

VOL. 1 | THE PHYSIO BROTHERS | ISSUE 1

PHYSIOTRENDS

Advancing Physiotherapy Through Knowledge & Innovation

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FIFA 11+: An Effective Injury
Prevention Program for

SOCCE R PLAYERS

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Differences in how older men
and women respond to

FLU SHOTS



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FOUNDER'S NOTE

Vol. 1, Issue 1

Dr. DARSHAN PARMAR
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Dear Readers,

Welcome to the inaugural issue of PhysioTrends, where we aim to bridge the gap between the latest advancements in physiotherapy and the everyday practice of healthcare professionals.

PhysioTrends was born out of a passion for innovation and a commitment to enhancing patient care through evidence-based practices. In each issue, we'll delve into the cutting-edge research, emerging technologies, and best practices shaping the field of physiotherapy.

I would like to express my heartfelt gratitude to Dr. Jaspreet Kaur Kang, our esteemed Chief Editor, whose vision, expertise, and dedication have been instrumental in shaping this endeavor.

I would also like to extend my sincere thanks to KD Institute of Physiotherapy for their unwavering support and encouragement.

Our team of experts, alongside renowned contributors from around the globe, will provide insightful articles, case studies, and interviews to keep you informed and inspired. Whether you're a practitioner or a student just starting out, PhysioTrends is your go-to resource for staying at the forefront of this dynamic field.

As we embark on this journey together, I invite you to explore, learn, and engage with us. Your feedback and support are invaluable as we strive to make PhysioTrends a trusted companion on your professional path.

**Here's to unlocking
new horizons in
physiotherapy !**

PHYSIOTRENDS
Advancing Physiotherapy through Knowledge & Innovation

FROM THE EDITORIAL DESK

Celebrating a Milestone: Introducing Physiotrend E-Magazine's Inaugural Edition

I'm thrilled to share that I've embarked on a new chapter as the Editorial Chief of Physiotrend E-Magazine, overseeing its first edition and launch. This marks an exciting step in my career journey, and I'm honored to be part of this innovative venture.

I'd like to extend my heartfelt congratulations to the founder of Physiotrend E-Magazine Dr Darshan Parmar And Dr. Sujay Makwana for envisioning and bringing this platform to life. Your dedication and vision have laid the foundation for an exciting new resource in the field of physiotherapy.

Together, we're poised to create a dynamic and informative space that will serve as a valuable resource for physiotherapists, researchers, and enthusiasts alike. I'm excited to collaborate with you and the entire team as we bring Physiotrend E-Magazine to life and make a meaningful impact in our field.



Dr. Jaspreet Kaur Kang

Principal at KD Institute of Physiotherapy,
Ahmedabad
Chief Editor of PhysioTrends

