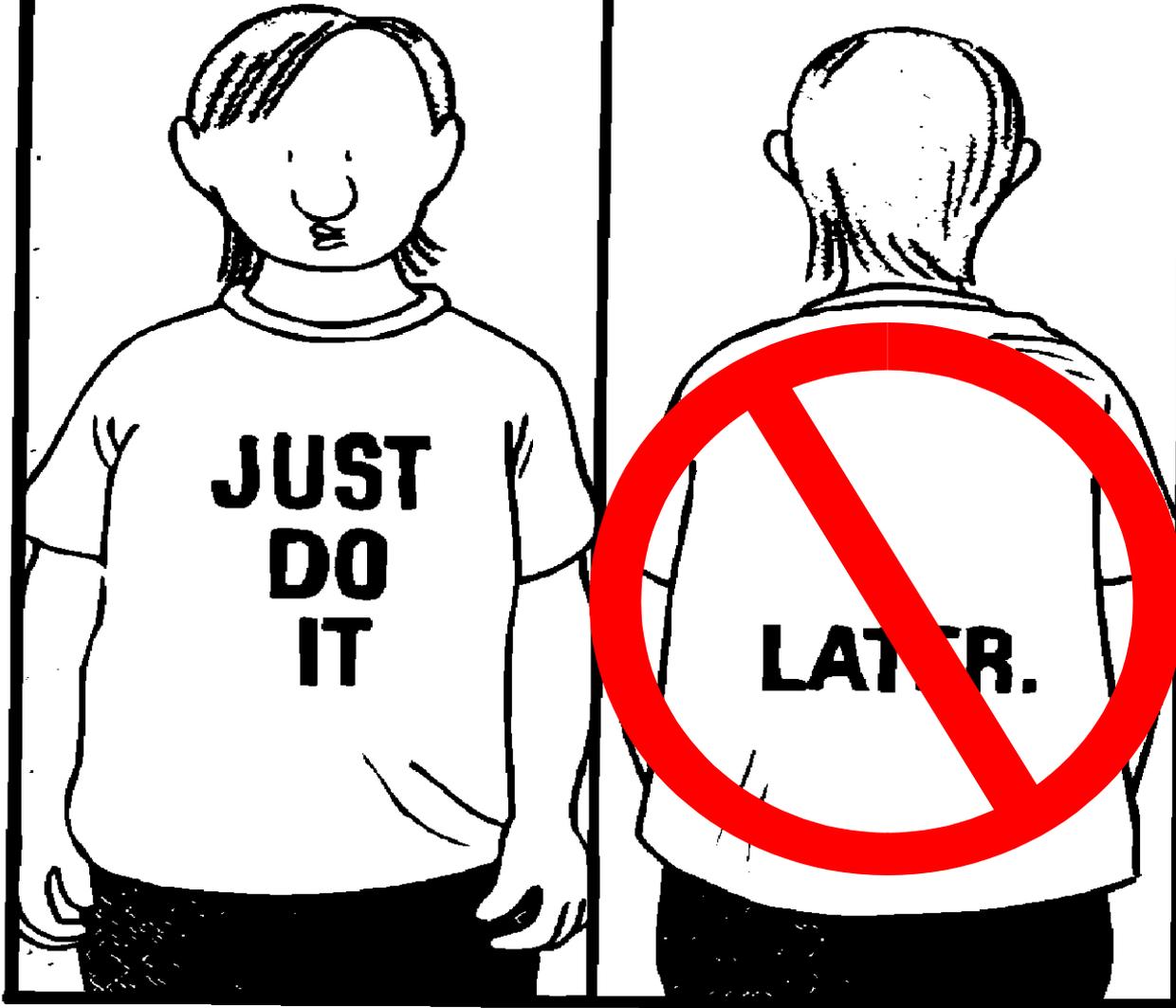


Lifetime Fitness

**Adapted from the Weigh to Live Program
Darnall Army Community Hospital
Fort Hood, Texas**



Surgeon General Report:

Physical Activity and Health

- ◆ On par with report on smoking and health published in 1964.
- ◆ Concerns:
 - ❖ >60% of Americans are not physically active on a regular basis
 - ❖ 25% of Americans do nothing physical.
- ◆ **Good News:** individuals of all ages can improve their quality of life with regular, moderate activity.

