

Ergonomics and Back Safety

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Why?

Personal health and safety

- Second highest injury rate in country healthcare
- Nurses estimated lifting 1.5 tons in eight-hour shift

Cost to your company

- Most injuries in healthcare are back, shoulder and neck, resulting from lifting
- Second highest are slips, trips and falls

What?

Learn what causes injuries and pain

Learn techniques and programs to make job easier

Learn proper lifting techniques and body mechanics

[LIGHTER SIDE]



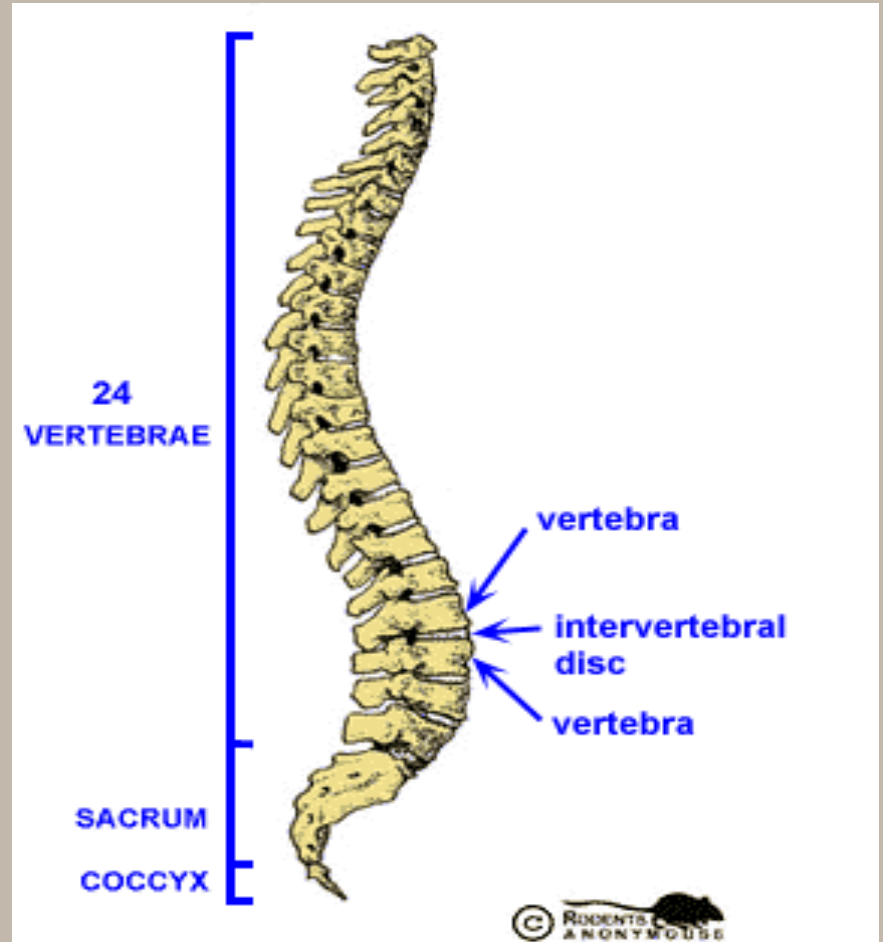
"I was so tired at work today that the other nurses had to revive me with CPR...coffee, Pepsi and Red Bull."

