



BACK CARE

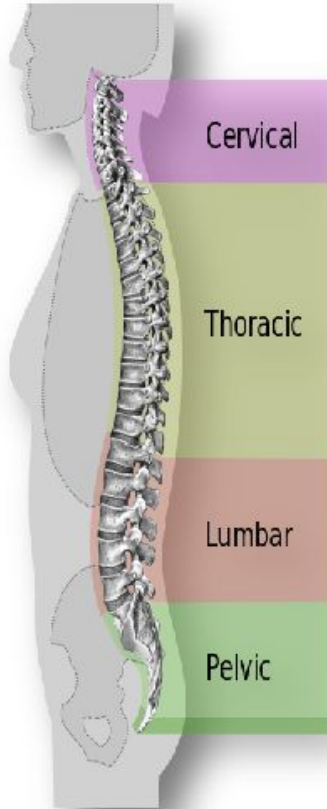
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Back facts

in general...



- About 85% people experience back pain by age 35-50.
- Back problems are the most frequent cause of activity limitations in working-age adults.
- In the long run, surgery, physiotherapy, chiropractic care, etc., are considered more effective than no treatment in reducing low back pain.....But,,,,,,,,,,,,,, prevention is key!



Low back pain (LBP)

- **Low back pain (LBP)** a common disorder involving the muscles, bones and nerves of the back.
- Pain can vary from a dull constant ache to a sudden sharp feeling.
- **Acute Pain:** pain lasting less than 6 weeks.
- **Sub-Chronic Pain:** pain lasting from 6 to 12 weeks.
- **Chronic Pain:** Pain lasting more than 12 weeks.

- **Musculoskeletal** – mechanical (including muscle strain, muscle spasm, or osteoarthritis); herniated nucleus pulposus or compression fracture
- **Inflammatory** – HLA-B27 associated arthritis including ankylosing spondylitis, reactive arthritis, and inflammatory bowel disease
- **Malignancy** – bone metastasis from lung, breast, prostate, thyroid, others
- **Infectious** – osteomyelitis; abscess

Personal factors

- Age
 - LBP occurs greatest among 35-50 y/o
- Gender
 - Equal among males and females
- Physical fitness and conditioning
 - Evidence supports poor conditioning,
- Strength
 - Some evidence linking poor physical performance to LBP
- Medical history
 - Evidence that hx of LBP increases risk for future problems
- Structural abnormalities
 - Some evidence exists between this factor and LBP

Signs & Symptoms

- Dull, aching pain that remains within the low back .
- Mild or severe muscle spasms,
- limited mobility, and aches in the hips and pelvis.
- Pain that travels to the buttocks, legs, and feet
- Pain that is worse after prolonged sitting
- Pain that is worse after waking up and better after moving around.

Low Back Pain Symptoms by Location

- L3-L4
- The L3-L4 nerve root is likely to cause shooting pain in the front of the thigh, possibly including numbness or tingling. Pain or neurological symptoms may radiate to the front of the knee, shin, and foot as well, though it is less common.
- L4-L5
- Pain from the L4-L5 segment typically manifests as sciatic pain in the back of the thigh, and possibly pain that reaches the calves, combined with axial low back pain.
- L5-S1
- Pain from the L5-S1 segment is generally caused by problems with these joints or from a compressed nerve root. Issues with the L5-S1 segment commonly cause sciatica.

Common Back Disorders

- General joint stiffness
- Acute strains and sprains
- Muscle guarding or spasm
- Disc bulge → herniation
- Degenerative disk disease
- Osteoarthritis



Anatomy Review...

the spine

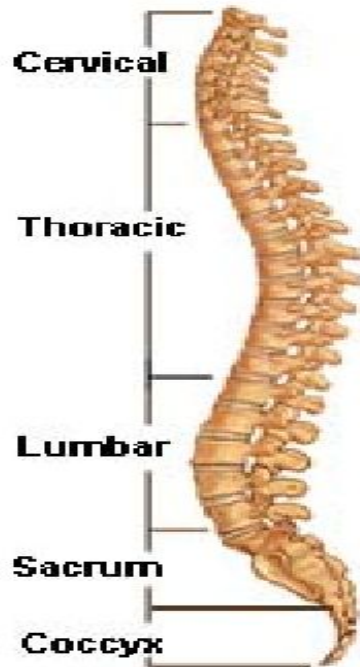
- Bones
- Joints
- Discs
- Muscles and ligaments
- Nerves