Surgeon General Report:

Physical Activity and Health

- ◆ Increasing physical activity is a formidable public health challenge.
- ◆ Regular physical activity reduces the risk of developing or dying from some of the leading causes of illness and death in the US.
- ◆ American Heart Association 4 Major Risk Factors: **smoking, high blood pressure, high cholesterol, and decreased physical activity.**

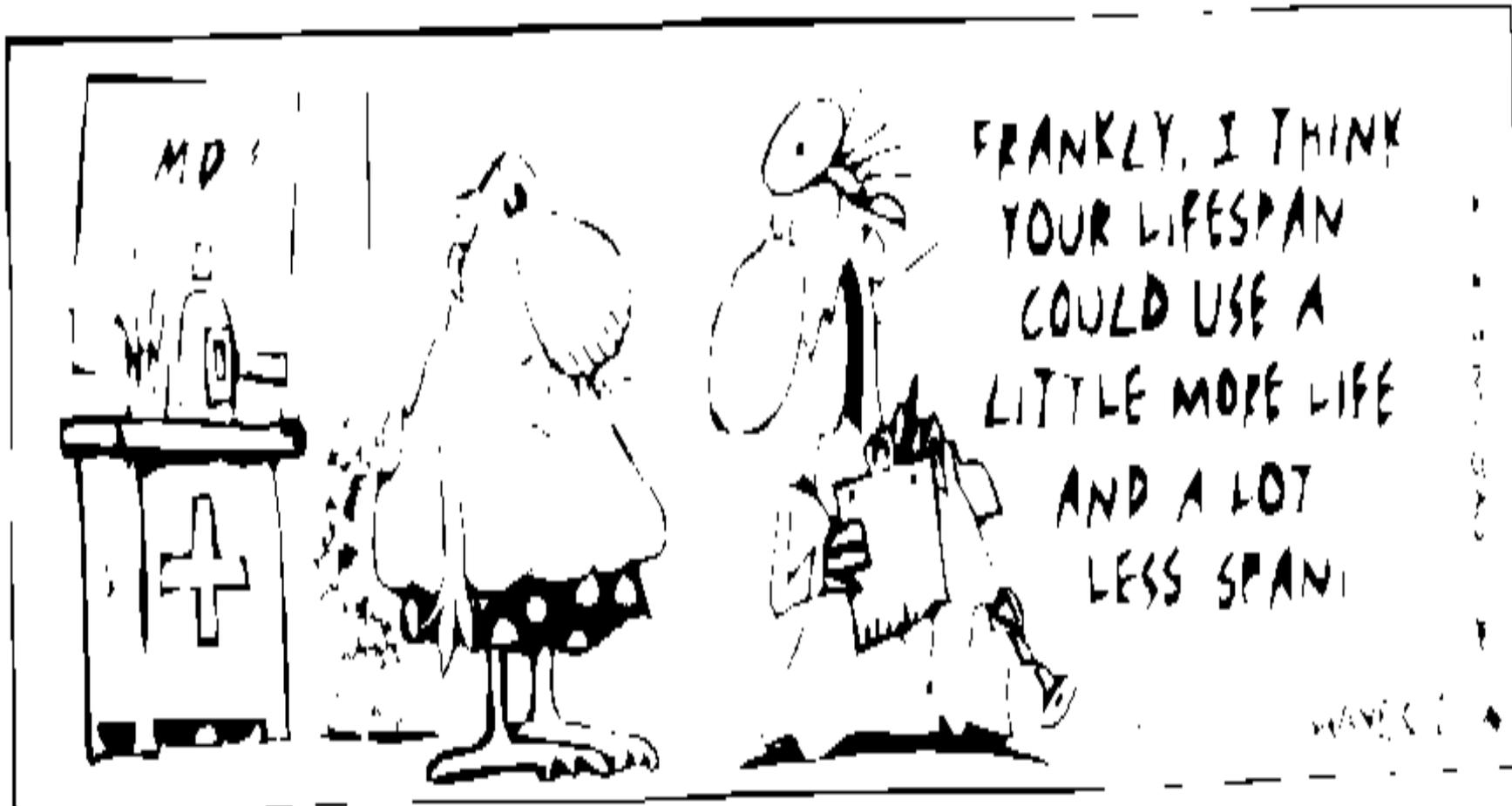
Regular Physical Activity Improves Health