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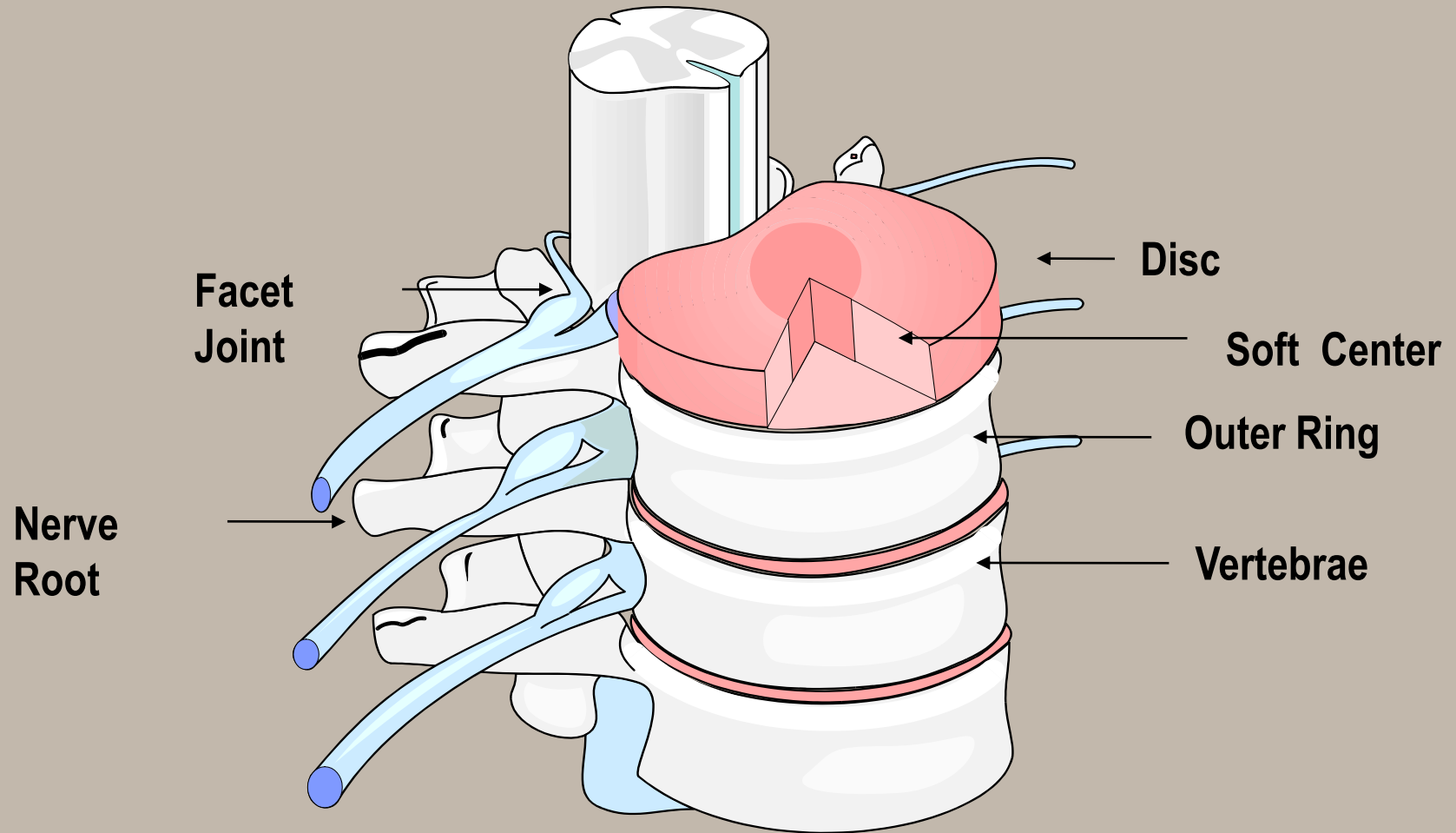
Brickstreet | 360°
INSURANCE