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PHYSIOTRENDS

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— Dr. Rimjhim Pandey

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AND LOW BACK PAIN



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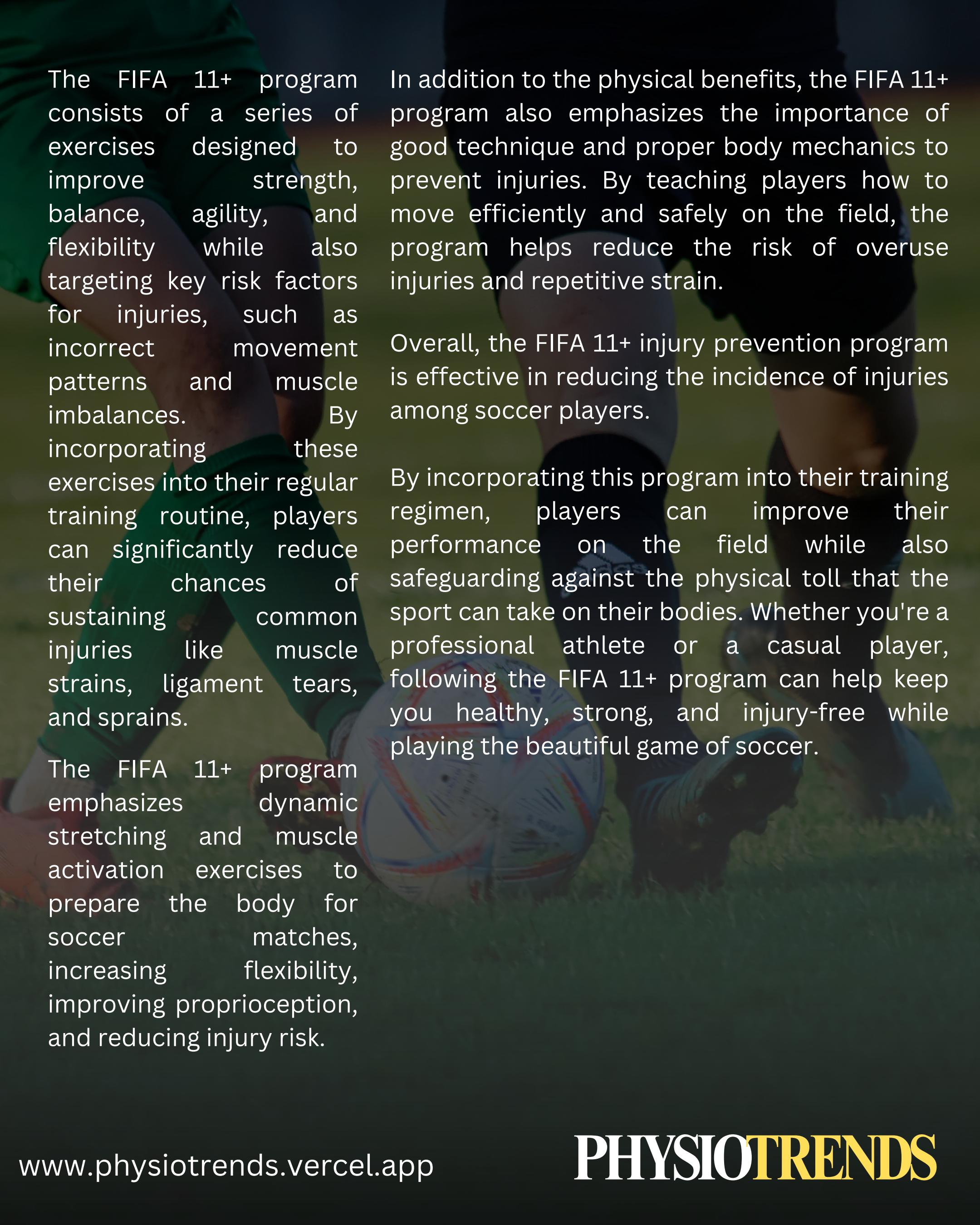
#PhysioTrends

FIFA 11+: AN EFFECTIVE INJURY PREVENTION PROGRAM FOR SOCCER PLAYERS

Soccer is a physically demanding sport that requires players to be in excellent physical condition to perform at their best. However, the risk of injuries is always present due to the high-intensity nature of the game. To address this issue, FIFA developed the FIFA 11+ injury prevention program, aimed at reducing the risk of injuries among soccer players of all levels.



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The FIFA 11+ program consists of a series of exercises designed to improve strength, balance, agility, and flexibility while also targeting key risk factors for injuries, such as incorrect movement patterns and muscle imbalances.

By incorporating these exercises into their regular training routine, players can significantly reduce their chances of sustaining common injuries like muscle strains, ligament tears, and sprains.

The FIFA 11+ program emphasizes dynamic stretching and muscle activation exercises to prepare the body for soccer matches, increasing flexibility, improving proprioception, and reducing injury risk.

In addition to the physical benefits, the FIFA 11+ program also emphasizes the importance of good technique and proper body mechanics to prevent injuries. By teaching players how to move efficiently and safely on the field, the program helps reduce the risk of overuse injuries and repetitive strain.

Overall, the FIFA 11+ injury prevention program is effective in reducing the incidence of injuries among soccer players.

By incorporating this program into their training regimen, players can improve their performance on the field while also safeguarding against the physical toll that the sport can take on their bodies. Whether you're a professional athlete or a casual player, following the FIFA 11+ program can help keep you healthy, strong, and injury-free while playing the beautiful game of soccer.