- ◆ Reduces the risk of:
 - ❖ Dying prematurely
 - ❖ Dying prematurely from heart disease
 - ❖ Developing diabetes
 - ❖ Developing high blood pressure
 - ❖ Developing colon cancer
- ◆ Reduces feelings of anxiety and depression
- ◆ Helps control weight
- ◆ Helps build and maintain healthy bones, muscles, and joints
- ◆ Helps older adults become stronger and better able to move about without falling
- ◆ Promotes psychological well-being

Physical Activity and Public Health

- ❖ “Every US adult should accumulate 30 minutes or more of moderate-intensity physical activity on most, preferably all, days of the week.”
- ❖ Beneficial effect of training, both aerobic and strength activities, diminish within 2 weeks if physical activity is reduced, and disappears within 2-8 months.

A recommendation from the Centers for Disease control and Prevention and the American College of Sports Medicine. JAMA 273:402,1995



Frankly, I think your lifespan could use a little more life and a lot less span

Tell Me Some Good News!

- ◆ People who are usually inactive can improve their health and well-being by becoming even moderately active on a regular basis
- ◆ Physical activity need not be strenuous to achieve health benefits
- ◆ To avoid soreness and injury, start out slowly and gradually build up to the desired amount....give the body time to adjust
- ◆ All physical activity counts as exercise!
 - ❖ Mowing the lawn
 - ❖ Housework
 - ❖ Walking the dog

Aerobic vs. Anaerobic Fitness

- Anaerobic Exercise – without oxygen
 - Example: 100 yard dash, lifting weights
 - Characterized by short, intense bouts of exercise
- Aerobic Exercise – with oxygen
 - Characterized by continuous rhythmical activity using the body's major muscle groups
 - Examples: lap swimming, walking, running, cycling
 - Weight bearing vs. Non-weight bearing exercises

Aerobic Exercise

- ◆ Burns fat calories; oxygen is necessary to burn fat!
- ◆ Walking 1 mile burns about 100 calories
- ◆ Walking is a safe, inexpensive way to aerobically condition your body
- ◆ Monitor your intensity by the “Talk Test”

The Talk Test

- ◆ The simplest way to determine the intensity of a workout is to talk while exercising
- ◆ **Speed up:** if talking is too easy
- ◆ **Slow down:** if talking is difficult; you are gasping for air
- ◆ **Correct Intensity:** if talking comes in short bursts; breathing is deep, but comfortable

Calories Burned Per Mile

| | | Weight in Pounds | | | | | | |
|-------|---------|------------------|-----|-----|-----|-----|-----|-----|
| Speed | Pounds | 100 | 120 | 140 | 160 | 180 | 200 | 220 |
| | 2.0 mph | 65 | 80 | 93 | 105 | 120 | 133 | 145 |
| | 2.5 mph | 62 | 74 | 88 | 100 | 112 | 124 | 138 |
| | 3.0 mph | 60 | 72 | 83 | 95 | 108 | 120 | 132 |
| | 3.5 mph | 59 | 71 | 83 | 93 | 107 | 119 | 130 |
| | 4.0 mph | 59 | 70 | 81 | 94 | 105 | 118 | 129 |
| | 4.5 mph | 69 | 82 | 97 | 110 | 122 | 138 | 151 |
| | 5.0 mph | 77 | 92 | 108 | 123 | 138 | 154 | 169 |
| | 6.0 mph | 86 | 99 | 114 | 130 | 147 | 167 | 190 |
| | 7.0 mph | 96 | 111 | 128 | 146 | 165 | 187 | 212 |

Fitness Recommendations

American College of Sports Medicine (ACSM) and Centers for Disease Control and Prevention (CDC)

◆ Frequency:

❖ 3 to 5 times a week

◆ Duration:

❖ 20+ minutes at a time

◆ Intensity:

❖ Determined by heart rate



Recommendations emphasize fitness in addition to health.