Human Spine

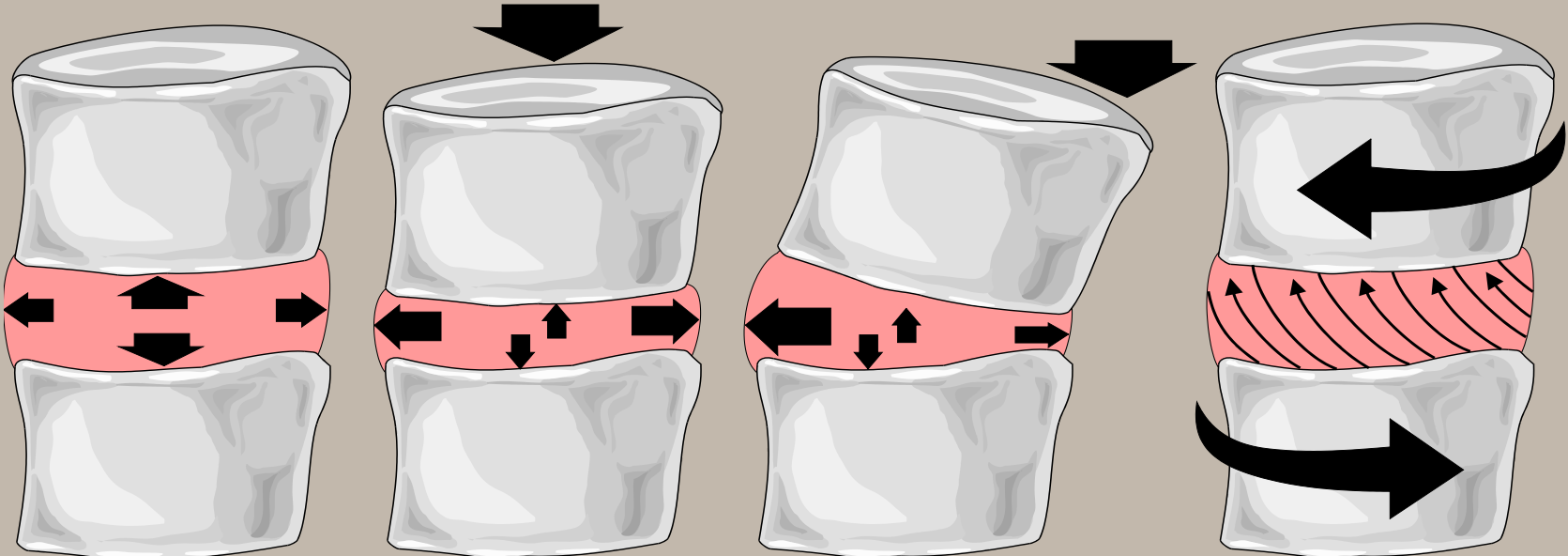
It's all about pressure



Spinal Column Details



Spinal Discs Under Various Loads



Normal Load

Additional Load

Uneven Load

Torsion Load

The Forces Involved

Think of your back as a lever

- With the fulcrum in the center, it only takes ten pounds of pressure to lift a ten-pound object
- Shifting the fulcrum to one side takes more force to lift the same object

Your waist acts like the fulcrum on a 10:1 ratio

- Lifting a ten-pound object puts 100 pounds of pressure on your lower back

The Forces Involved

Adding 105 pounds for an average human upper torso to lifting a ten-pound object, actually puts 1,150 pounds of pressure on the lower back

If you were 25 pounds overweight, it would add an additional 250 pounds of pressure on your back every time you bend over

Common Causes Of Back Injuries

Anytime you find yourself doing one of these things, you should think: *Danger! My back is at risk!*

- To avoid heavy lifting, especially repetitive lifting, over a long period of time
- Twisting at the waist while lifting or holding a heavy load, this frequently happens when using a shovel

Common Causes Of Back Injuries

Reaching and lifting over your head, across a table or out the back of a truck

Lifting or carrying objects with awkward shapes or sizes

Working in awkward, uncomfortable positions

Common Causes Of Back Injuries

Sitting or standing too long in one position, sitting can be very hard on the lower back

It also is possible to injure your back slipping on wet floor or ice

How To Prevent Back Injuries

Avoid lifting and bending whenever you can

Place objects up off the floor

Raise/lower shelves

Use carts and dollies

How To Prevent Back Injuries

Test the weight of an object before lifting by picking up a corner

Get help if it's too heavy for you to lift it alone

Use proper lifting procedures and follow lifting protocols

How To Prevent Back Injuries

Follow these steps when lifting

- Take a balanced stance, feet shoulder-width apart
- Athletic position “ready”
- Do not let knees go over toes, keep Lordosis in spine “curve”
- Squat down to lift, get as close to the load as you can

How To Prevent Back Injuries

Get a secure grip, hug the load

Lift gradually using your legs, keeping the load close, with your head and chest up