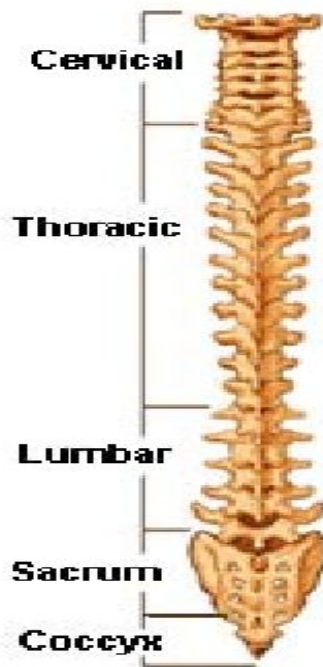
Anatomy Review...

the spine

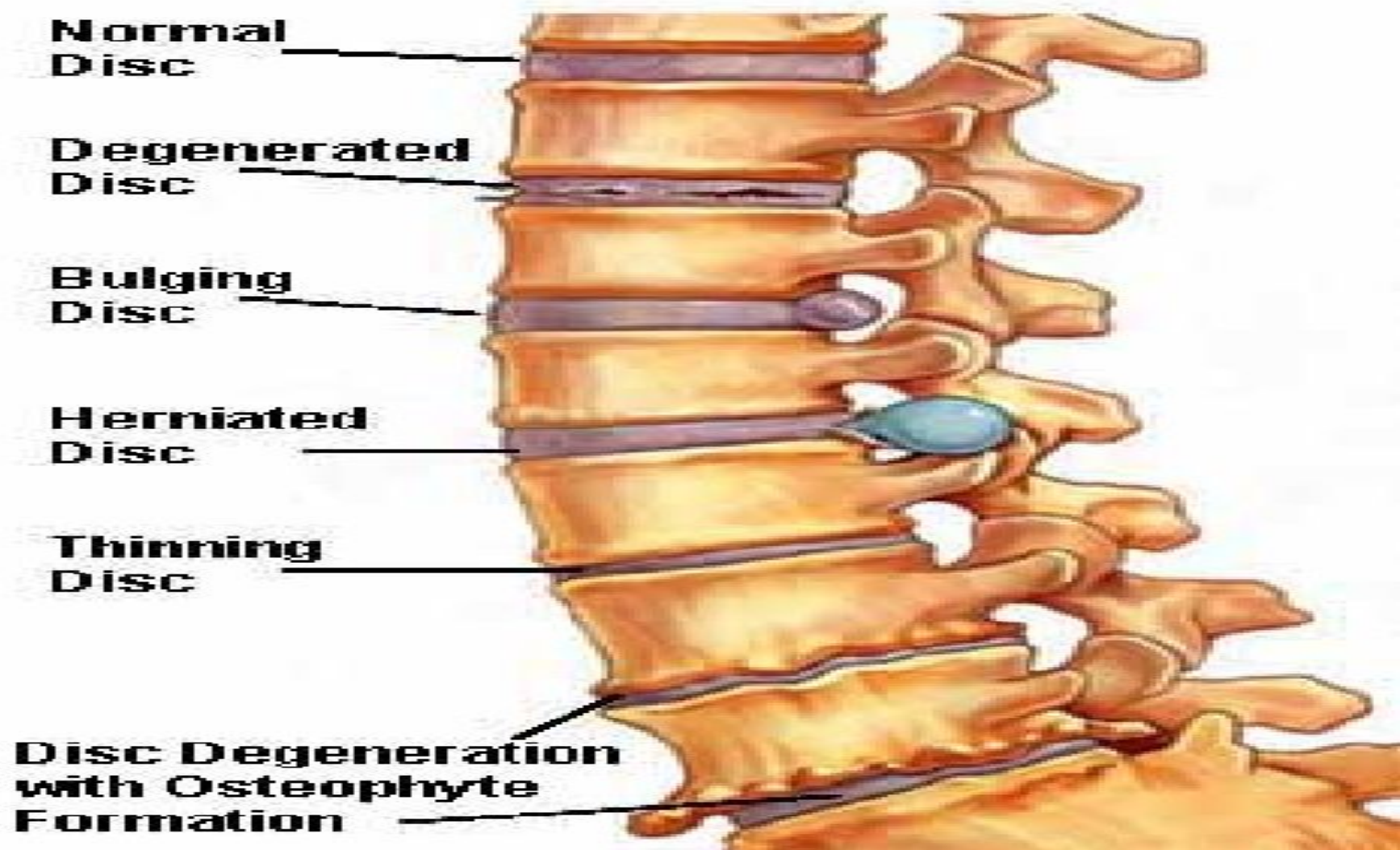
**Lateral (Side)
Spinal Column**



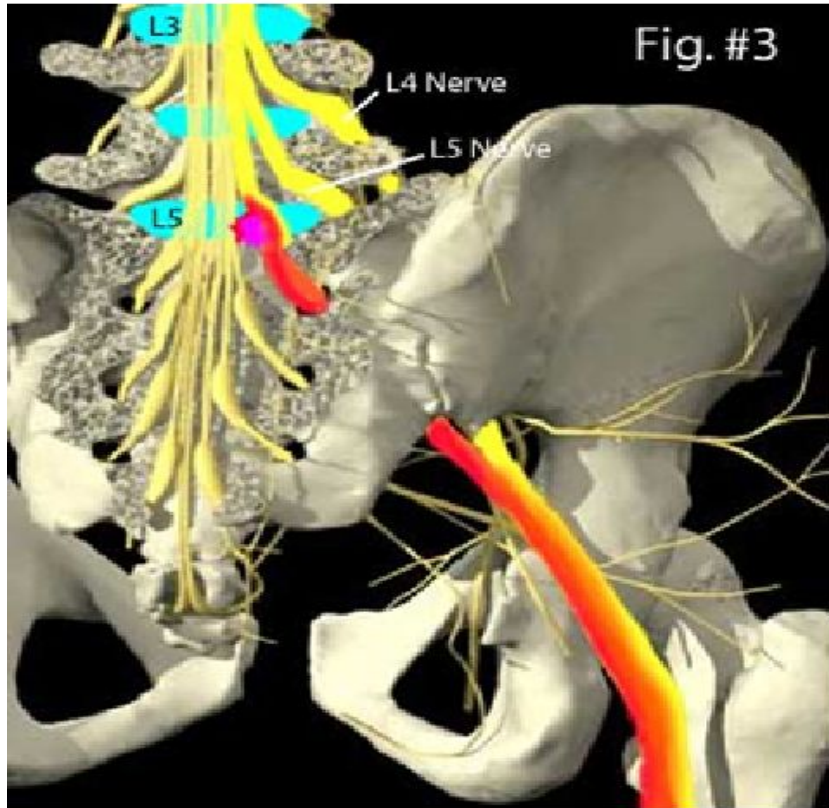
