

The Middle-Aged Bulge

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Paleolithic Humans

- As tall as members of affluent societies
- Much physical activity
- Lean bodies
- Higher caloric intake than today's humans
- Very long time with above diet; our biology reflects it and primate relatives are vegetarians for most part
- S Boyd Eaton and colleagues work; dietary diversity actually in h/g

Average Diet of Foragers

- Fruits, roots, legumes, nuts and other noncereals provided 65-70% of average forager subsistence base
- Minimal or no processing (uncooked too)
- Likely gave our ancestors levels of vitamins and minerals in excess of today's standards
- Cancer prevention not evident with processed cereals

Electrolytes

- Today we consume 4000 mg of sodium each day (75% added in processing)
- Potassium intake only 2500-3400 mg
- We are the only nonmarine mammals to eat more sodium than potassium
- Preagricultural humans: 768 mg of sodium and 10,500 mg of potassium
- Median blood pressure does not rise with age in populations that eat more potassium and a lot less sodium

Carbohydrates & Fats

- Paleolithic humans received carbohydrates from vegetables and fruit (23% today)
- Much of our intake in form of sugars and sweeteners (120 lbs annually in 1980s); mostly through refined grain flours, low in bulk
- Fat should be less than 10%; saturated fats only 6%, no trans fatty acids in forager diet; wild game
- High carbohydrate diet in today's hunter/gatherers but low serum cholesterol so ratio of poly-unsaturated (? -3 better than ? -6; 1:1 or lower in forager diets) and saturated fat relevant (P:S ratio, .4 today and 1.4 in past)

Protein

- 30% of daily energy for Paleolithic humans; other primates similar
- 12% recommended lately because of link between protein and cancer (breast and colon; atherosclerotic disease too)
- Protein intake per se not necessarily bad
- High intake of purified, isolated protein also increases urinary excretion of calcium (problematic if kidney disease which goes with diabetes and hypertension); soda exacerbates
- Our ancestors ate protein with lots of fruits and vegetables & ratio of protein to carbohydrate affects relative amount of insulin secreted after meal

Aging and the Bulge

- Mortality starts to increase with BMI's more than 27-28 but women much less vulnerable to negative effects of being overweight
- Fat distribution as important as BMI; upper body fat (abdominal and visceral) is 20% of fat in normal weight men and 6% in women who are more likely to develop pear shape
- Lower body fat is less available for immediate needs
- Upper body fat more related to human pathology and environmental factors play major role; reduced activity big problem as we age

Consequences of Not Eating Right

- Senile Dementia: more fruits and vegetables slowed aging declines in cognitive functions (blueberries, strawberries & spinach, vitamin E help)
- Colon Cancer: less fiber increases the risk of colon cancer; human gut holds little and transit time is protracted (62 h vs. 40 h with hi vs. lo fiber)
- Prostate and Breast Cancer: types of fats eaten can alter hormonal status
- Diabetes: contemporary diet increases risk for NIDDM; we store fat readily (thrifty genotype)
- Heart Disease & Hypertension: stress and contemporary diet increases risk; salt intake

Corn and Waistlines

(Greg Critser/Michael Pollan)

- Used to prevent farmers from over-production but paid to overproduce in the 1970's; lots of cheap corn
- Converted to cheap high-fructose corn syrup so 8 oz soda to 20 oz
- Cheap corn-fed beef & chicken so “supersized” burgers and chicken nuggets
- Prices did not rise but portion sizes increased

Eating Out or Quickly

- 1960s fries were 320 calories and now 610
- Customers want bigger chairs at Olive Garden
- Unnatural to eat 3 times per day
- Baggy clothes in vogue
- Quick foods with added salt and sugar

Big Food

- Kraft claims to be making smaller food portions, end marketing in schools, reformulating artery cloggers; we'll see
- Big problem in grocery stores: slotting fees (essentially buying floor space) or provide marketing advice for same
- Drive for dietary novelty
- 15,000 food makers but 20 account for 54% of checkout sales
- Fatty, sugary snacks dominate the shelves; since late 1970's new products labeled as condiments, candy, snacks and bakery foods has risen 6 fold or from 400/year to 2400/year

Two questions

- What do we eat to live well and age well?
- Given all that we know about nutrition, why do we (often) not do what we know?

