

# NURSING CARE OF PATIENT WITH LOW BACK PAIN

PRESENTED AT A SEMINAR ON BACK ACHE CARE  
ORGANIZED BY SOCIETY FOR THE STUDY OF PAIN IFE/IJESHA ZONE  
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# Low back pain



# Introduction

- Low back pain has been identified as a common reason for absence from work.
- One of the major reasons for seeking medical treatment.
- Back pain can affect people of any age, for different reasons.
- Nurses will encounter it themselves, and in their patients and colleagues
- It can be uncomfortable and debilitating
- The chance of developing back pain increases with age

# Introduction

- Why is low back pain a common ?

- Lumber region

1. Bears most of the weight of the body
2. Is the most flexible region of the spinal column
3. Contains nerve roots that are vulnerable to injury or disease
4. Has an inherently poor biomechanical structure

# Definition

- Low back pain is an ache or pain anywhere in the lower back region, and sometimes all the way down to the buttocks and legs.
- Previous occupation and degenerative disk disease are important factors in back pain development

# Incidence

- Back pain is 2<sup>nd</sup> only to headache as the most common pain complaint
- Approximately 60-80% of all adults will have at least one episode of low back pain in their lifetime.
- 40-50% will have a repeat episode in the same year
- 50% will have recurrence at some point.

# Causes

Frequent causes of back pain are:

- strained muscles or ligaments
- a muscle spasm
- muscle tension
- damaged disks
- injuries, fractures, or falls

# Causes

Activities that can lead to strains or spasms include:

- lifting something improperly
- lifting something that is too heavy
- making an abrupt and awkward movement

# Causes

Structural problems may also result in back pain, such as:

- **Ruptured disks**

- If the disk ruptures there will be more pressure on a nerve, resulting in back pain.

- **Bulging disks**

- a bulging disk can result in more pressure on a nerve and back pain

- **Sciatica**

- A sharp and shooting pain travels through the buttock and down the back of the leg, caused by a bulging or herniated disk pressing on a nerve.

# Causes

- **Arthritis**

- Osteoarthritis can cause problems with the joints in the hips, lower back, and other places.

- **Abnormal curvature of the spine**

- If the spine curves in an unusual way, back pain can result e.g scoliosis

- **Osteoporosis**

- Bones, including the vertebrae of the spine, become brittle and porous, making compression fractures more likely.

- **Kidney problems:** Kidney stones or kidney infection can cause back pain.

# Causes

Medical conditions can lead to back pain.

- **Cauda equina syndrome**

- The cauda equine is a bundle of spinal nerve roots that arise from the lower end of the spinal cord resulting a dull pain in the lower back and upper buttocks, as well as numbness in the buttocks, genitalia, and thighs.

- **Cancer of the spine**

- A tumor on the spine may press against a nerve, resulting in back pain.

- **Infection of the spine:**

- A fever and a tender, warm area on the back could be due to an infection of the spine.

# Causes

- **Other infections**

- Pelvic inflammatory disease, bladder, or kidney infections may also lead to back pain.

- **Sleep disorders**

- Individuals with sleep disorders are more likely to experience back pain, compared with others.

- **Shingles**

- An infection that can affect the nerves may lead to back pain. This depends on which nerves are affected.

# Risk factors for low back pain

The following factors are linked to a higher risk of developing low back pain:

- occupational activities
- pregnancy
- a sedentary lifestyle
- poor physical fitness
- older age

# Some risk factors for low back pain

- obesity and excess weight
- smoking
- strenuous physical exercise or work, especially if done incorrectly
- genetic factors
- medical conditions, such as arthritis and cancer

# Lower back pain in women

- Lower back pain also tends to be more common in women than in men
- Possibly due to hormonal factors.
- Stress, anxiety, and mood disorders

# Clinical manifestation

- **Report of:**

- Acute back pain – lasting fewer than 3months
- Chronic back pain – 3months or longer without improvement
- Fatigue
- Radiculopathy – pain radiating down the leg
- Sciatica – pain radiating from an inflamed sciatic nerve

# Red alert symptoms

Back pain accompanied with any of the following:

- weight loss
- fever
- inflammation or swelling on the back
- persistent back pain, where lying down or resting does not help
- pain down the legs
- pain that reaches below the knees

# Red alert symptoms

- a recent injury, blow or trauma to the back
- urinary incontinence
- difficulty urinating
- fecal incontinence, or loss of control over bowel movements
- numbness around the genitals
- numbness around the anus
- numbness around the buttocks

# Diagnostic procedures for low back pain

- **X-ray of the spine**

- can show the alignment of the bones and detect signs of arthritis, fracture, dislocation, scoliosis.

