A Primer on Personal Prevention

Boyd Lyles, Jr. MD
The HeartHealth and Wellness Center
Dallas, TX
Chief Medical Officer
US Preventive Medicine

November 3, 2007

"I am dying from the treatment of too many physicians."

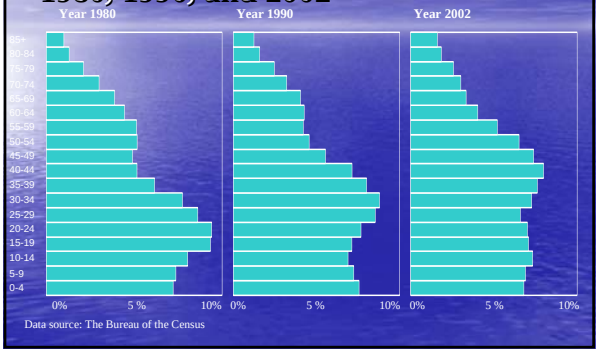
Alexander the Great
356 – 323 BC
Cause of death was malaria, West Nile Virus, typhoid, or alcohol (acute pancreatitis)

Life Expectancy vs. Life Span

- Life expectancy in the USA now is approx. 80+ years for females and approaching 80 for males
- Life span (the age of the oldest living) has not changed in recorded history (about 110 – 120 years)

We all age.

Age distribution of U.S population, 1980, 1990, and 2002



Data source: The Bureau of the Census

Causes of Death in 1900

- Pneumonia and flu
- Tuberculosis
- Infectious diarrhea and enteritis
- Heart disease (#1)

In the 20th century, only one year (1918) had a cause of death that exceeded heart disease deaths.

Slide 5

s1 Axes.
src8, 8/9/2005

Causes of Death in 2002 (USA)

• Heart diseases	28.5 %
• Cancers	22.8
• Stroke	6.7
• Chronic lung disease	5.1
• Accidents	4.4
• Diabetes	3.0
• Flu and pneumonia	2.7
• Alzheimer's	2.4

National Vital Statistics Report (October 2004)

Life Expectancy in the USA

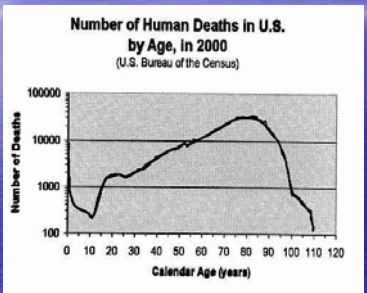
- In 1900, only 39% of males and 43% of females lived to age 65
- In 1997, 77% of males and 86% of females lived to age 65 (twice as likely as 1900)
- Over 75% of deaths occur past age 65
- Men who live to age 65 can expect to live to age 81
- Women who live to age 65 can expect to live to age 84

New Final Data for 2004 (8/07)

- Rates of death for heart disease, cancer, and stroke continue their long-term declines (relative to 2003)
- Rates of death from accidents, hypertension, and Alzheimer's increased from 2003 to 2004
- Life expectancy for whites exceeds blacks by 5 years, although gap is narrowing
- In 2004, female life expectancy was 80.4 (up from 80.0 in 2003) and for males was 75.2 (up from 74.7 in 2003)

CDC Report on Death Statistics

Americans Living to 100



Why we shouldn't fear aging...

Conditions for Well-being

- Absence of limiting chronic diseases
- Freedom from worry
- Appropriate diet for nutritional needs and to maintain a good weight
- Regular cardiovascular and muscle-strengthening exercise
- Adequate sleep to avoid sleep-deprivation

Conditions for Well-being (cont)

- Fulfilling job or educational activities
- Active social life with satisfying interpersonal relationships
- Spiritual “connectedness”
- Sense of safety and security at home

Negative Health Habits

- Smoking
- Excessive alcohol
- Recreational drug use
- Inactivity
- Over eating or eating disorders
- Lack of sleep
- Inadequate check-ups or immunizations
- Lack of socialization

This is what we need to protect...

To have more good years...

Food and Americans...Face it...We like to eat

Weight Control is on Everyone's Mind

Weight Control is 70% Diet and 30% Exercise

How to Calculate Your Caloric Needs

- Assuming a fairly active lifestyle with moderate exercise (walking daily)
- You can assume about 12 cal/lb of ideal weight

Desired Wt	Calories/Day Needed
120 lbs	1,400
180 lbs	2,100
200 lbs	2,400

Reading a food label


Nutrition Facts

Serving Size ½ cup (114g)
Servings Per Container 4

Amount Per Serving
Calories 90 Calories from Fat 30

	% Daily Value*
Total Fat 3g	5%
Saturated Fat 0g	0%
Cholesterol 0mg	0%
Sodium 300mg	13%
Total Carbohydrate 13g	4%
Dietary Fiber 3g	12%
Sugars 3g	
Protein 3g	