How To Prevent Back Injuries

Once standing, change directions by pointing your feet and then turning your whole body

- Avoid twisting at your waist

To put the load down, use guidelines in reverse

Things You Can Do To Help Your Back

Exercise to tone the muscles in your back, hips, thighs and abdomen

Before beginning any exercise program, check with your doctor

Exercise

Exercise regularly

Warm up slowly – a brisk walk is a good way to warm up for exercise

Inhale deeply before each repetition of an exercise and exhale when performing each repetition

Exercises To Help Your Back

To strengthen leg muscles

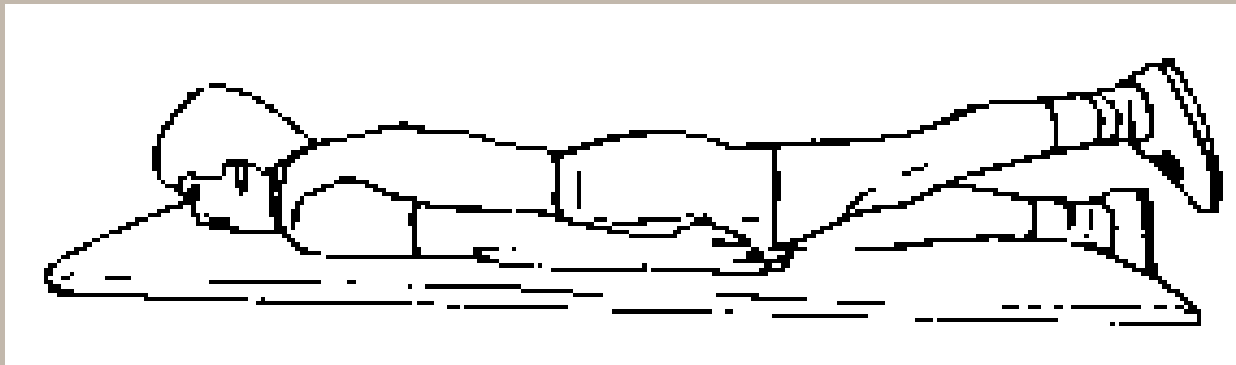
- Wall slides: stand with your back against a wall, feet shoulder-width apart. Slide down into a crouch with knees bent to 90 degrees, count to five and slide back up the wall. Repeat five times.



Exercises To Help Your Back

To strengthen back and hip muscles

- Leg raises on your stomach: tighten muscles in one leg and raise leg from floor. Hold for a count of ten and return leg to floor. Repeat five times with each leg.



Exercises To Help Your Back

To strengthen back and hip muscles

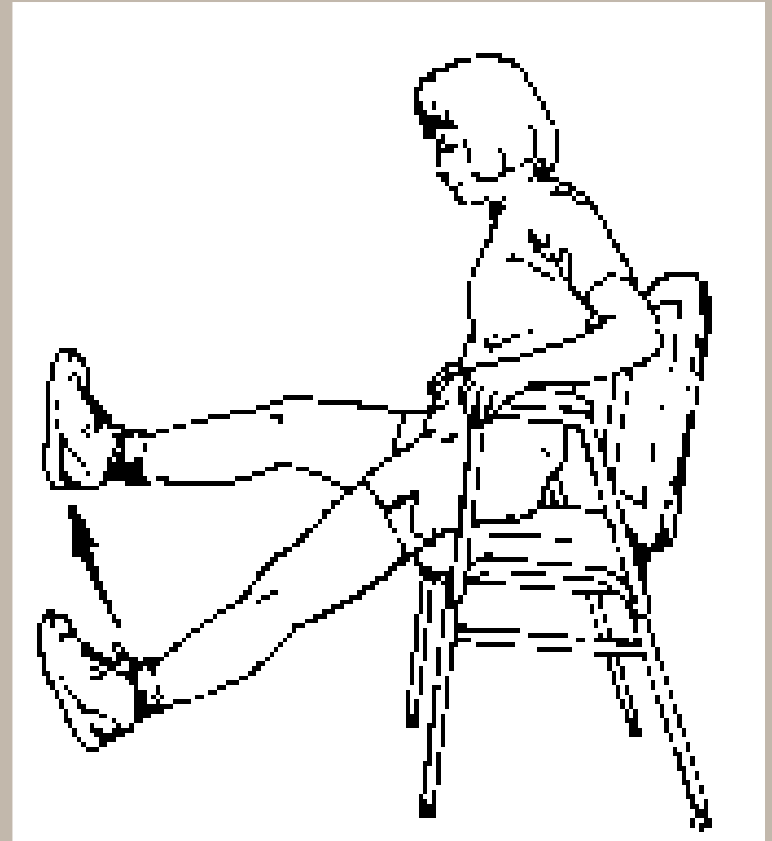
- Leg raises on your back: lie on back, arms at your sides. Lift one leg off floor and hold for a count of ten. Repeat five times with each leg. If it is too difficult, keep one knee bent and the foot flat on the floor while raising the other leg.