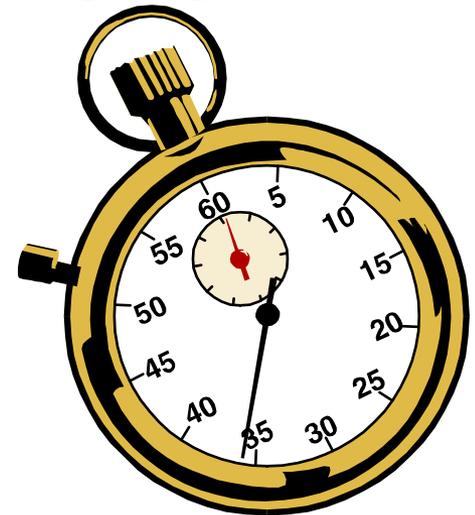
Aerobic Conditioning

| <i>Frequency</i> | <i>Duration</i> | <i>Intensity</i> | <i>Type</i> |
|--------------------|-------------------------------|--|--|
| 3-5 times per week | 20-60 min continuous activity | 65-90% MHR 50-85% age predicted Max Heart Rate | Running, lap swimming, cycling, walking etc. |

ACSM recommendations for aerobic exercise

Warm up

- ❖ **Goal:** Gradually prepare the body for more intense activity.
- ❖ Replicate aerobic activity at a lower intensity for 5-15 minutes.
- ❖ May stretch for short periods after or during warm up.



Cool Down

❖ *Aerobic Cool Down*

- **Goal:** Gradually reduce the heart rate to prevent venous pooling & stress on the heart.
- Replicate aerobic activity at lower intensity for 5 -15 minutes.

❖ *Final Cool Down*

- Follows aerobic cool down, floor work, or weight training.
- Stretch all the major muscle groups focusing on tighter muscles.

10 Ways to Get a 10 Minute Workout

1. Walk for 10 minutes before going to work and during lunch. Walk down the hallway to take a break.
2. Walk to a co-worker's office instead of calling on the phone.
3. Have walking meetings.
4. Take the stairs.
5. Dance to two songs on the radio.
6. Pick up the pace during housework or when hand washing the car.
7. Exercise while watching your favorite TV program.
8. Rent an exercise video.
9. Stretch while talking on the phone.
10. Make fitness a family affair -- walk the kids to school.

Body Fat

- ◆ Average American **loses 1/2 pound** of lean body **muscle** mass and **gains 1 pound** of **fat** a year, from age 25 to 55.
- ◆ Absolute weight is not the factor.
- ◆ Non-fat food is not necessarily low in calories. (sugar)
- ◆ The truth about burning fat during exercise.

Training Progression Tips

- ❖ General Guideline: Use the **10% RULE**
- ❖ Increase frequency, duration, & intensity using the 10% Rule. Never increase more than one training parameter at a time.
- ❖ Stress the body in small increments or doses.
- ❖ Intensity overloads should NOT exceed 1-2% per week (conservative) .

