Separating Fat from Fiction: Exploring Myths, Realities, and Assumptions

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Sobering Statistics

- 116 million adults dieting
- 80% US teenage girls have dieted
- Age 13, 1/2 girls unhappy with bodies
‘Unreal’istic Images

- Average model, dancer, or actress is thinner than 95% of population

- A generation ago models weighed 8% less than avg. woman; today, 23% less
  [http://www.dove.us/#/features/videos/default.aspx[cp-documentid=7049579]/]

- Women, weight, and feminism
Is Obesity a disease? Is body fat pathological?

Who benefits from obesity being considered a disease?
- Scientists and academics researching obesity
- Pharmaceutical companies
- Bariatric surgeons
- Public health establishment
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- $50 Billion Diet Industry
Fat Phobic Society

- **Diet Drugs**
  - Usage among female adolescents
    (Journal of Preventive Medicine Feb. 2007)
  - **Fen-Phen Fiasco**
Fat Phobic Society

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- **Bariatric Surgery: Liposuction**
  - Elective surgery, high mortality rate.
  - Hospitalization rate doubled in the year post-surgery compared to year prior to surgery. At least 20% will need more surgery.
  - Health benefits? (Klein, Samuel, M.D., 2004)
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- **Bariatric Surgery: Gastric Bypass**
  - AHRQ (within 6 months); 4 in 10
  - 13-15 years out
  - Post surgery-3 ounces fills stomach → 800-1200 cal/day.
MYTH #1: Eat Too Much; Exercise Too little?

- **Food environment**
  - Increased portion size, Snack-foods heavy on refined sugars and saturated fats.
  - **Most studies: overweight people eat fewer calories than those of normal weight.** (Nat’l Academy of Sciences, Diet and Health, 1989)
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- **Physical environment**
  - Technology has stripped our lives of natural exercise.
  - Screen time=video games, computers, TV
  - 1970’s Fitness Revolution
  - SES, income, and education are inversely related to obesity.
  - Poor people more likely to work in physically demanding jobs, yet have much higher obesity rates.
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- **The relationship between exercise and food and obesity is not clear.**
Intervention school studies

- 5,106 3rd graders from 96 schools
- 56 schools-2 year Intervention: healthy foods, nutrition instruction, extra physical activity.
- Students decreased fat in diet, exercised more, ...
- No difference in weights from 40 control schools
  - Nader, PR., Stone, EJ, Lytle, LA et al.
What is the cause of obesity?

- Intrinsc metabolic, enzymatic, or hormonal abnormality induces + caloric balance.....fat accumulation.

- *Defect of fat metabolism*; hormonal and metabolic, release of fat is impeded, or the deposition/synthesis of fat is promoted.

- Appetite and weight regulation have strong biological underpinnings.
Myths and Misconceptions

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- You will lose weight when you exercise
  - Heritage Family Study (Wilmore, Jack H., et al)
  - 500 men and women; 20 weeks, stationary bicycle 3x/week
  - 55%-75% of VO2 Max; 30-50 min.
  - Lost < 1 lb.; % body fat ↓ < 1%
More Myths

- People are thin or fat based on a simple relationship between ‘calories in and calories out’
  - “no basis in medical science”
  - Overfed 12 sets of identical twins 1,000 cal./day, 6 days/week, 12 weeks
  - identical levels of physical activity
  - 7 weeks later; weight gain among 24 men varied 300%, from 9-30 lbs.

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- **Obesity causes poor health and increased mortality**
Obesity is a poor predictor of:

- **Hypertension.**
  - No history of dieting; \(125/79\)
  - History of yo-yo dieting (5 + weight losses of 10 + pounds last 5 years); \(147/90\)
  - BP positively correlated with total lbs. yo-yo-ers had regained.

(Guagnano, MT, E. Ballone, V. Pace-Pallitti, et al. 2000)
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- **High Cholesterol**
  - 31 obese women put on 6 month aerobic program. most lost avg. 6 lbs.; 11 gained 6 lbs
  - **Both gainers and losers improved cv fitness the same amount**
  - **Also improved cholesterol levels and insulin sensitivity** (Lamarche, B, J-P Despres, M-C Pouliot, et al. 1992)
Obesity is a poor predictor of:
(continued)

- Atherosclerosis ("clogged arteries")
  - 1960 (Int’l Atherosclerosis Project). 23,000 autopsies; concluded “no association”.
  - 1991. Dr. Applegate (U. of Tenn.) 4,500 angiograms of middle aged and elderly. Fattest people had cleanest arteries.

