

- ### Top Health Hazards Worldwide
- Underweight
 - Unsafe sex
 - High blood pressure
 - Tobacco
 - Alcohol
 - Contaminated water, sanitation and hygiene
 - Iron deficiency
 - Indoor pollution
 - High cholesterol
 - Obesity
- Lancet November 2002


- ### Top Health Hazards in "Rich Countries"
- ◆ Tobacco
 - ◆ High blood pressure
 - ◆ Alcohol
 - ◆ High Cholesterol
 - ◆ Overweight
 - ◆ Low fruit and vegetable intake
 - ◆ Inadequate exercise
- Lancet November 2002

◆ "Corpulency, when in an extraordinary degree, may be reckoned a disease, as it in some measure obstructs the free exercise of the animal functions; and hath a tendency to shorten life, by paving the way to dangerous distempers."

- Malcolm Flemyng (1760)

◆ "If morbid and severe obesity is as incurable as it seems to be based on the experience of the last 30 to 40 years, then prevention of weight gain and promotion of healthy weight should become priorities."

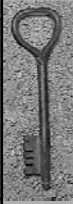
• S Rossner, 1994



◆ It will be “a daunting task to change the course of nations that have become quite comfortable with an effortless lifestyle in which individual consumption is almost unlimited.”

– C Bouchard (1996)

7



Tools to Reduce Unhealthy Trends in Weight

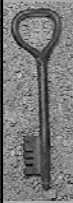
- ◆ Eat regular meals
- ◆ Avoid snacking
- ◆ Drink water, not caloric beverages
- ◆ Reduce dietary fat to 30% or less
- ◆ Reduce TV time
- ◆ Walk more
- ◆ Increase physical education classes
- ◆ Increase sports activities, energetic leisure activity

• C. Bouchard (1996)

8




9



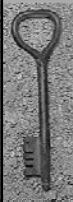
The Surgeon General's Call To Action To Prevent and Decrease Overweight and Obesity

10



- ◆ Communication
- ◆ Research and Evaluation
- ◆ Action


11



COMMUNICATION & EDUCATION

- ◆ Use an informed, sensitive approach to:
- ◆ Change weight-related concerns at all ages
- ◆ Educate expectant parents on benefits of breastfeeding
- ◆ Educate health care professionals on prevention and treatment of overweight and obesity across the lifespan
- ◆ Provide education in schools and communities about healthy eating habits and regular physical activity

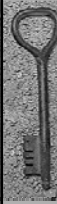
12



RESEARCH

- ◆ **Improve understanding of causes, prevention, and treatment of overweight and obesity**
Increase research on behavioral and environmental causes
- ◆ **Increase research and evaluation on prevention and treatment interventions**
- ◆ **Disseminate best practice guidelines**
- ◆ **Increase research on disparities in the prevalence among racial and ethnic, gender, socioeconomic, and age groups**
- ◆ **Identify effective and culturally appropriate interventions**


13



ACTION

- ◆ **Help people balance healthful eating habits and regular physical activity**
- ◆ **Ensure daily, quality physical education in all school grades**
- ◆ **Reduce time spent watching television and in other sedentary behaviors**
- ◆ **Build physical activity into regular routines and playtime for children and their families**
- ◆ **Create more opportunities for physical activity at worksites**
- ◆ **Make community facilities available and accessible for physical activity for all**

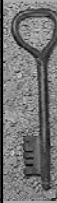
14



ACTION

- ◆ **Promote healthier food choices and reasonable portion sizes**
- ◆ **Ensure schools provide students healthful foods and beverages**
- ◆ **Prohibit serving foods of minimal nutritional value in schools**
- ◆ **Specify all foods and beverages available at school follow healthy eating patterns**
- ◆ **Provide access to more low fat, reduced calorie, and reduced sugar foods**
- ◆ **Reduce access to excessive portion sizes**
- ◆ **Create mechanisms for reimbursement for prevention and treatment of overweight and obesity**


15



References for Obesity

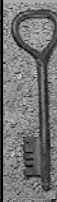
- ◆ Weintraub M. Long-term weight control: the National Heart, Lung, and Blood Institute funded multimodal intervention study. *Clin Pharm Ther.* 1992; 51(Suppl): 581-646.
- ◆ National Task Force on the Prevention and Treatment of Obesity. Long-term pharmacotherapy in the management of obesity. *JAMA.* 1996; 276(23): 1907-1915.
Shape Up America and American Obesity Association. *Guidance for Treatment of Adult Obesity.* Bethesda, MD; 1996.
- ◆ World Health Organization: *Obesity: Preventing and Managing the Global Epidemic.* Report of a WHO Consultation on Obesity, Geneva, June 1997.
- ◆ AACE/ACE Obesity Task Force. AACE/ACE Position Statement on the Prevention, Diagnosis, and Treatment of Obesity. *Endocr Prac.* 1998; 4:297-350.

