



PATIENT
EDUCATION



Back Pain

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AMERICAN UNIVERSITY of BEIRUT MEDICAL CENTER

المركز الطبي في الجامعة الأمريكية في بيروت

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What is back pain?

Back pain can be felt anywhere through your spine from your neck to your hips. It can result from different causes. The pain can vary in intensity from mild to severe. It can start suddenly or progress slowly. It can be intermittent or persistent. Back pain can be acute (short term) lasting from a few days to a few weeks. Less commonly, it can be chronic (long term) lasting for three months or more.

What causes back pain?

- **Sprain and strain:** A sprain is the stretching or tearing of ligaments, which are the bands that connect one bone to another. Whereas a strain is the stretching or tearing of a muscle or tendon, which is the cord connecting a bone to a muscle. They can result from heavy lifting, overstretching, lifting an object improperly, etc.
- **Traumatic injury:** An injury due to an accident, fall, etc.
- **Degenerative disc disease:** A condition in which the spinal discs wear out with advanced age. A disc is the soft pad located between each vertebrae in the spine.
- **Herniated or ruptured discs:** A condition in which the discs bulge outward or rupture.
- **Sciatica:** A condition that occurs due to the compression of the sciatic nerve (large nerve extending from the lower spine to the back of the leg to the toes).
- **Osteoarthritis:** An inflammatory chronic disease that can affect the spine.
- **Spinal stenosis:** A condition characterized by narrowing of the space around the spinal cord.
- **Spondylolisthesis:** A condition during which a vertebra slips out of place.
- **Abnormal spinal curvature:** Such as scoliosis (sideways curvature of the spine), lordosis (excessive inward curvature of the spine), etc.
- **Fractures of the vertebrae:** Fractures may develop due to different causes including osteoporosis. Osteoporosis is a disease that weakens the bones and makes them more likely to fracture after a simple fall or bump.
- **Infections:** Some infections might involve the vertebrae, discs, sacroiliac joint (joint connecting the back to the pelvis), etc.
- **Tumors:** Some tumors might start in the back while others might spread to the back.
- **Non-spinal causes:** These include kidney stones, abdominal aortic aneurysms (enlargement of the abdominal aorta which is the main artery that supplies blood to the body), etc.

What are the symptoms of back pain?

Symptoms of back pain vary from one person to another. They include:

- Stabbing pain
- Muscle pain
- Pain radiating to the lower extremities
- Pain that gets worse when moving such as sitting, bending, lifting, standing, or walking

How is back pain diagnosed?

Your doctor will ask you questions about your medical history and examine your back. He/she may request one or more of these tests to determine the cause of your pain.

- **X-ray:** An imaging test that produces images of the bones in your back.
- **Computed tomography (CT) scan:** An imaging test that produces detailed three dimensional images of your back from different angles. It is more detailed than the X-ray. **Please refer to the "Computed Tomography Scan" handout for more information.**
- **Magnetic resonance imaging (MRI):** An imaging test that produces more detailed images of structures inside your back by using radio waves and a magnetic field. **Please refer to the "Magnetic Resonance Imaging" handout for more information.**
- **Bone scintigraphy:** An imaging test that produces images of the bones to look for bone damages or tumors. It is done by using radioactive material. **Please refer to the "Bone Scintigraphy" handout for more information.**
- **Electromyography (EMG):** A test that measures the electrical activity of nerves and muscles. **Please refer to the "Electromyography" handout for more information.**
- **Blood test:** A test that can help detect any infection or other conditions that may be causing your pain.

What are the treatment options for back pain?

Treatment options for back pain vary depending on whether your pain is acute or chronic, its cause, and severity.

- **Medications:** Your doctor may prescribe one or more medications to relieve your pain. They include:
 - Over the counter painkillers: Such as acetaminophen or nonsteroidal anti-inflammatory drugs (NSAIDs) such as ibuprofen.
 - Topical painkillers: Creams, gels, etc. that can be applied on the skin over the painful area.
 - Opioids: Medications that treat moderate to severe pain. They include codeine, morphine, etc.
 - Injections: Local anesthetics, steroids, or botulinum toxin injections in the affected painful tissue or joint may help relieve your pain.
- **Physical therapy:** Your doctor may recommend physical therapy since it helps in strengthening the muscles of your back, improving your mobility and flexibility, etc. It includes several treatments such as muscle-release exercises, electrical stimulation, etc.
- **Surgery:** Your doctor may recommend a surgical procedure when other treatments fail to relieve pain from serious musculoskeletal injuries or nerve compressions.

How can I prevent having back pain?

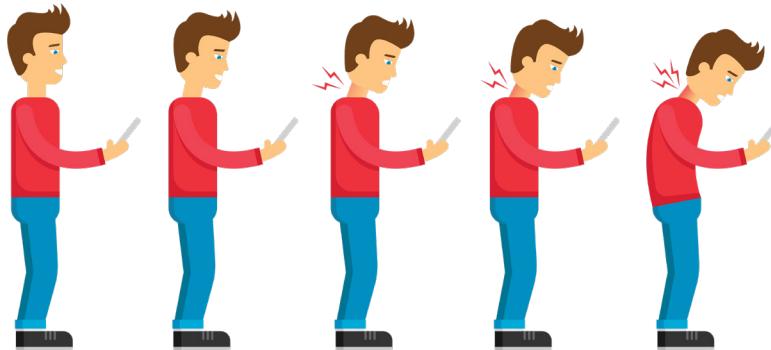
There are many lifestyle changes you can adopt to keep your back healthy and prevent having back pain.

- Perform exercises that strengthen the muscles of your back and abdomen and support your spine such as swimming, walking, etc.
- Use good posture (such as standing straight without slouching and keeping your feet shoulder-width apart) to relieve pressure on your lower back.
- Try to avoid bending your head when using your phone or tablet to prevent pressure on your spine. Raise your phone or tablet to the level of your eyes instead.
- Avoid sitting for long periods of time.
- Avoid heavy lifting. If you have to lift an object:
 - Keep your back straight
 - Bend at the knees
 - Bring yourself up with your hips and legs
 - Hold the object close to your chest no matter how light it may be
- Maintain a healthy weight to prevent pressure on the muscles of your back.

- Quit smoking. Smoking increases the risk of back pain and affects your back in the following ways:
 - It decreases the blood flow to your spine.
 - It causes muscle weakness in the back area which leads to chronic back pain.
 - It helps in increasing the cartilage friction leading to pain.
 - It may lead to the failure of spinal surgeries because it prevents the bones from healing.
 - It increases the brain's sensitivity to pain which increases back pain symptoms.
 - It decreases bone density leading to an increase in the risk of osteoporosis at an early age.

HOW IS THE SMARTPHONE DAMAGING YOUR NECK

0 degrees 4.5-5.5 Kg	15 degrees 12 Kg	30 degrees 18 Kg	45 degrees 22 Kg	60 degrees 27 Kg
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When should I contact my doctor?

Contact your doctor immediately if you experience:

- Back pain that does not improve with rest or wakes you up from sleep
- Back pain that occurs after an injury to your back or fall
- Back pain that is accompanied with:
 - Numbness or weakness in the legs
 - Unexplained weight loss
 - Fever
 - Loss of bladder or bowel control