ROLE OF PHYSIOTHERAPY IN OSTEONECROSIS OF HIP AFTER COVID - 19

Osteonecrosis of hip or Avascular necrosis (AVN) of hip, is the vascular disruption of the hip joint lead to the death of the femoral head. AVN is more common in males than in females. Most Commonly clinically presents as the insidious onset of pain around the hip and restricted range of motion of hip Join that lead to patients have a problem in wait bearing and during walking. Patients cannot walk properly.



Dr. Chirag Solanki (PT), MPT Neuro & Spine,
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RK University.

Coronavirus disease (COVID-19) is an infectious disease caused by the SARS-CoV-2 virus. Most people infected with the virus will experience mild to moderate respiratory illness and recover without requiring special treatment. D-dimer elevation is often observed in patients with acute COVID-19 due acute lung injury itself or due thromboembolic complications that occur frequently in COVID-19. Thromboembolism can damaged nearby blood vessels and reduce blood flow to bones lead to AVN can developed. Those who are suffering from Mild to Moderate COVID-19 they take more amount of corticosteroids during the acute phase of infection. Use of high-dose corticosteroids, such as prednisone can increase lipid levels in the blood, reducing blood flow. Due to Increase Lipid Levels and more Thromboembolism the cases of AVN Hip is increasing day by day.

Physiotherapy Can be used for relief of symptoms of Pain and Restricted ROM of hip joint. It can be help to prevent of disease progression and Improvement of functional activity and ADL. Physical therapy treatment focuses on exercises to maintain joint mobility and strengthen the muscles around the affected hipjoint. Exercises will focus on the muscles of the hip and thigh but will also include exercises for the core area as they play a large supporting role. To improve functionality, it is important to implement endurance training and coordination training in a more advanced stage of the therapy

HAMSTRING TIGHTNESS AND LOW BACK PAIN



**Dr. Rimjhim Pandey
MPT**

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Low back pain is defined as pain and discomfort, localized below the costal margin and above the inferior gluteal folds, with or without leg pain. This profoundly affects daily activities and frequently impairs functional tasks. Low back pain (LBP) affects nearly 60-80% of people throughout their lifetime. One of the suspected etiologies of LBP is lack of hamstring flexibility. Sitting at a desk all day can cause tightness and a shortening of hamstring muscles, and therefore leads to back pain.

Student Corner

The hamstring group refers to the posterior thigh muscles and act as strong flexors of the knee and weak extensors of the hip. Hamstring group of muscles includes semitendinosus, semimembranosus, and long and short heads of the biceps femoris. All together flex the knee but the short head of biceps femoris alone extends the hip. Blood supply from the perforating branches of the deep femoral artery ,also known as the profunda femoris artery.

We might be wondering how hamstring tightness could result in back pain. The body is interconnected, and prolonged sitting without stretching can cause the hamstrings to constrict and shorten. These muscles originate from the ischial tuberosity of the pelvis.

The pelvis tilts posteriorly as a result of tight hamstrings. As the pelvis and the lumbar vertebrae work together, when the pelvis tilts posteriorly, the lumbar vertebrae are forced to flex forward.

The pelvis, lumbar spine, and surrounding muscles are put under more tension and strain as a result of this. Blood supply to the hamstrings will be reduced if they are tight. Therefore, muscles are working with less capacity, which results in low back pain.

The predominance of tightness is greater in female 96% than in male 4%. Its incidence is high in university students from 18-25 years. Stretch to reduce the pain .The stretches can gradually lengthen and reduce tension in the hamstring muscle, and in turn reduce stress felt in the lower back.

Differences in how older men and women respond to flu shots



**Dr. Monali Tanna (PT), MPT,
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As people age, their immune systems vary significantly, resuming differences in how older men and women respond to flu vaccines. According to research, elderly men's and women's immunological responses to influenza vaccine vary significantly.

Hormonal differences between men and women have a significant role in these discrepancies.

Estrogen, which is found in greater amounts in women, has been demonstrated to improve immunological response to vaccinations, particularly flu injections. According to studies, women may have a stronger immunological response to vaccination than males because of hormonal influences.