**Posterior (Back)
Spinal Column**



Examples of Disc Problems



Sciatica

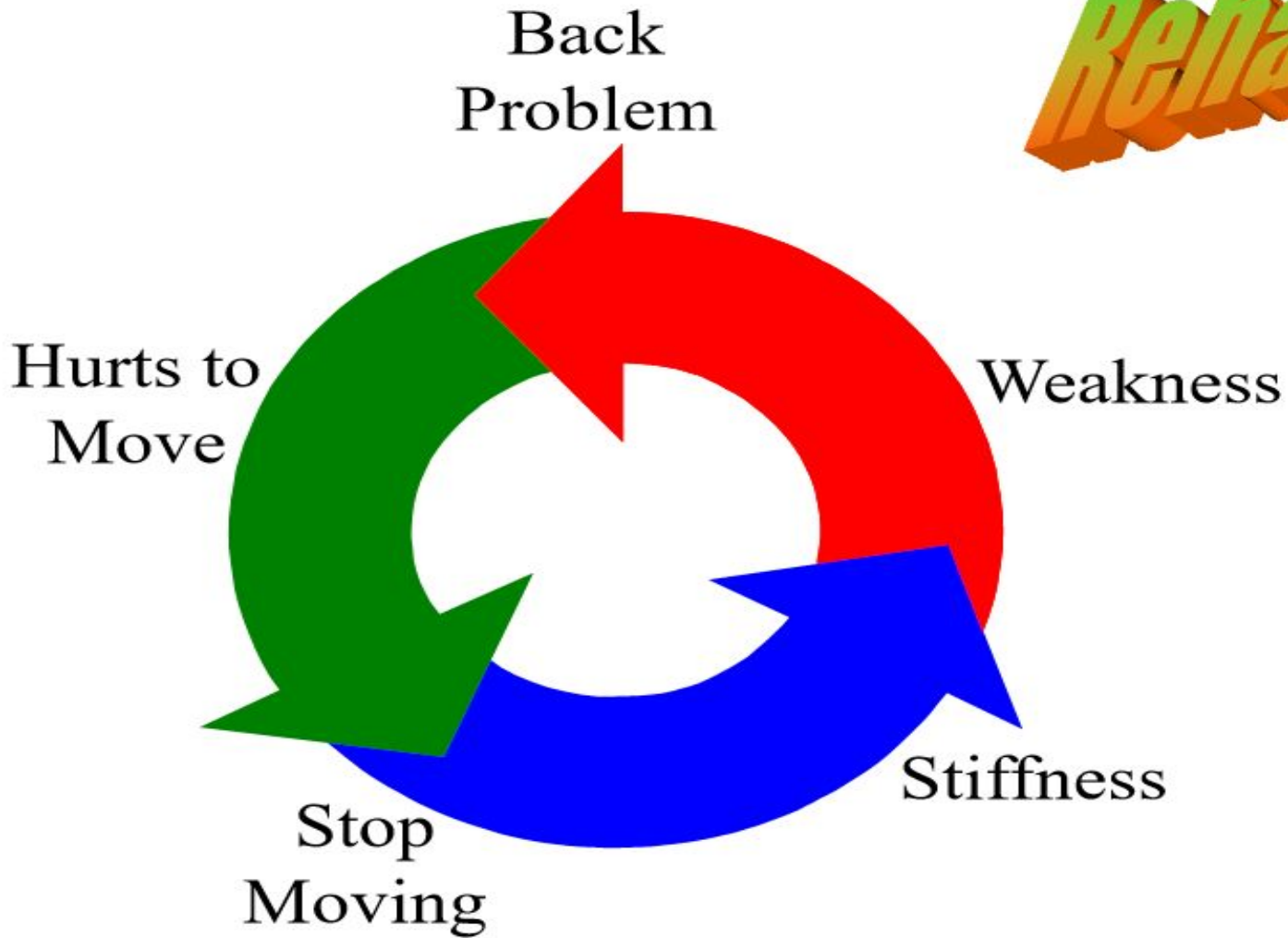


Sciatic nerve
(largest nerve in body)

- “Catch-all” diagnosis
- Back pain radiates down leg to foot
- Avoid long periods of sitting
- Stand up every 20 minutes to recover
- arch in spine
- Keep mobile – go for walks
- Stretch regularly
- If pain persists see doctor