16




- ◆ National Institutes of Health, National Heart, Lung, and Blood Institute (NHLBI) and North American Association for the Study of Obesity. *Clinical Guidelines on the Identification, Evaluation, and Treatment of Overweight and Obesity in Adults. The Evidence Report.* U.S. Department of Health and Human Services; June 1998.
- ◆ Bray GA. *Contemporary Diagnosis and Management of Obesity.* Handbooks in Health Care, Co., Newtown, PA, USA, 1998.
- ◆ Pi-Sunyer F, Laferrere B, Aronne LJ, Bray GA. Obesity—A Modern-Day Epidemic. *J Clin Endocr Metab.* 1999; 84:3-12.
- ◆ US Department of Health and Human Services. *The Surgeon General's call to action to prevent and decrease overweight and obesity.* Rockville, MD. US Dept of HHS, Public Health Service, Office of the Surgeon General; 2001.
- ◆ Waine C. *Obesity and Weight Management in Primary Care.* Blackwell Science Ltd., Oxford, 2002.
- ◆ Yanovski SZ, Yanovski JA. Obesity. *N Engl J Med* 2002;346:591-602.
- ◆ Dickey RA, Bray GA. Obesity. *The Manual of Endocrinology and Metabolism, 3rd Edition,* ed N Lavin. Lippincott Williams and Wilkins, New York, 2002.

17



Thank you

18




Clinical Symposium Therapeutic Options in Obesity

Richard A Dickey, MD, FACP, FACE
2nd AME Italian Meeting
 Associazione Medici Endocrinologi
Joint Meeting with
 American Association of Clinical Endocrinologists
 Reggio Emilia, Italy - November 8-10, 2002

19




20



Options for Weight Excess, Overweight or Obesity

- ◆ Prevention
- ◆ When this has failed, use a structured system with a team approach:
 - Patient focused
 - Respectful of patient
 - Compassionate approach
 - Strong patient commitment
 - Long-term support


21



Options

- ◆ Physical and psychological evaluation
- ◆ Education of patient
- ◆ Initiate changes toward healthy lifestyle and behavior practices
- ◆ Motivation and support by:
 - MD
 - Support groups
 - Family and friends


22



Options

- ◆ Reinforcement
- ◆ Dietary/nutritional measures
 - Realistic
 - Collaborative with patient
 - Individualized
- ◆ Physical activity enhancement/exercise

23




Options

- ◆ When or if these measures fail or are inadequate to satisfactorily reduce risks of and/or ameliorate co-morbid conditions, use:
- ◆ Pharmacotherapy in selected patients:
 - As used for hypertension or diabetes, where no ideal therapy is yet at hand either but we still treat
- ◆ and/or Surgery in selected patients: e.g. BMI >40
- ◆ Long-term follow-up

24




25



Pharmacotherapeutic agents

- ◆ Should produce:
 - Long-term weight reduction
 - Reduced weight regain
 - Reduced co-morbid conditions
- ◆ Should be:
 - Effective
 - Not underutilized
 - Much safer than in the past

26




Pharmacotherapeutic agents

- ◆ Diethylpropion
- ◆ Mazindol
- ◆ Ephedrine+caffeine
- ◆ Phentermine
- ◆ Sibutramine
- ◆ Orlistat

27



28



Causes of Obesity*

- ◆ Hereditability (but gene pool fairly constant)
- ◆ Cultural practices (explain epidemic)
 - Reduced physical activity
 - Increased snacking
 - Increased fat content of food

* C Waine *Obesity and Weight Management in Primary Care*, 2002

29



30

Obesity Associated Increased Risks

Adapted from www.nih.gov/health/nutrit/pubs/statobes.htm

- ◆ Premature death
- ◆ Type 2 diabetes
- ◆ Heart disease
- ◆ Stroke
- ◆ Hypertension
- ◆ Gall bladder disease
- ◆ Osteoarthritis
- ◆ Asthma
- ◆ Breathing problems
- ◆ Cancer of:
 - Endometrium
 - Colon
 - Kidney
 - Gall bladder
 - Breast (postmenopausal)

31

Obesity Associated Increased Risks

Adapted from www.nih.gov/health/nutrit/pubs/statobes.htm

- ◆ High blood cholesterol
- ◆ Complications of pregnancy
- ◆ Menstrual irregularities
- ◆ Hirsutism
- ◆ Sleep apnea
- ◆ Stress incontinence
- ◆ Increased surgical risk
- ◆ Psychological disorders
- ◆ Psychological difficulties due to social stigmatization

32

Health Problems Associated with Obesity in Developed Countries Relative risk = 1 to 2

- ◆ Cancer
 - Endometrium
 - Colon
 - Breast (postmenopausal)
- ◆ Reproductive hormone abnormalities
- ◆ Polycystic ovarian syndrome
- ◆ Impaired fertility
- ◆ Low back pain from obesity
- ◆ Increased anesthetic risk
- ◆ Fetal defects from maternal obesity

• WHO 1997

33

Health Problems Associated with Obesity in Developed Countries Relative risk = 2 to 3

