

Annotated References

Epidemiology of obesity

- The average weight per individual has increased nearly 25 pounds from 1960-2002.

Ogden CL, Fryar CD, Carroll MD, Flegal KM. Mean body weight, height, and body mass index, United States 1960-2002. *Adv Vit and Heal Stat.* Oct 27 2004(347):1-17.

- Approximately 65% of the US adults are overweight/obese and 30% are obese and it is projected that by 2015 nearly 75% of adult population will be overweight or obese.

Hedley AA, Ogden CL, Johnson CL, Carroll MD, Curtin LR, Flegal KM. Prevalence of overweight and obesity among US children, adolescents, and adults, 1999-2002. *Jama.* 2004;291(23):2847-2850.

Wang Y, Beydoun MA. The Obesity Epidemic in the United States--Gender, Age, Socioeconomic, Racial/Ethnic, and Geographic Characteristics: A Systematic Review and Meta-Regression Analysis. *Epidemiol Rev.* August 1, 2007 2007;29(1):6-28.

- Approximately 112,000 individuals die each year due to obesity related co-morbidities (hypertension, hypercholesterolemia, diabetes, sleep apnea, and some forms of cancer).

Flegal KM, Graubard BI, Williamson DF, Gail MH. Excess deaths associated with underweight, overweight, and obesity. *JAMA.* Apr 20 2005;293(15):1861-1867.

- Only 40% of family physicians advised their obese patients to manage and/or reduce bodyweight. This was a decrease from 44% from 1994 to 2000.

Jackson JE, Doescher MP, Saver BG, Hart LG. Trends in professional advice to lose weight among obese adults, 1994 to 2000. *J Gen Intern Med.* Sep 2005;20(9):814-818.

Patient Attitudes

- 82% of overweight and obese patients want help from their family physician.

Davis NJ, Emerenini A, Wylie-Rosett J. Obesity management: physician practice patterns and patient preference. *Diabetes Educ.* Jul-Aug 2006;32(4):557-561.

- Most overweight and obese patients are frustrated that their physician provide closed-ended messages about what to do rather how to do it.
 - Almost all overweight and obese patients want a detailed, individualized weight loss plan from their family physician.
 - Over 75% of overweight and obese patients want their family physician to be an active part of their weight management treatment including monitoring their progress.
 - The main themes identified from a patient focus group on physicians addressing obesity include:
 1. Patients want their physician to initiate discussions about weight.
 2. Patients want individualized advice and recommendations.

Beran MS, Fowles JB, Kind EA, Craft CE. State of the Art Reviews: Patient and Physician Communication About Weight Management: Can We Close the Gap? *Am J Life Med*. February 1, 2008 2008;2(1):75-83.

Tan D, Zwar NA, Dennis SM, Vagholkar S. Weight management in general practice: what do patients want? *Med J Aust*. Jul 17 2006;185(2):73-75.

Physician barriers

- Physicians preferred giving patients advice, recommending a book, or referring the patient to a dietitian ... The main themes from the physician focus groups were
 1. Physicians felt that weight management was a significant issue in their practice.
 2. Each physician had one main strategy for weight loss that they used with most of their patients,
 3. Physicians felt that they had little time for a detailed weight loss plan.

Beran MS, Fowles JB, Kind EA, Craft CE. State of the Art Reviews: Patient and Physician Communication About Weight Management: Can We Close the Gap? *Am J Life Med*. February 1, 2008 2008;2(1):75-83.

- In a survey of over 2250 primary care physicians, approximately 70% of the physicians report a lack of patient compliance with nutritional guidance. This supports a previous article on physicians' belief that treating obesity is futile.

Kushner RF. Barriers to providing nutrition counseling by physicians: a survey of primary care practitioners. *Prev Med*. Nov 1995;24(6):546-552.

Frank A. Futility and avoidance. Medical professionals in the treatment of obesity. *JAMA*. Apr 28 1993;269(16):2132-2133.

- Insurance reimbursement for dietary counseling is marginal. Only 50% of survey plans in Pennsylvania cover individual dietary counseling. Approximately 54% of physicians indicate they would counsel the patient on obesity if their time was reimbursed appropriately.

Tsai AG, Asch DA, Wadden TA. Insurance coverage for obesity treatment. *J Am Diet Assoc*. Oct 2006;106(10):1651-1655.

Foster GD, Wadden TA, Makris AP, et al. Primary care physicians' attitudes about obesity and its treatment. *Obesity Research*. Oct 2003;11(10):1168-1177.