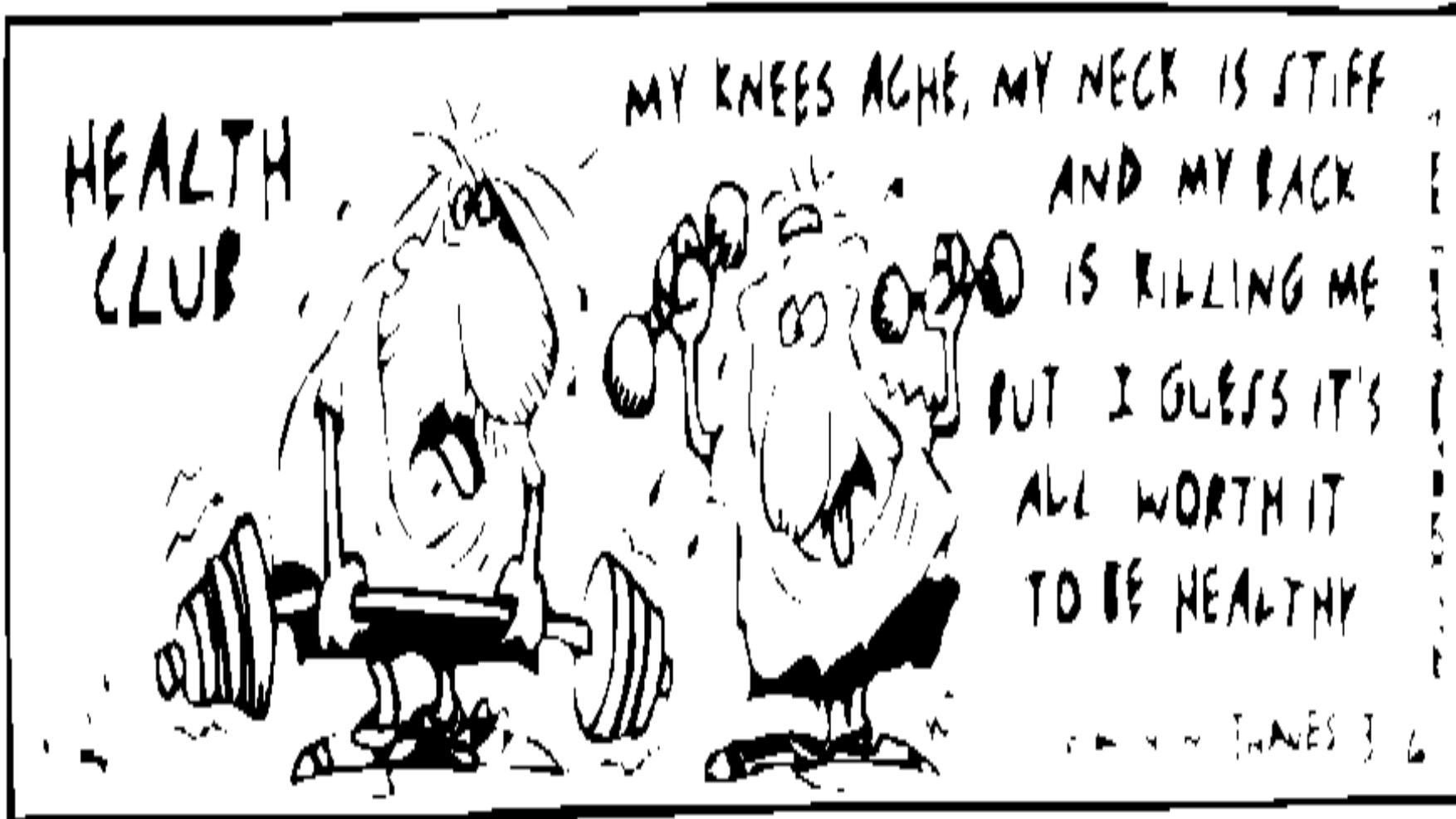
REST

Recommendations

Training order progression:

- ❖ Frequency – up to 5 times per week, cross train, vary program
- ❖ Duration – Increase 1-2 mins/week
- ❖ Intensity – Increase 5-10% per week, use THR* to monitor intensity