Back Injury Cycle

Rehab



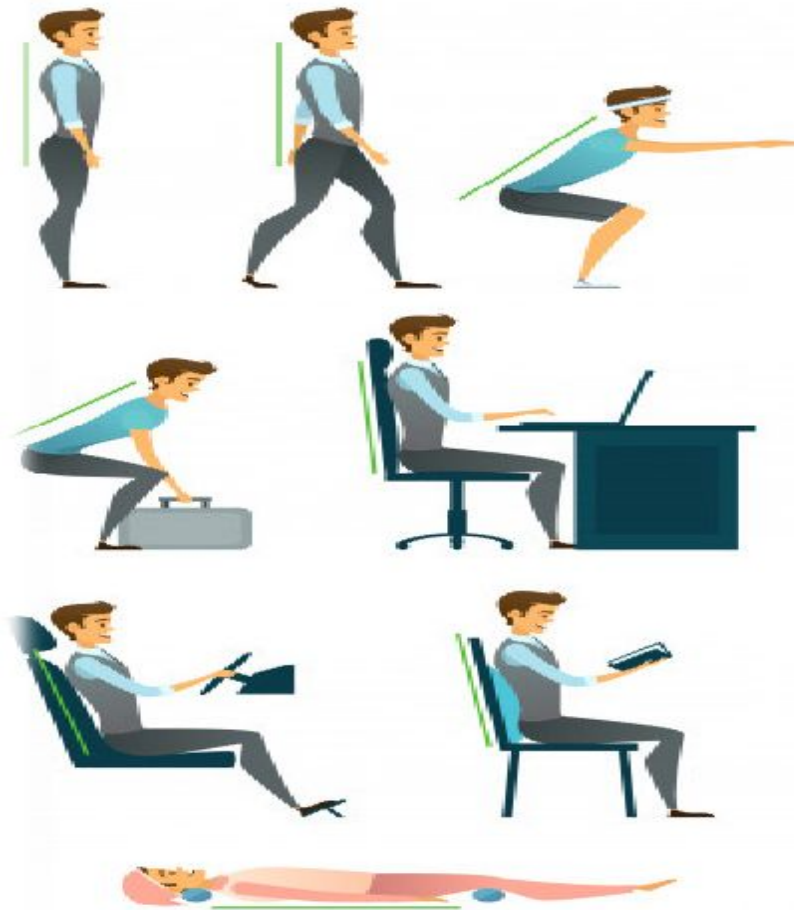
Leading Causes of Back Problems

- Poor body mechanics
- Stressful living & work habits
- General physical fitness decline
 - Loss of flexibility
 - Loss of strength



POSTURE

correct



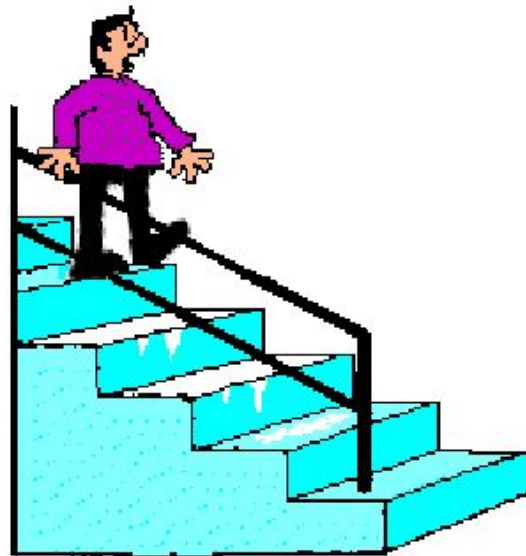
incorrect



Another cause of back problems...

accidents

It is also possible to injure your back due to accidents.



How do we take care of our back?

- Body Mechanics
- Proper Lifting Techniques
- Maintain safe postures
- Keep physically fit
- Stretch and exercise
- Stress management
- Good nutrition

Body Mechanics

“It’s not how much you lift or move, but the way you do it”!