Furthermore, age-related immune system changes, known as immunosenescence, influence how older people respond to immunizations. In general, older persons have a weakened immune system, which leads to a worse response to vaccination. However, research suggests that women may maintain greater immune function as they age than males, perhaps leading to a more effective response to flu vaccines.

In addition, variations in the way older men and women react to flu vaccines might be attributed to hereditary factors. It is known that individual reactions to vaccination are influenced by differences in genes linked to immune

function and vaccine response.

Variations in vaccination effectiveness between older men and women have been identified; these discrepancies may be partially explained by genetic differences.

In summary, whereas vaccinations against influenza protect against the disease for older men and women alike, there are notable variations in the immune responses of these populations. Comprehending these distinctions is crucial for refining vaccination plans for senior citizens and creating specialized methods to increase vaccination efficacy in this demographic.



SLUMP TEST

THE DIRECTION PROVIDING TEST TO DISC DISEASES OF THE LUMBAR SPINE

**Dr. Meghana Pandya Kacked
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Co-founder - Prayosha Physiotherapy
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The slump test is a provocative test that produce maximal stress on the dura matter at spinal cord. It is covered under a neural tension test used to detect altered neurodynamic and neural tissue sensitivity in the patients with suspected disc protrusion. According to cyriax, this test determines the relationship between the patient's symptoms and restriction of movement due to pain sensitive structures within the vertebral canal or intervertebral foramina.

A very popular straight leg raise test is usually preferred by every physiotherapist to differentiate the causes of lower back pain, but SLR on its own is not sufficient to reveal canal and foraminal component. So, by using the slump test canal and foraminal structures are put on maximal stretch to evolve its involvement. Description and technique of performance might change among different sources but the aim of the test is the reproduction or provocation of pain which is common in every literature.

TEST POSITION: -
Sitting

DESCRIPTION OF THE TEST: -

- (1) **STEP 1: - SYMPTOMS IN THE ERECT POSTURE**
 - Patient sits erect, cervical- thoracic and lumbar spine should be in erect position.
 - No slouch / curved spine allowed.
 - Symptoms are defined in this position.

(2) STEP 2: - SYMPTOMS AND RANGE IN SLUMPED THORACIC AND LUMBAR AREAS

- Patient slumps and therapist assist the patient to full flexion of the thoracic and lumbar spines, preventing flexion of spine.
- The symptom reproduction to the slumped thoracic and lumbar areas are noted.

(3) STEP 3: - SYMPTOMS AND RANGE IN SLUMPED CERVICAL, THORACIC AND LUMBAR AREAS

- In addition to slumped lumbar and thoracic areas, therapist adds cervical spine full flexion and notice the symptoms.

(4) STEP 4: - SYMPTOMS AND RANGE IN FULLY SLUMPED SPINE WITH KNEE EXTENSION

- Therapist adds and assist the patient to extend knee joint and determine the response of patient.

(5) STEP 5: - SYMPTOMS AND RANGE IN SLUMPED POSITION WITH KNEE EXTENSION AND ANKLE DORSIFLEXION

(6) STEP 6: - SYMPTOMS AND RANGE CHANGES WITH RELEASE OF CERVICAL SPINE FLEXION

- While the patient is held in the position of maximum stretch (i.e. complete spine in full flexion with knee extension and ankle dorsiflexion) therapist release the cervical spine from flexion and note the change in symptoms.

- In the patients with spontaneous onset pain the response will be release of pain with release of cervical spine release.

(7) STEP 7: - SLUMP TEST WITH EXTENSION OF BOTH KNEES AND DORSIFLEXION OF BOTH ANKLES

DIAGNOSTIC ACCURACY FOR LUMBAR DISC HERNIATION

- SENSITIVITY: - 84
- SPECIFICITY: - 83

RATIONALE

- The test's result can be interpreted in many ways. While complete flexion of spine and hip with extended lower extremity, the sciatic nerve along with respective nerve roots are put on tension to detect the potential disc herniation and stress on the nerve.

INTERPRETATION OF TEST

- Positive test is when pain is reproduced with neural symptoms.
- Negative test is when pain is not reproduced and no neural symptoms appear.

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