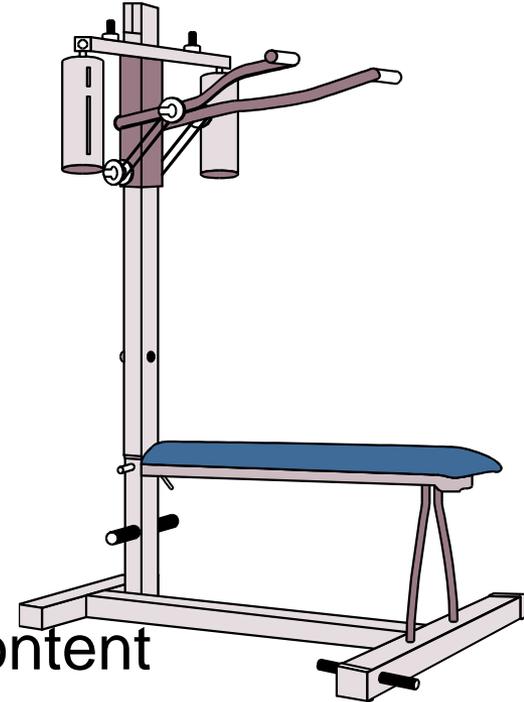
* Target Heart Rate



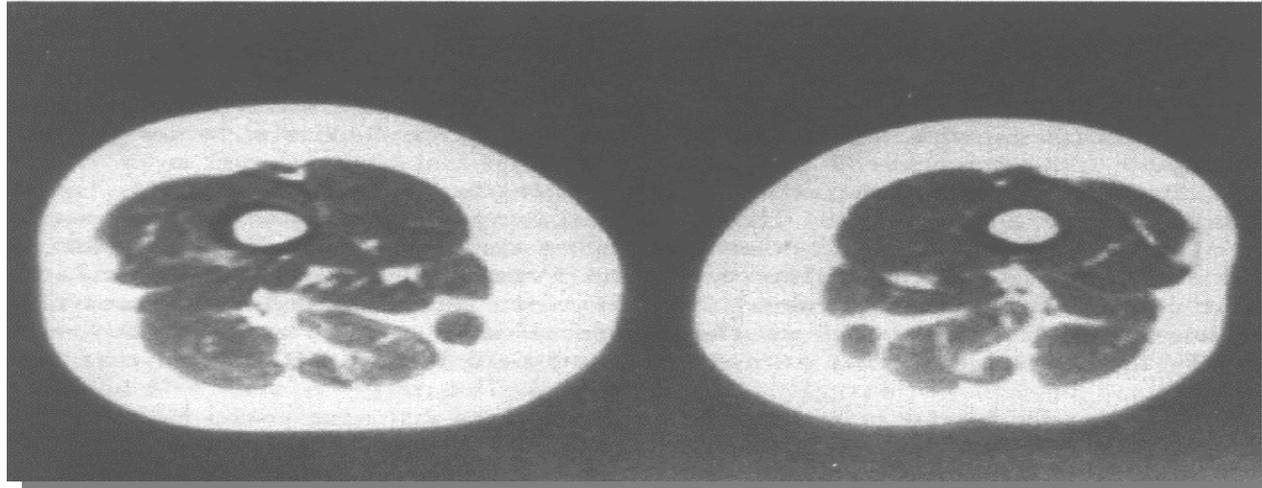
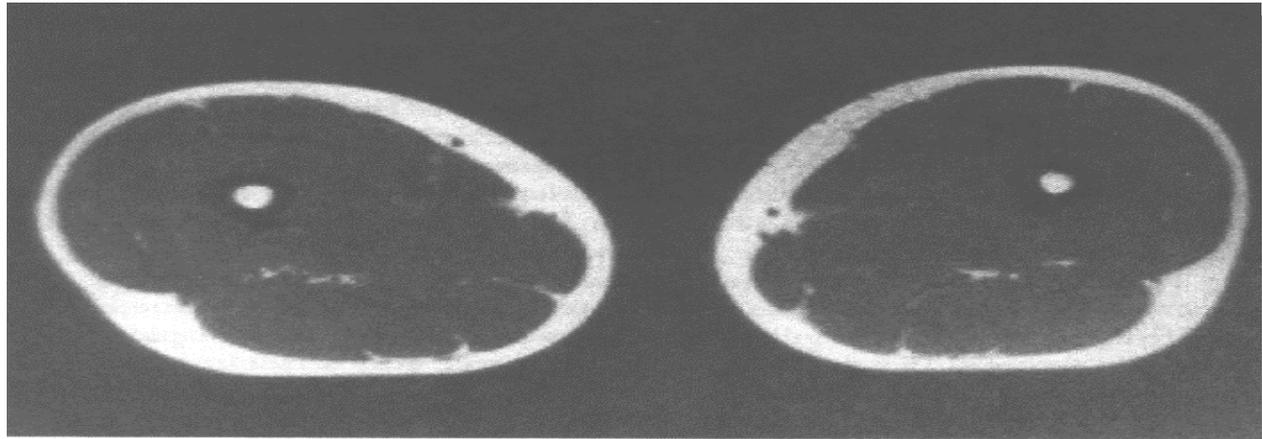
My knees ache, my neck is stiff and my back is killing me, but I guess its all worth it to be healthy.