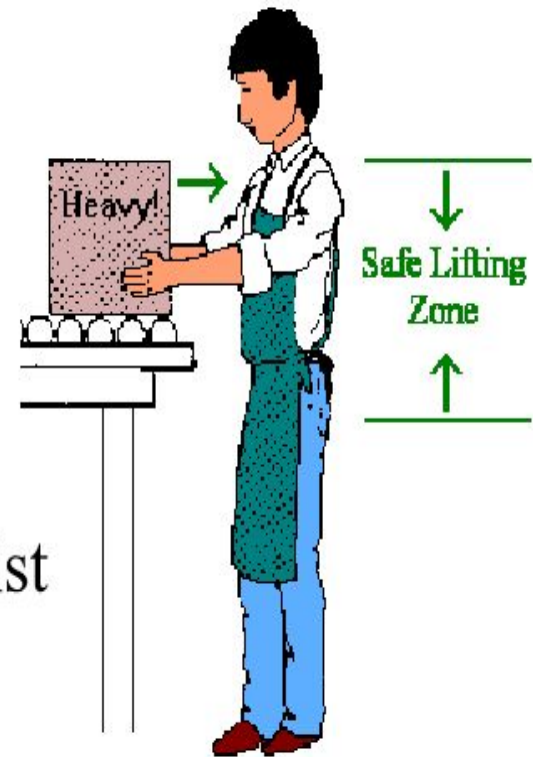
- General Rules:***
- 1) Push vs. Pull
 - 2) Keep Work Within “Strike Zone”
 - 3) Keep Load Close To Body
 - 4) Use Abdominal Bracing
 - 5) Pivot with Feet - Avoid Twisting
 - 6) Team Work vs. Mule Work



Avoid lifting and bending when able

Place objects up off the floor. Set objects down on a table or other elevated surface instead of on the floor.

Raise / lower shelves. The best zone for lifting is between your shoulders and your waist. Put heavier objects on shelves at waist level, lighter objects on lower or higher shelves.



Proper Lifting Technique

Power Position:

- Wide base of support
- Feet shoulder width apart
- Back straight
- Head and shoulders up
- Bend at hips and knees - **NOT BACK!**
- Keep load close to body
- Tighten stomach muscles
- Use leg, hip and buttock muscles
- Breathe out with lift



DEMO!

QUESTIONS?



Back Safety isn't just a work thing!

The big picture...



think of things you do at home...

- Washing dishes, pots & pans
- Carrying and loading groceries
- Picking up and carrying kids
- Walking the dog
- Yard work
 - Raking, shoveling, sweeping
 - Lawn mowing, snow removal
 - Wheel barrels



think of driving your car...

- Buttock and back pain
 - Posture
 - Nerve and tissue compression
- Position of legs while driving
 - Muscle strain: hamstring tightness
 - Decreased circulation
 - Increased pain – lateral right knee
- Upper neck/back tension and pain
 - Muscle strain: upper trapezius
 - Stress reactions, trigger points



think of sleeping in your bed...

For long periods of time: static and awkward positions,
decreased circulation, increased compression!

- Neck posture
- Shoulder and arm posture
- Wrist posture
- Knee and hip posture
- Back posture



Injury Prevention...

Conditioning is key!

- Strength and Stability
- Flexibility
- Aerobics for endurance
- Anaerobics for recovery



Aerobic Exercise



- 20-30 minutes per day
- Enhanced circulation - healthier heart
- Weight management benefit
- Increases endurance & decreases recovery time
- Enables sustained performance without increased stress to body systems
- Breathing rates return to normal quicker after strenuous work

Other benefits of conditioning...

- Reduction in blood pressure
- Increase in good (HDL) cholesterol
- Decreased total cholesterol
- Increased heart function
- Decreased body fat stores
- Increased aerobic capacity
- Decreased clinical symptoms of anxiety, tension, depression
- Possible reduction in mortality in post-heart attack patients

Making Physical Activity a Part of Your Life.



There are 1440 minutes in every day...Schedule 30 of them for physical activity.

Strength & Flexibility

areas of focus...

- Trunk

- Abdominals
- Extensors



- Legs

- Quads
- Gluts
- Hip Flexors



Stability Exercises

- Crunches
- Press Ups
- Bird Dog



Stretches for Flexibility

- Swiss Ball
- Lower Trunk Rotation
- Hamstring Stretch
- Quad Stretch



QUESTIONS?