- Approximately 50% of 2500 family physicians in two studies indicated a lack of knowledge in nutrition as a potential barrier when addressing obesity with their patients.

Kushner RF. Barriers to providing nutrition counseling by physicians: a survey of primary care practitioners. *Prev Med*. Nov 1995;24(6):546-552.

Foster GD, Wadden TA, Makris AP, et al. Primary care physicians' attitudes about obesity and its treatment. *Obesity Research*. Oct 2003;11(10):1168-1177.

- Obese patients frequently have multiple comorbid diseases and based on the USPTF recommendations, physicians lack the time to adequately address obesity with patients.

Kushner RF. Barriers to providing nutrition counseling by physicians: a survey of primary care practitioners. *Prev Med*. Nov 1995;24(6):546-552.

Rafferty M. Prevention services in primary care: taking time, setting priorities. *West J Med*. Nov 1998;169(5):269-275.

Yarnall KSH, Pollak KI, Ostbye T, Krause KM, Michener JL. Primary Care: Is There Enough Time for Prevention? *Am J Public Health*. April 1, 2003 2003;93(4):635-641.

MedGem[®] indirect calorimeter

- A diagnostic tool that will enable a clinician to provide accurate nutritional guidance in accord with recommended evidence-based guidelines for weight management

American Dietetic Association. Adult weight management evidence-based nutrition practice guideline. Accessed 12/08/2007 from <http://www.adaevidencelibrary.com/topic.cfm?cat=2798&library=EBGAmerican>.

- FDA cleared class II medical device that accurately determines and individual's daily metabolic needs.

McDoniel, S. A Systematic Review on the Accuracy and Reliability of a Hand-Held Indirect Calorimeter for Assessing Energy Needs in Adults & Children. *Int J Sport Nutr Exerc Metab.* 2007;17:491-500.

- Briefly addressing weight in an *individualized* manner with patients, emphasizing caloric restriction, regular physical activity, and goal setting may lead to eventual behavior change.

Beran MS, Fowles JB, Kind EA, Craft CE. State of the Art Reviews: Patient and Physician Communication About Weight Management: Can We Close the Gap? *Am J Life Med.* February 1, 2008 2008;2(1):75-83.

- The use of the MedGem in developing a personalized nutrition plan proved to be more effective in helping overweight adults reduce bodyweight. 75 percent of the intervention MedGem participants achieved a level of weight loss ($\geq 3\%$) that would generate health benefits compared to 36% of the usual care participants.

McDoniel SO, Nelson HA, & Thompson, CA. Employing RMR Technology in a 90-Day Weight Control Program. *Obesity Facts: The European Journal on Obesity.* 2008. In press.

- A study using the MedGem and Microlife's BalanceLog nutritional software program in a 6 month weight reduction indicates professionals can assist overweight patients with weight loss with minimal staff resources. Individuals who met with a health professional 9 times during the six month period lost 6.1 ± 4.5 kg versus individuals who met with a health professional 4 times lost 6.7 ± 5.0 kg.

Makris, Patel, Bailer, & Foster, G. D. (2006). Use of Self Monitoring and RMR technology in Behavioral Weight Management. *Obesity, 14*(Supplement), A248: 789.

- A recent study using the MedGem and BalanceLog in an email counseling program over a three month period indicates health professionals can assist overweight patients with one face-to-face session and email counseling. Average weight change over the three month intervention was approximately 3.5 kg.

Chambliss, H., Finley, C., Huber, R.C. Computerized self-monitoring and email feedback for weight loss using commercially available software. Paper presented at: *TDA- The Texas Dietetic Association Annual Meeting.* 2008. Dallas, TX.

Overweight & Obesity Treatment Guidelines

1. ADA. Adult weight management evidence-based nutrition practice guideline. Accessed 12/08/2007 from <http://www.adaevidencelibrary.com/topic.cfm?cat=2798&library=EBGAmerican>.
2. NIH. *Practical guide to the identification, evaluation, and treatment of overweight and obesity in adults.* Bethesda, MD: National Institutes of Health: National Heart, Lung, and Blood Institute. North American Association for the Study of Obesity; 2000.
3. Tsigos C, Hainer V, Basdevant A, et al. Management of obesity in adults: European clinical practice guidelines. *Obesity Facts: The European Journal of Obesity.* 2008;1(2):106–116.