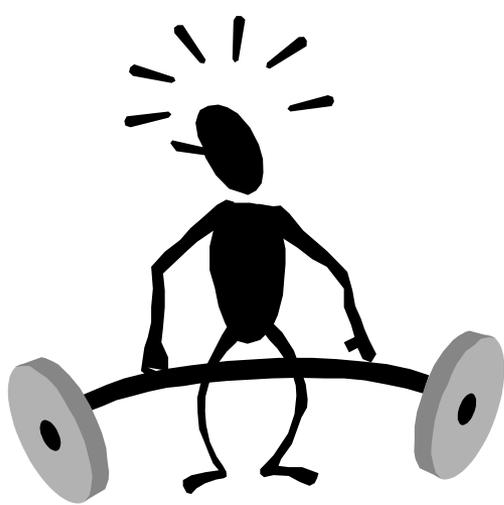
Loss of Skeletal Muscle Mass

- ◆ Age-related loss of skeletal muscle mass.
- ◆ Decreased strength.
- ◆ Decreased aerobic capacity.
- ◆ Closely linked to ...
 - ❖ Age-related loss of bone mineral content
 - ❖ Basal metabolic rate
 - ❖ Increased body fat content



Cross-Section of Thigh of 25 y/o and 65 y/o Female





Strength



- ◆ We lose muscle fibers secondary to aging.
- ◆ We lose more fast twitch fibers.
- ◆ We cannot grow more muscle fibers.
- ◆ **Good News:** Regardless of age, we can obtain significant strength gains with proper training.

Strength Training

The American College of Sports Medicine (ACSM) recommendations:

- ❖ Perform one set of 8-12 reps
- ❖ All major muscle groups
- ❖ 2-3 days a week (every other day)
- ❖ Use slow and controlled movements
- ❖ Muscle should be fatigued at end of set

Concept: Work smarter -- not harder



Benefits of Strength Training

- ❖ Bone health - load or stress
- ❖ Increases lean body mass
- ❖ Elevated metabolic rate
- ❖ Improves aerobic capacity
- ❖ Stability to joints
- ❖ Maintain normal daily functions