- **MRI or CT scans**

- can reveal herniated disks or problems with tissue, tendons, nerves, ligaments, blood vessels, muscles, and bones.

- **Bone scans**

- can detect bone tumors or compression fractures caused by osteoporosis

# Diagnostic procedures

- **Electromyography or EMG**

- This can confirm nerve compression, which may occur with a herniated disk or spinal stenosis.

- **Blood test**

- full blood count, WBC, Blood culture if infection is suspected.

# Types of low back pain

- **Acute pain**

- starts suddenly and may last for up to 6 weeks.

- **Chronic or long-term pain**

- develops over a longer period, lasts for over 3 months, and causes ongoing problems.

# Treatments

## Home treatment

- Over-the-counter (OTC) pain relief medication
  - usually non-steroidal anti-inflammatory drugs ([NSAID](#)), such as ibuprofen, can relieve discomfort.
  - Applying a hot compress or an ice pack to the painful area may also reduce pain.
- Resting from strenuous activity can help
- But moving around will ease stiffness, reduce pain, and prevent muscles from weakening.

# Medical treatment

- **Medication**

- Back pain that does not respond well to OTC painkillers may require a prescription NSAID.
- Codeine or hydrocodone, which are narcotics, may be prescribed for short periods.
- In some cases, muscle relaxants may be used.
- Antidepressants, such as amitriptyline may be prescribed

# Medical treatment

- **Physical therapy**

- Applying heat, ice
- ultrasound and electrical stimulation
- some muscle-release techniques to the back muscles and soft tissues
  - may help alleviate pain.

# Medical treatment

- **Cortisone injections**

- Cortisone is an anti-inflammatory drug.
- these may be injected into the epidural space, around the spinal cord.
- helps reduce inflammation around the nerve roots.
- may also be used to numb areas thought to be causing the pain.

- **Botox:** Botox (botulism toxin), according to some early studies, are thought to reduce pain by paralyzing sprained muscles in spasm. These injections are effective for about 3 to 4 months.

# Medical treatment

- **Traction**

- Pulleys and weights are used to stretch the back.
- This may result in a herniated disk moving back into position.
- It can also relieve pain, but only while traction is applied.

- **Cognitive behavioral therapy (CBT)**

- CBT can help manage chronic back pain by encouraging new ways of thinking.
- It includes relaxation techniques and ways of maintaining a positive attitude.

# Surgical intervention

- Surgery for back pain is very rare.

If a patient has a herniated disk with persistent pain, and nerve compression which can lead to muscle weakness, surgery may be an option.

Examples of surgical procedures include:

- **Fusion:** Two vertebrae are joined together, with a bone graft inserted between them. The vertebrae are splinted together with metal plates, screws or cages.
- **Artificial disk:** An artificial disk is inserted; it replaces the cushion between two vertebrae.
- **Discectomy:** A portion of a disk may be removed if it is irritating or pressing against a nerve.

# Surgical intervention

- **Partially removing a vertebra:** A small section of a vertebra may be removed if it is pinching the spinal cord or nerves.
- **Injecting cells to regenerate spine discs**
  - New biomaterials developed by Scientists from Duke University, North Carolina
  - It can deliver a booster shot of reparative cells to the nucleus pulposus, effectively eliminating pain caused by degenerative disc disease.