Why do we (often) not do what we know?

- “Big Food” marketing—food has replaced toys as the number one marketing emphasis on TV aimed at children
- Information explosion
 - Internet
 - Popularity of diet books
 - Popularity of cookbooks and cooking shows
 - Local grocery stores offering classes on “nutrition”

Why do we (often) not do what we know?

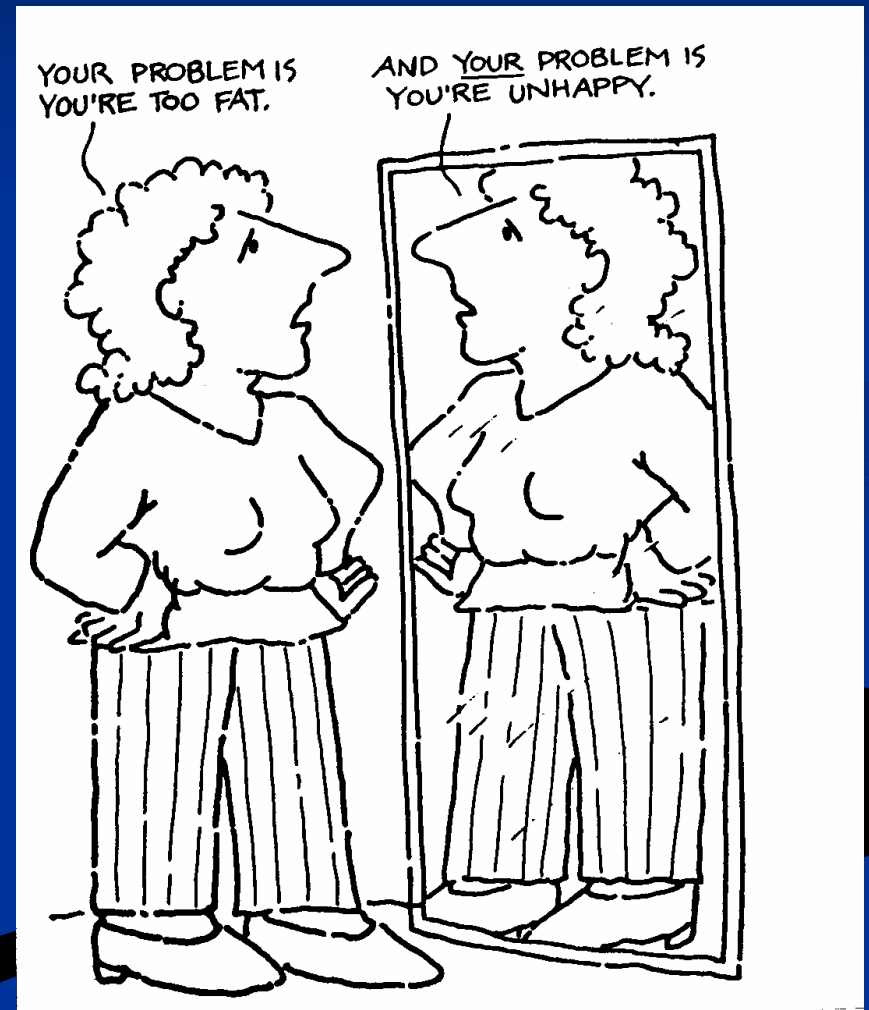
- “Science” of nutrition full of contradiction and disagreement
- Lack of nutrition education among health care professionals
- Time pressured Americans—it takes time to shop, prepare, cook and eat food
- Processed food—fast food is all wrong nutritionally but is fast, relatively cheap, and tastes good



"No, Thursday's out. How about never—is never good for you?"