Age-related Changes

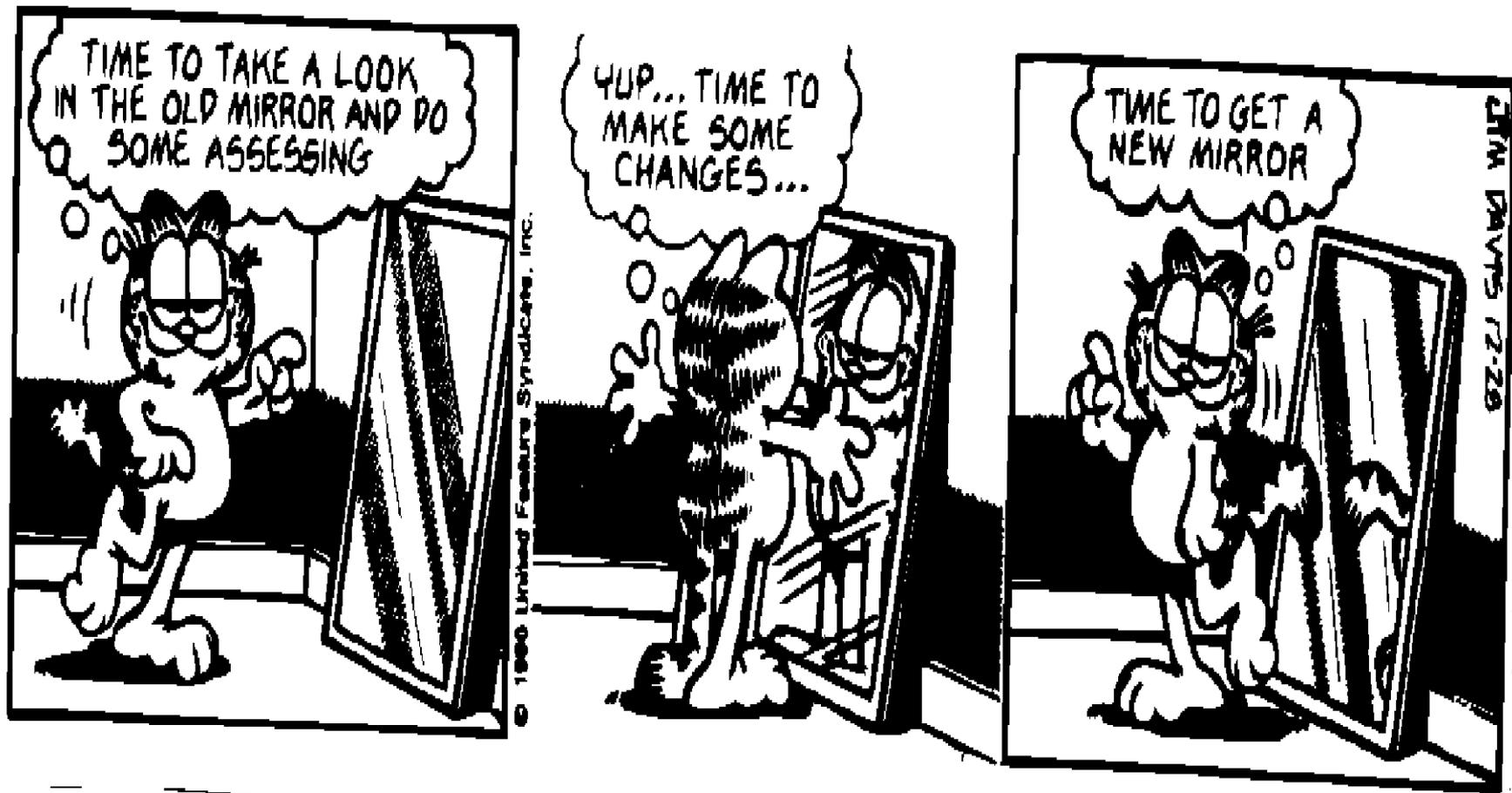
- ◆ 30-60 years decade 1% each
- ◆ 61-70 years additional 15%
- ◆ 71-80 years additional 30%
- ◆ **Good news:** muscle weakness is reversible with strength training at any age.

Defend lean muscle mass!

Stretching Guidelines

- ❖ **Mode** - static technique
- ❖ **Exercise Number** - all major muscle groups
- ❖ **Frequency** - 3 days / week minimum
- ❖ **Intensity** - just below pain threshold
- ❖ **Duration** - 10-30 seconds
- ❖ **Repetitions** - 3 to 5

(ACSM)



Time to take a look in the old mirror and do some assessing. Yup...time to make some changes ... Time to get a new mirror.

Pedometer Walking

- ◆ Pedometer: device that counts your footsteps.
- ◆ Footsteps can be converted to distance by knowing the length of your usual stride.
- ◆ Wear your pedometer on your right side of your waistband.
- ◆ Wear your pedometer **ALL** day!
- ◆ Record the number of steps you walk in your exercise log.
- ◆ Goal: 10,000 steps per day!

Fitness Tips

- ◆ Clothes should be light, loose, comfortable and protective
- ◆ Cotton or cotton blend that allows moisture and heat to escape is best.
- ◆ Avoid bulky seams.
- ◆ Shoes: Purchase quality name-brand shoes specific to your sport.

More Fit Tips

- ◆ Keep track of your workouts with a fitness log.
- ◆ Exercise with a partner.
- ◆ At night, exercise in well lighted areas and wear a reflective vest.
- ◆ Dress for the weather.
- ◆ Stay well hydrated!

Sticking With It!

- ◆ Don't overdo it initially. Take your time.
- ◆ Cross Training decreases injuries and adds variety.
- ◆ Exercise with music.
- ◆ Be realistic.
- ◆ Set modest, short-term, reachable goals.
- ◆ Have fun!

GOOD LUCK!!!