Exercises To Help Your Back

To strengthen back and hip muscles

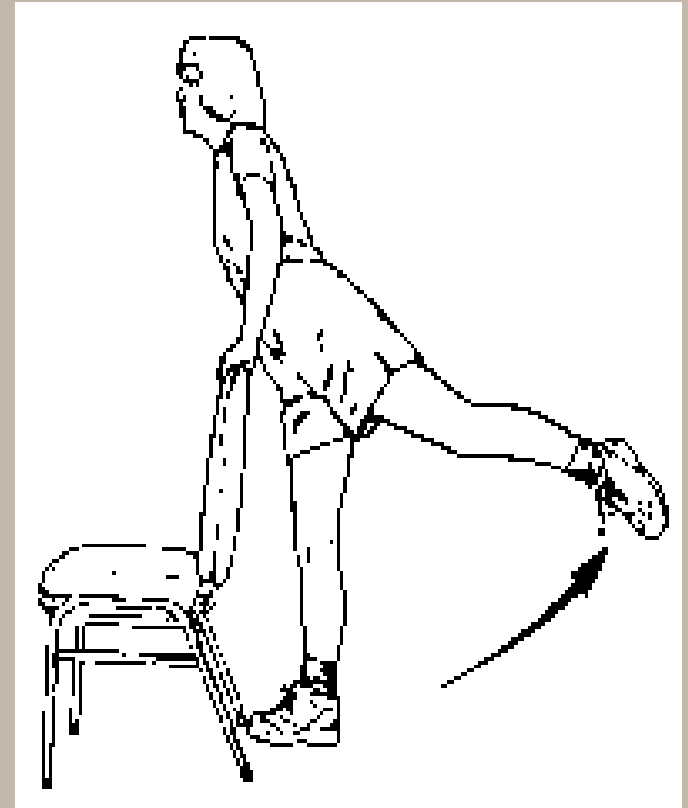
- Seated leg raises: sit upright, legs straight and extended at an angle to the floor. Lift one leg waist high. Slowly return to floor. Repeat five times with each leg.



Exercises To Help Your Back

To strengthen hip and back muscles

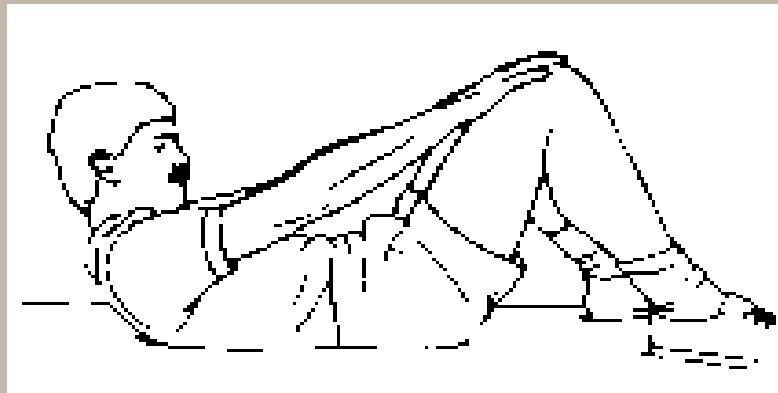
- Back leg swing:
Stand behind chair, hands on chair. Lift one leg back and up, keeping the knee straight. Return slowly. Repeat five times with each leg.



