poor methodological quality. They had high rates of missing data and failed to explain these losses. The meta-analytic techniques could not fully account for these limitations.

CONCLUSIONS: Compared with usual care, dietary counseling interventions produce modest weight losses that diminish over time. In future studies, minimizing loss to follow-up and determining which factors result in more

Reading 6 - OLDER PEOPLE WITH ASTHMA

Svetkey LP, Stevens VJ, Brantley PJ, Appel LJ, Hollis JF, Loria CM, Vollmer WM, Gullion CM, Funk K, Smith P, Samuel-Hodge C, Myers V, Lien LF, Laferriere D, Kennedy B, Jerome GJ, Heinith F, Harsha DW, Evans P, Erlinger TP, Dalcin AT, Coughlin J, Charleston J, Champagne CM, Bauck A, Ard JD, Aicher K; Weight Loss Maintenance Collaborative Research Group. Comparison of strategies for sustaining weight loss: the weight loss maintenance randomized controlled trial. *JAMA*. 2008 Mar 12;299(10):1139-48.

URL: <http://jama.ama-assn.org/cgi/content/full/299/10/1139> (free fulltext)

Division of Nephrology, Department of Medicine, Duke Hypertension Center and Sarah W. Stedman Nutrition and Metabolism Center, Duke University Medical Center, Durham, North Carolina 27710, USA. Svetk001@mc.duke.edu

ABSTRACT

CONTEXT: Behavioral weight loss interventions achieve short-term success, but re-gain is common.

OBJECTIVE: To compare 2 weight loss maintenance interventions with a self-directed control group.

DESIGN, SETTING, AND PARTICIPANTS: Two-phase trial in which 1032 overweight or obese adults (38% African American, 63% women) with hypertension, dyslipidemia, or both who had lost at least 4 kg during a 6-month weight loss program (phase 1) were randomized to a weight-loss maintenance intervention (phase 2). Enrollment at 4 academic centers occurred August 2003-July 2004 and randomization, February-December 2004. Data collection was completed in June 2007.

INTERVENTIONS: After the phase 1 weight-loss program, participants were randomized to one of the following groups for 30 months: monthly personal contact, unlimited access to an interactive technology-based intervention, or self-directed control. Main Outcome Changes in weight from randomization.

RESULTS: Mean entry weight was 96.7 kg. During the initial 6-month program, mean weight loss was 8.5 kg. After randomization, weight regain occurred. Participants in the personal-contact group regained less weight (4.0 kg) than those in the self-directed group (5.5 kg; mean difference at 30 months, -1.5 kg; 95% confidence interval [CI], -2.4 to -0.6 kg; $P = .001$). At 30 months, weight regain did not differ between the interactive technology-based (5.2 kg) and self-directed groups (5.5 kg; mean difference -0.3 kg; 95% CI, -1.2 to 0.6 kg; $P = .51$); however, weight regain was lower in the interactive technology-based than in the self-directed group at 18 months (mean difference, -1.1 kg; 95% CI, -1.9 to -0.4 kg; $P = .003$) and at 24 months (mean difference, -0.9 kg; 95% CI, -1.7 to -0.02 kg; $P = .04$). At 30 months, the difference between the personal-contact and interactive technology-based group was -1.2 kg (95% CI -2.1 to -0.3; $P = .008$). Effects did not differ significantly by sex, race, age, and body mass index subgroups. Overall, 71% of study participants remained below entry weight.

CONCLUSIONS: The majority of individuals who successfully completed an initial behavioral weight loss program maintained a weight below their initial level. Monthly brief personal contact provided modest benefit in sustaining weight loss, whereas an interactive technology-based intervention provided early but transient benefit. TRIAL

REGISTRATION: clinicaltrials.gov Identifier: NCT00054925.

Reading 7 - MANAGEMENT OF DYSLIPIDEMIA

Nestel PJ, O'Brien R, Nelson M. Management of dyslipidaemia - evidence and practical recommendations. Aust Fam Physician. 2008 Jul;37(7):521-7.

URL: <http://www.racgp.org.au/afp/200807/25425> (free fulltext)

Cardiovascular Nutrition Laboratory, Baker Heart Research Institute, Melbourne, Victoria.

ABSTRACT

BACKGROUND: Dyslipidaemia is a common condition managed in general practice.

OBJECTIVE: This article reviews the evidence and gives practical advice for the management of dyslipidaemia in general practice.

DISCUSSION: It is essential to identify people at risk of cardiovascular disease (CVD) and to instigate appropriate treatment strategies. An assessment of absolute risk is the most appropriate method of identifying those at a higher risk of CVD where CVD is not overt. People with an absolute risk of >15% of a cardiovascular event in the next 5 years should be actively treated. Drug therapy should also be considered in those estimated to be at 10-15% risk of a cardiovascular event in the next 5 years if they have additional risk factors. It is important to select an appropriate lipid lowering therapy (or combination of drugs) in order to reach lipid targets, which need to consider not just LDL-c but also HDL-c and triglycerides. Lifestyle management should underpin all lipid management strategies.

Reading 8 - LIFESTYLE EFFECT ON HYPERTENSION & DYSLIPIDEMIA

Villegas R, Kearney PM, Perry IJ. The cumulative effect of core lifestyle behaviours on the prevalence of hypertension and dyslipidemia. BMC Public Health. 2008 Jun 13;8:210.