Why do we (often) not do what we know?

- Human decision making is often more than information-based, more than rational.
- We may know what we should eat, but not do it anyway.



How should we eat to live well and age well?

- Eating well is a “practice” and more than a “practice”
- It is also a “perspective”
- a philosophy if you will

Food Philosophy

- Nourishment not deprivation
- Eat what you need; not less in the absolute
- Distinguish hunger for food from other hungers
- ◆ No forbidden foods
- ◆ Whole natural food
- ◆ Less dead food
- ◆ Control weight control--not just weight
- ◆ Move, move, move



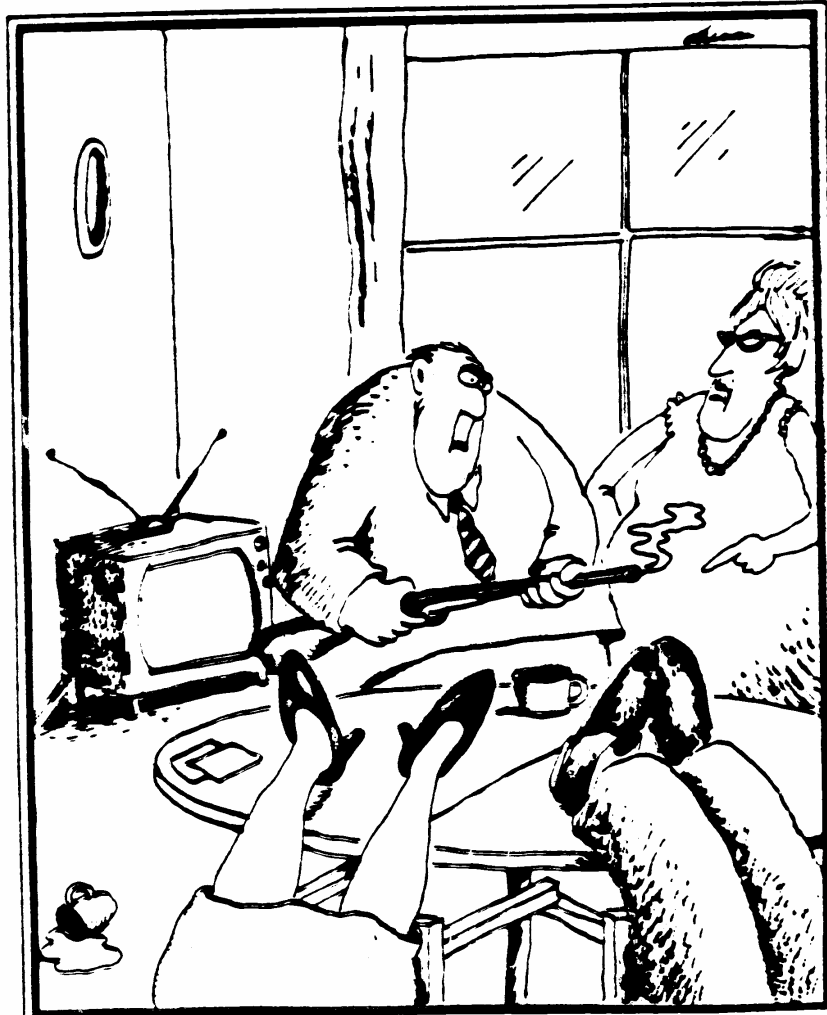
Quick course on nutrition

MORE

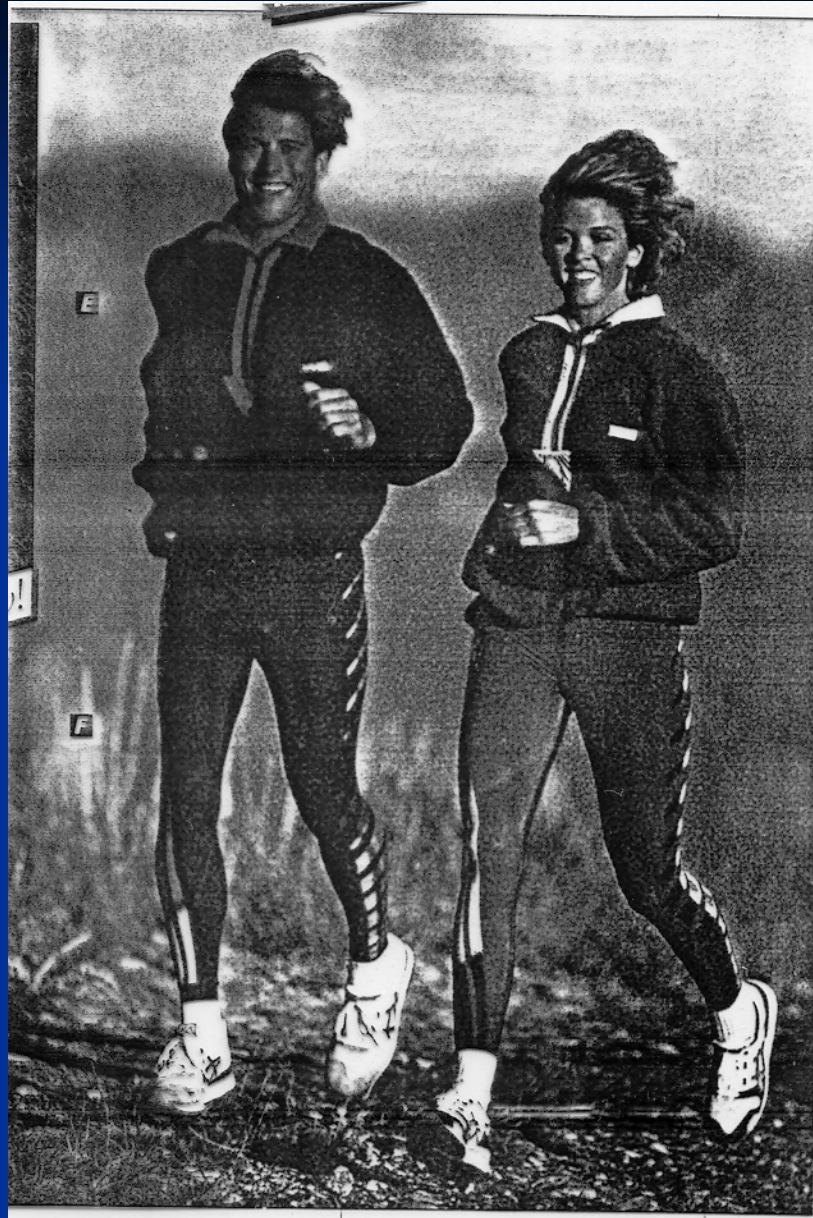
- **vegetables**
- **fruit**
- **whole grains**
- **low-fat dairy**
- **fish-poultry**
- **live food**
- **water**

LESS

- **saturated fat**
- **refined sugars**
- **salt**
- **red meat**
- **dead food**
- **alcohol**
- **caffeine**



"That settles it, Carl! . . . From now on, you're getting only decaffeinated coffee!"



PLAY EVEN IF YOUR ARM HURTS,
YOUR STOMACH HURTS AND YOUR
BACK HURTS--DON'T LET YOUR
BODY PUSH YOU AROUND!



SCHWZ

Exercise

- *Build strength and endurance*
- *Have fun: Leave “no pain, no gain” in competitive locker room.*
- *Do it your way; experts might not be right for you.*
- *Appreciate movement as process, not goal.*
- *Use the earth as well as high-tech.*
- *Do your personal best and affirm yourself.*

Food for thought. . .

- Do we want the same health issues as our parents?
- How do we stop aging from being a downhill slide?
- How do we translate “knowing more than ever about what works” into what works for us.
- Limiting food intake is correlated with longer life span, but who would want to do that?
- How do we eat well, exercise well, age well, live well until we die?