- ◆ Coronary heart disease
- ◆ Osteoarthritis of knees
- ◆ Hyperuricemia and gout
- ◆ Congestive heart failure

• WHO 1997

34

Health Problems Associated with Obesity in Developed Countries Relative risk = >3

- ◆ Diabetes type 2
- ◆ Gall bladder disease
- ◆ Hypertension
- ◆ Dyslipidemia
- ◆ Insulin resistance
- ◆ Breathlessness
- ◆ Sleep apnea

• WHO 1997

35

36

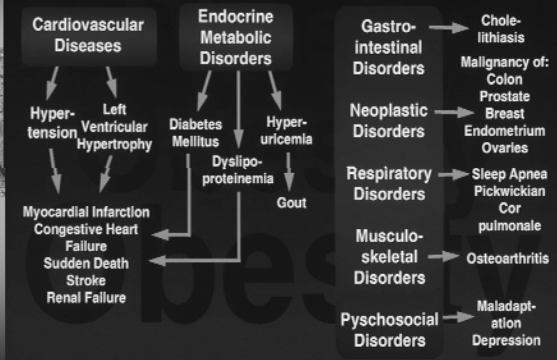
Reaven Syndrome Metabolic Syndrome Dysmetabolic Syndrome

ATP III: The Metabolic Syndrome*

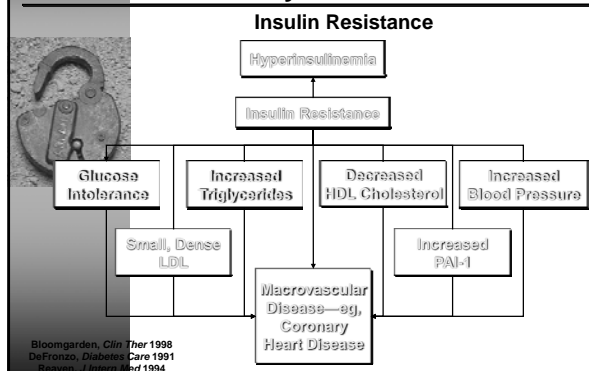
Risk Factor	Defining Level
Abdominal obesity (Waist circumference)	
Men	>102 cm (>40 in)
Women	>88 cm (>35 in)
TG	≥150 mg/dL
HDL-C	
Men	<40 mg/dL
Women	<50 mg/dL
Blood pressure	≥130/≥85 mm Hg
Fasting glucose	≥110 mg/dL

*Diagnosis is established when ≥3 of these risk factors are present.
Expert Panel on Detection, Evaluation, and Treatment of High Blood Cholesterol in Adults.
JAMA. 2001;285:2486-2497.

THE RISKS OF OBESITY



Consequences of the Metabolic Syndrome



Bloomgarden, *Clin Ther* 1998
DeFronzo, *Diabetes Care* 1991
Reaven, *J Intern Med* 1994

Case Presentation

Case Presentation

When patient first seen in 1992

- 58 y/o Caucasian female RN administrator
- History of repetitive miscarriages from age 20 to 25
- Hypothyroidism diagnosed and treated
- Four full-term pregnancies thereafter
- TAH and BSO at age 40

43

- Cholecystectomy at age 48
- Progressive weight gain from age 30 to 58
- BMI 37 (Ht 63.5"; Wt 212 lb)
- BP 120-150/80-90 mm Hg

44

- Family history:
 - Father died at age 48; Hx of hypertension
 - Mother died at age 72; Hx of hypertension, MI
 - MGF, Hx type 2 DM
 - MGM, hypertension and MI
 - PGF died of MI

45

- Cholesterol 230 mg/dL; HDL 52 mg/dL; TG 141 mg/dL; calc LDL 150 mg/dL
- Levothyroxine 0.1 mg beginning at age 25 to present
- TSH now 0.8 μ IU/mL; TT4 10.7 μ g/dL; T3U 1.01%; T3 125 ng/dL
- Antithyroid Abs negative

46


- Levothyroxine discontinued
- TSH rose to 6.0 μ IU/mL in 2-3 wk; 2 months later, TSH and TT4 normal

47

When seen in 1996


- Patient now 62 y/o; RN administrator
- History: persistent obesity
- BMI 41 (Ht 63"; Wt 230 lb; waist circumference 42.5")
- BP 160/106 mm Hg

48




- 1000 calorie diet
- Support group
- Regular aerobic physical activity
- Rx phentermine-fenfluramine; April 1996 to July 1997
- Weight fell from 230 to 145 lb
- BMI fell from 41 to BMI 26

49



- Aug 1997: Wt 145 lb; Rx dexfenfluramine
- Sept 1997: Wt 156 lb; Rx phentermine
- Sept 1998: Wt 182 lb; ramipril to control BP; then Rx sibutramine
- July 1999: Wt 186 lb; Rx orlistat
- March 2000: Wt 181 lb; Rx phentermine for 3 months on, 3 months off
- June 2001: Wt 174 lb

50



Thank you

51