Exercises To Help Your Back

To strengthen stomach muscles

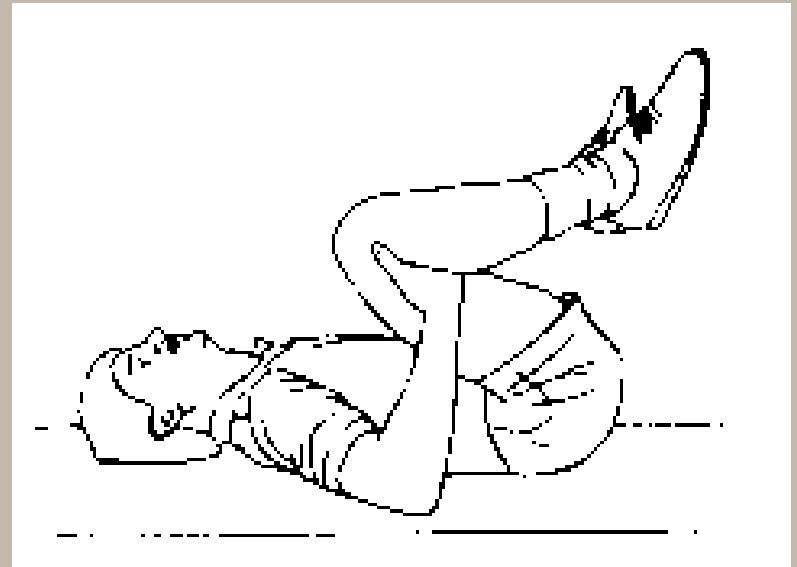
- Partial sit-up: Lie on back, knees bent and feet flat on floor. Slowly raise head and shoulders off floor and reach both hands toward your knees. Count to ten, repeat five times.



Exercises To Decrease Strain On Your Back

Knee raises

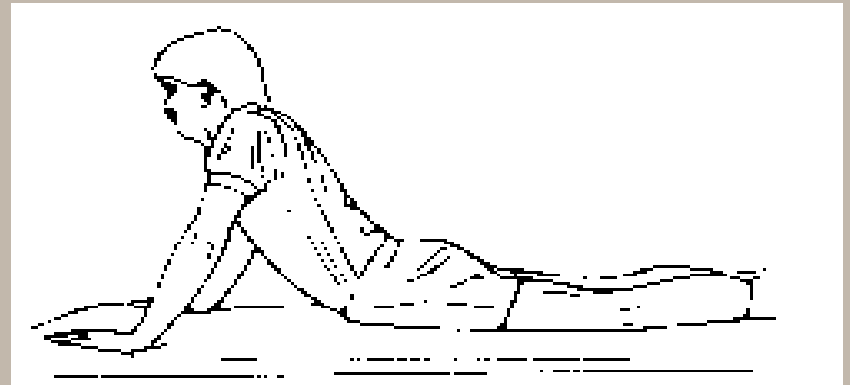
- Lie on back, knees bent, feet flat on floor. Place hands under knees and pull knees to chest. Do not raise head. Do not straighten legs as you lower them. Start with five repetitions, several times a day.



Exercises To Decrease Strain On Your Back

Prone Press Ups

- Lie on stomach, hands under shoulders, elbows bent and push up. Raise top half of your body as high as possible. Keep hips and legs on floor, hold for one or two seconds. Repeat ten times, several times a day.



Exercises To Decrease Strain On Your Back

Back Extensions

- Stand with feet apart. Place hands in small of back, keep knees straight. Bend backward at waist as far as possible, hold for one or two seconds. Repeat as needed.



Remember

Take care of your back; it will take care of you

- Exercise
- Utilize legs when lifting, keep Lordosis in back, butt back
- Avoid heavy lifting alone (get help)
- Avoid twisting at the waist when lifting or carrying objects
- Always watch where you're going
- Remain aware of the potential for injury

Questions?

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