# Nursing care of patient with low back pain

\*Nurses play a vital role in the prevention and management of low back pain

- Assessment and history taking

- Assess the discomfort – location, severity, duration, characteristics, radiation, and weakness in the legs.
- Assess environmental variables
- Work situations and family relationships
- Assess the effect of chronic pain on the emotional well-being of the client

# Nursing care

- **Physical examination**

- Inspect the spinal curve
- Check any leg length discrepancy
- Inspect pelvic crest and shoulder symmetry
- Observe posture and gait
- Palpate para-spinal muscles and notes spasm and tenderness
- Evaluates nerve involvement by assessing deep tendon reflexes, sensations, and muscle strength.

# Nursing management

- Major nursing goals for the client
  - Relief of pain
  - Improved physical mobility
  - Improved self-esteem
  - Weight reduction (as necessary)
  - Educate the client about the health problem and appropriate exercise

# Nursing care

- Pain management

- Goal : Client reports satisfactory pain relief with pain <4 on 10-point scale

- Intervention

- Perform a comprehensive assessment of pain to include:

- location, characteristics, onset/duration, frequency, quality, intensity or severity of pain, and precipitating factors.

- \*to plan appropriate intervention

# Nursing care

- Intervention

- Evaluate effectiveness of pain-control measures used through ongoing assessment of pain experience

- Ensure client receives attentive analgesic care

- Promote adequate rest/sleep

- \*to facilitate pain relief and to reduce paravertebral muscle spasm

- Provide client with optimal pain relief with prescribed analgesic

- \*Help decrease pain and relaxation

# Nursing care

- Intervention

- Teach the use on non-pharmacologic technique e.g. relaxation, distraction, hot/cold application, massage etc

- \*to promote muscle relaxation and decrease tension

## Positioning

- Place client in the designated therapeutic position

- To promote comfort by reducing stress on lower back muscles

# Nursing care

## Physical mobility

Goal: improve physical mobility

- Return to prior level of mobility within prescribed restrictions
- Demonstrate performance of prescribed exercise

## Intervention

- Determine limitations of joint movement and effect on function
- Initiate pain-control measures before beginning joint exercise to assist in completion of exercises

# Nursing care

- Intervention

- Encourage range of motion (ROM) exercises, according to regular, planned schedule

- \*To maintain all joints in normal ROM

- Encourage ambulation

- \*To promote gradual and progressive return to previous mobility level

- Provide written instruction for exercise

# Nursing care

- Improved self-esteem

## Intervention

- Use therapeutic communication strategies to acknowledge pain experience
- Convey acceptance of patient's response to pain
- Referral to a psychologist for assessment and management of stressors contributing to the low back pain and related depression

# Nursing care

- Client and family teaching/education

- Advice client to maintain appropriate body weight
- Teach the client how to minimize back pain and avoid repeat episode
- Teach good body mechanics and posture
- Explore with client factors that relieve/worsen pain to make adjustment in lifestyle
- Role-related responsibilities may have to be modified

# Prevention

- **Address the risk factors**

- **Exercise**

Regular exercise helps build strength and control body weight

- **Diet**

Diet that includes enough calcium and vitamin D, as these are needed for bone health.

- **Smoking**

Smokers have higher percentages of back pain incidences compared to non-smokers of the same age, height, and weight.

# Prevention

## ➤ **Body weight**

The difference in back pain risk between obese and normal-weight individuals is considerable.

## ➤ **Posture when standing**

Stand upright, Make sure you have a neutral pelvic position

## ➤ **Posture when sitting**

A good seat for working should have good back support, arm rests and a swivel base.

## ➤ **Lifting**

When lifting things, use legs to do the lifting, rather than your back.

# Prevention

## ➤ **Shoes:**

Flat shoes place less of a strain on the back.

## ➤ **Driving**

Have proper support for the back.

## ➤ **Bed**

Use mattress that keeps your spine straight

Avoid a pillow that forces the neck into a steep angle.

# Conclusion

- Low back pain are leading health problem and causes of disability.
- The functional and psychological limitations for the patient may be severe
- Nurses provides care in both inpatient and outpatient settings, therefore, nurses should be cognizant of these problem and the effect it may have on these patients.



**THANKS  
FOR  
LISTENING**

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