Vitamin A 60% • Vitamin C 60%
Calcium 4% • Iron 4%

* Percent Daily Values are based on a 2,000 calorie diet. Your daily values may be higher or lower depending on your calorie needs:

	Calories:	2,000	2,500
Total Fat	Less than	65g	80g
Sat Fat	Less than	20g	25g
Cholesterol	Less than	300mg	300mg
Sodium	Less than	2,400mg	2,400mg
Total Carbohydrate		300g	375g
Dietary Fiber		25g	30g

Calories per gram:
Fat 9 • Carbohydrate 4 • Protein 4

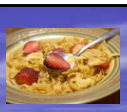
- Serving size (oz) !
- Servings per package !
- Calories per serving
- Calories from fat (<30%)
- Saturated and trans fats (bad !)
- Sodium (salt) <2000 mg per day
- Fiber (good !)
- Sugars (bad !)

Restaurants – "The Challenge"

- 41% of US food dollars are spent in restaurants (compared to 19% in 1955)
- Restaurant spending in the US is $222 billion annually plus schools, stadiums, etc.
- There are 800,000 food outlets in the US
- 34% of calories are consumed out of the home (compared to 18% in 1977 – 78)
- Restaurant eating is "casual and capricious"
- Portions tend to be large and saturated with salt and fat
- Restaurant plates have gone from 10 – 11" to 12"

David Kessler MD, Dean, Yale University School of Medicine, former Commissioner of US FDA
Preface to **Restaurant Confidential**, Jacobson, MF and Hurley, JG, Workman Pub., 2002
Sources: USDA and National Restaurant Association

Diet



- Must plan ahead…otherwise will rely on last-minute fast and restaurant food
- The Mediterranean Diet continues to earn the highest praise and benefits
- Calories and fat DO count
- Carbs are not inherently evil…only sugar
- Limit animal and dairy fat (saturated fat)
- Alcohol contains only nutritionally empty calories

Why the “typical” American diet does not work:

- Too many calories from large portions and calorie “dense” foods
- Too much sugar
- Too many saturated fats (mostly from animal and dairy sources)
- Food is plentiful and relatively cheap
- We eat too fast and rushed

The Mediterranean

The Diet and Heart Disease Studies

- The Rockefeller Foundation Study (Crete 1948)
- The Seven Countries Study (including Greece, Italy, Croatia, Serbia 1958-1963)
- Lyon Diet Heart Study (early compassionate conclusion)

Key Ingredients of the Mediterranean Diet...

- Whole grains
- Animal protein from fish, some chicken
- Lots of fresh fruits, vegetables
- Very little sugar
- Olive oil almost exclusive source of fat
- Lots of variety
- Small portions of each

Living Mediterranean if you don't have a villa in Portofino

- Breakfast – Whole grain bread or cereal with fruit and coffee
- Lunch – Sandwich made of whole grain bread, tomato, greens, and tuna
- Snack – 6-12 whole almonds or walnuts
- Dinner – Salad, grilled fish, vegetables, and fruit

Exercise Guidelines

- Should be a combination of cardio/aerobic (walk, bike, etc) plus strength (weights, calisthenics, tension bands) plus stretching
- Aim for 6 days per week in hopes of actually getting in 4 days per week
- Aim for 30 – 60 minutes of aerobic exercise daily (can break up into 2 – 3 sessions)
- Don't fret about your "target heart rate"
- Yoga and Pilates are wonderful

Benefits of Exercise

- Burns calories
- Increases metabolic rate, especially if muscle mass is increased
- Reduces stress hormones (nature's best tranquilizer)
- Lowers blood pressure
- Raises HDL (good) cholesterol and lowers triglycerides
- Increases energy
- Promotes better sleep

Sleep Problems

- 82% of those diagnosed with depression
- 81% of those who have had a stroke
- 76% of those treated for heart disease
- 75% of those treated for lung disease
- 72% of those treated for arthritis or diabetes
- 71% of those diagnosed with hypertension

Results of Inadequate Sleep

- Slowed thinking and reacting
- Difficulty in hearing or understanding
- Frequent errors or mistakes
- Poor judgment in complex situations
- Depression or negative mood
- Impatience

STRESS

Stress !!

- Since 1994 between 33 – 42% of Americans report “frequent” stress
- 20% report they are “rarely” stressed
- 55% report they do not have enough time
- 40% of women and 35% of men report frequent stress
- 43 – 46 % of workers and 29% of unemployed report frequent stress
- Parents of children and older adults report more stress

Carroll, J. ***The Gallup Poll***, Jan 24, 2007

The End

Boyd Lyles, Jr. MD

The HeartHealth and Wellness Center
Dallas, TX
www.hearthealth.net