URL: <http://www.pubmedcentral.nih.gov/picrender.fcgi?artid=2442070&blobtype=pdf> (free fulltext)

Department of Epidemiology and Public Health, University College Cork, Cork, Ireland. raquel.villegas@Vanderbilt.Edu

ABSTRACT

BACKGROUND: Most cardiovascular disease (CVD) occurs in the presence of traditional risk factors, including hypertension and dyslipidemia, and these in turn are influenced by behavioural factors such as diet and lifestyle. Previous research has identified a group at low risk of CVD based on a cluster of inter-related factors: body mass index (BMI) < 25 Kg/m², moderate exercise, alcohol intake, non-smoking and a favourable dietary pattern. The objective of this study was to determine whether these factors are associated with a reduced prevalence of hypertension and dyslipidemia in an Irish adult population.

METHODS: The study was a cross-sectional survey of 1018 men and women sampled from 17 general practices. Participants completed health, lifestyle and food frequency questionnaires and provided fasting blood samples for analysis of glucose and insulin. We defined a low risk group based on the following protective factors: BMI <25 kg/m²; waist-hip ratio (WHR) <0.85 for women and <0.90 for men; never smoking status; participants with medium to high levels of physical activity; light alcohol consumption (3.5-7 units of alcohol/week) and a "prudent" diet. Dietary patterns were assessed by cluster analysis.

RESULTS: We found strong significant inverse associations between the number of protective factors and systolic blood pressure, diastolic blood pressure and dyslipidemia. The prevalence odds ratio of hypertension in persons with 1, 2, 3, > or = 4 protective factors relative to those with none, were 1.0, 0.76, 0.68 and 0.34 (trend p < 0.01). The prevalence odds ratio of dyslipidemia in persons with 1, 2, 3, > or = 4 protective factors relative to those with none were 0.83, 0.98, 0.49 and 0.24 (trend p = 0.001).

CONCLUSION: Our findings of a strong inverse association between low risk behaviours and two of the traditional risk factors for CVD highlight the importance of 'the causes of the causes' and the potential for behaviour modification in CVD prevention at a population level.

Reading 9 - FEEDING ASSISTANCE

Simmons SF, Keeler E, Zhuo X, Hickey KA, Sato HW, Schnelle JF. Prevention of unintentional weight loss in nursing home residents: a controlled trial of feeding assistance. *J Am Geriatr Soc.* 2008 Aug;56(8):1466-73. Epub 2008 Jul 15.

URL: <http://www3.interscience.wiley.com/cgi-bin/fulltext/120776817/PDFSTART> (free fulltext)

Division of General Internal Medicine and Public Health, Center for Quality Aging, School of Medicine, Vanderbilt University, Nashville, Tennessee 37232-2400, USA. Sandra.Simmons@Vanderbilt.edu

ABSTRACT

OBJECTIVES: To determine the effects of a feeding assistance intervention on food and fluid intake and body weight.

DESIGN: Crossover controlled trial.

SETTING: Four skilled nursing homes (NHs).

PARTICIPANTS: Seventy-six long-stay NH residents at risk for unintentional weight loss.

INTERVENTION: Research staff provided feeding assistance twice per day during or between meals, 5 days per week for 24 weeks.

MEASUREMENTS: Research staff independently weighed residents at baseline and monthly during a 24-week intervention and 24-week control period. Residents' food and fluid intake and the amount of staff time spent providing assistance to eat was assessed for 2 days at baseline and 3 and 6 months during each 24-week period.

RESULTS: The intervention group showed a significant increase in estimated total daily caloric intake and maintained or gained weight, whereas the control group showed no change in estimated total daily caloric intake and lost weight over 24 weeks. The average amount of staff time required to provide the interventions was 42 minutes per person per meal and 13 minutes per person per between-meal snack, versus usual care, during which residents received, on average, 5 minutes of assistance per person per meal and less than 1 minute per person per snack.

CONCLUSION: Two feeding assistance interventions are efficacious in promoting food and fluid intake and weight gain in residents at risk for weight loss. Both interventions require more staff time than usual NH care. The delivery of snacks between meals requires less time than mealtime assistance and thus may be more practical to implement in daily NH care practice.

Reading 10 - NUTRITION IN LONG TERM CARE

Sloane PD, Ivey J, Helton M, Barrick AL, Cerna A. Nutritional issues in long-term care. *J Am Med Dir Assoc.* 2008 Sep;9(7):476-85.

URL: [http://linkinghub.elsevier.com/retrieve/pii/S1525-8610\(08\)00103-5](http://linkinghub.elsevier.com/retrieve/pii/S1525-8610(08)00103-5) (payment required)

Department of Family Medicine, School of Medicine, University of North Carolina at Chapel Hill (UNC-CH), Chapel Hill, NC 27599-7590, USA. psloane@med.unc.edu

ABSTRACT

Because long-term care residents often have chronic illnesses and complex care regimens, nutritional issues are common in these populations. Furthermore, management is complicated because some residents are terminally ill and under palliative care treatment plans that allow for dehydration and low oral intake. As a result, the medical management of nutrition is complex and challenging for medical providers caring for residents of nursing homes, assisted living facilities, and other long-term care settings. Quality nutritional practice in long-term care involves careful assessment of barriers to adequate nutrition; reduction of risk factors; attention to specialized diets, food presentation, and supplements, when appropriate; awareness of the importance of psychosocial and environmental issues; and consideration of the role of medication both as a cause and a therapeutic adjunct. Optimal practice at a facility level would involve a systematic approach to applying the best evidence-based approaches, with a focus on individualizing each resident's nutritional management.