- NOTE: individuals that are overweight/obese and have atherosclerosis have lower risk of heart attack, stroke or early death.
Obesity is a poor predictor of:
(continued)

- **Type II diabetes:** condition improves with changes in diet and exercise, independent of weight changes
  - Insulin resistance (IR) is the most important metabolic factor relating to weight, diet, and health.
  - Obesity and diabetes: consequences of the same underlying defects; hyperinsulinemia and IR
Weight and Cardiometabolic Abnormalities

- **5440 subjects; 1999-2004**
  - Wildman, R.P. et. al. 2008

- “A considerable proportion of overweight and obese US adults are metabolically healthy, whereas a considerable proportion of normal weight adults express a clustering of cardiometabolic abnormalities.”
Correlation is not Causality

- “The mere presence of 2 or more variables in the same individual does not infer an inherent causal relationship.”

- Dr. Glenn Gaesser “…it is absolutely unjustifiable to equate behavioral patterns (poor diet and physical inactivity) with a physical characteristic (obesity).”
Myth: Obesity Kills

- Cooper Institute for Aerobics Research
  - 1970. 26,000 men; 8,000 women (ages 20-90)
  - Being heavy did not increase the risk of premature death
  - = fitness levels → being overweight better than being underweight
  - Obese fit men and lean-fit men: similar low death rates -1/2 that of lean-unfit men-
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- Harvard Alumni Study
  - 17,000 men who attended Harvard between 1916-1950
  - Who has the best chance of living a long life?
BMI vs. Relative Risk of Death

Flegal, Katherine, Graubard, Barry, Willamson, David, et al. 2005

B All Women According to Age (N=214,218; 19,144 deaths)

B Men According to Age (N=313,047; 42,173 deaths)
Diets: Atkins to Zone

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- Needs deprivation leads to overcompensation
  - Dieting begets bingeing.
  - Dieting intensifies preferences for high-fat and sugar-loaded foods.
  - Starving......... Stuffed.
Landmark diet study

- **Keys Study (1944)**
  - 32 conscientious objectors
  - 24 weeks caloric restriction/one-half of what they were used to eating
  - All lost weight, all gained it back plus some (avg. 10 lbs.)
  - Men were irritable, depressed, apathetic, preoccupied with food
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- **What do Treblinka and Jenny Craig have in common?**
Diet is a four letter word

- Emotional toll: disheartened, disillusioned, and depressed
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- Emotional toll: disheartened, disillusioned, and depressed

- Body conserves energy/survival mechanism
  - BMR (basal metabolic rate) accounts for 60-70% of total energy used by body
  - BMR drops within 24 hrs. of food deprivation, may reduce 20% in 2 weeks
Diets

- **Improves body’s ability to store fat and limits ability to burn it**
  - Increases lipogenic (fat-storage) enzymes
  - Decreases lipolytic (fat-releasing) enzymes
  - Decreased muscle used for energy and reduced to lower metabolism

How to weigh yourself and get the most accurate result. I can't believe I have been doing it wrong all these years!

We must get the word out!
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- **Ideology reinforces split between dieter’s mind and body.**
Yo-Yo, Uh Oh

- Weight loss begets weight gain - serious health consequences
- Framingham Heart Study
Yo-Yo, Uh Oh

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- Framingham Heart Study
- Harvard Alumni Study (follow-up 1998)
  - Men with stable weights vs. those who had lost and gained the most pounds:
    - 80% higher risk of heart disease
    - 123% higher rate of type II diabetes
  - Alumni who dieted frequently (compared to non-dieters):
    - 2x risk of diabetes, hypertension, and coronary heart disease
Consequences of weight loss/gain cycling

- The observations confirm...a basic relationship between starvation, re-feeding diet, and cv disease.
  (Univ. of Illinois, 1964)

- “Weight cycling is associated with lower HDL cholesterol in women of a magnitude ... associated with an increased risk of cardiac event”.
  (Marian B. Olson, MS 2000)
Athletics

- Scales are scarce
- Educate the coaches/staff
- Mandatory Programming for athletes
- No weigh-ins or % body fats
Scales are for FISH, not WOMEN!

Don't weigh your self-esteem.

Change the rules... NOT your body!

- Break the barriers.
- Voice your opinion.
- Make room for every body.
- Get physical for fun.
- Be a role model.

Don't weigh your self-esteem.
Athletic Traits vs. ED Symptoms

- Mental toughness
- Commitment to training
- Pursuit of excellence
- Coachability
- Unselfishness
- Performance despite pain
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- Performance despite pain

- Asceticism
- Excessive exercise
- Perfectionism
- Over compliance
- Selflessness
- Denial of discomfort

(Thompson and Sherman 1999)
Ready, Set Point, Go

- "Home" weight; where your body feels at home (homeostasis)
- Natural weight
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- Vermont State Prison. Set out to make thin men fat. Concluded “marked difference in their ability to gain weight”.
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- “Home” weight; where your body feels at home (homeostasis)

- Natural weight

- Vermont State Prison. Set out to make thin men fat. Concluded “marked difference in their ability to gain weight”

- 70% of our weight is genetically determined
Location, location, location

- Upper-body fat (abdomen)
- More prevalent in males
- Visceral (or deep) body fat—metabolically hyperactive, high levels of FFA (free fatty acids) released in the bloodstream, etc.
- Increased risk for atherosclerosis and diabetes.
Location, location, location

- Lower body fat (hips and thighs)
- More prevalent in females
- Subcutaneous fat
- Associated with a lower risk of heart disease and diabetes
  - Stanford University, 1991. 133 men and 130 women, ages 25-49. Fatter thighs = lower heart disease risks (low LDL, high levels HDL, i.e. blood fat profiles).
Popular Torture Devices

What EXERCISE EQUIPMENT should really be called:

- DREADMILL
- SWEARMASTER
- NordicTRICK
- Personal DRAINING
Discrimination......Humiliation

- Acknowledge the anxiety, pain, and grief this issue elicits for so many.

- 150 Science Studies: noted stigmatization of obese adults by employers, educators, health care providers, the media, etc.
  (Rudd Center for Food Policy and Obesity/Yale)

- Weight bias is a social injustice as well as a public health issue.

- See Cynthia’s words (handout)
HAES (Health At Every Size)

- Accept and respect the diversity of body shapes and sizes.

- Health and well-being are multi-dimensional including physical, social, spiritual, occupational, emotional, and intellectual aspects.

- Promoting all aspects of health and well-being for people of all sizes.

- Promoting eating in a manner which balances individual nutritional needs, hunger, satiety, appetite, and pleasure.

- Promoting individually appropriate, enjoyable, life-enhancing physical activity, rather than exercise focused on weight loss.
New Year’s Resolutions

- #1 wish every year-to lose weight
New Year’s Resolutions

Climb a mountain.

Drink more champagne.

Watch more sunsets.

Listen to more music.
Marcia Germaine Hutchinson, “Feminist Perspectives on Eating Disorders”, “So what does it mean to have a healthy body image?....”
Suggestions, Solutions, Solace

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What if??? What if everyone collectively woke up tomorrow morning and was happy and content with their bodies?
More Suggestions, Solutions, Solace

- Substance over image.
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- Redefine beauty. Accept your size.
- Challenge the images/media.
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  - Influence of the weight loss industry
  - Food industry and nonprofit health organizations
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- Be critical consumers of information.
  - Influence of the weight loss industry
  - Food industry and nonprofit health organizations
- Avoid mentioning weight.
Peace with food

- Shift focus: weight & dieting $\rightarrow$ enhanced quality of life & health.
  - Reject diet mentality

- Unconditional permission to eat

- “Enjoy a variety of real food, primarily plants” Linda Bacon
  - “Gentle Nutrition”
Intuitive Eating

- Honor your hunger
Intuitive Eating

- Honor your hunger
- Feel your Fullness
Intuitive Eating

- Honor your hunger
- Feel your Fullness
- Eating with Pleasure
Intuitive Eating

- Honor your hunger
- Feel your Fullness
- Eating with Pleasure
- Respect your Body
  - Accept your genetic blueprint
Wonderful Websites

- www.bodypositive.com
- www.naafa.org (National Association to Advance Fat Acceptance)
- http://www.sizediversityandhealth.org (Association for Size Diversity and Health)
- www.bbwmagazine.com
- www.melpomene.org
- http://www.haescommunity.org
- www.healthyweight.net
- http://loveyourbody.nowfoundation.org/
Resources


Resources (Continued…)


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