

## Back Conditions & Considerations to Exercise



Modern Pilates

EDUCATING MINDS TO STRENGTHEN BODIES

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Modern Pilates and Later Life  
Course Tutors

### Back Pain and Older Adults

- A slipped disc is a common cause of pain in younger adults however this is less likely to occur after the age of 60.
  - In older adults back pain often becomes chronic, typically cycling between improving for a while then coming back
  - Sedentary lifestyle will contribute to back pain
  - Often stiffness is interpreted as 'bad' pain in those less active
- Also Consider
- Cancer
  - Infections
  - General degenerative conditions of the spine.

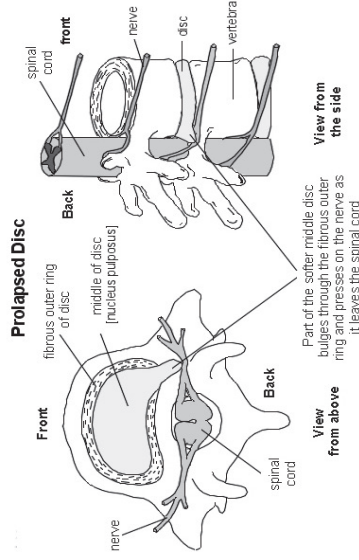
### Sciatica

- **Sciatica** is a set of symptoms including pain that may be caused by general compression and/or irritation of one of five nerve roots that give rise to the sciatic nerve, or by compression or irritation of the sciatic nerve itself.
- Spinal disc herniation
- **Degenerative Disc Disease**
- **Spinal stenosis**
- Piriformis syndrome

### Symptoms of Sciatica

- Pain
- Numbness
- Loss of use
- The lower down the pain / numbness the more the nerve is compressed
- **Ask.....**
- Have you had diagnosis?
- What advice have you been given?
- What exercise have you been given?

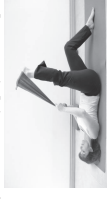
### Prolapsed and Herniated Disc



### Prolapsed Disc - Considerations to Exercise:

Sciatica caused by Disc Herniation - Prolapsed Disc

- Extension good choice, *trunk flexion contra-indication*
- Mobility within pain free range – stiffness is to be expected
- Trunk Stability standing and mat based
- Hamstring stretch is generally ok however - take care and avoid the foot flexion as this may aggravate condition unless prescribed by physiotherapist

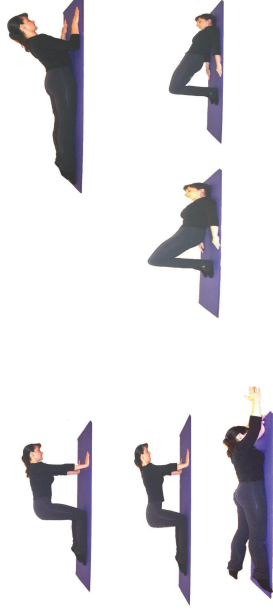


## Cont:

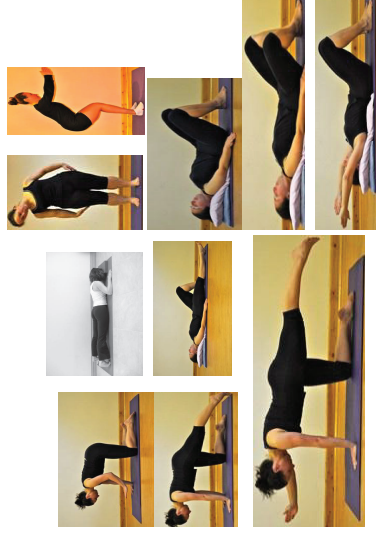
- Strengthen glut max and glut med in standing and matbased
- Teach correct bending and lifting – observe correct lumbar pelvic rhythm
- Avoid sitting for long periods
- Consider seated position use pillows support spine and for feet if shorter legs
- Buttocks should be higher than knees in seated



## Suggested Exercise (these may need modification for older adults)



## Suggested Exercise (these may need modifications for some older adults and for various types of herniated disc)

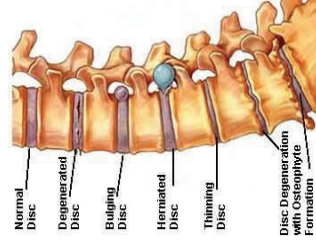


## Degenerative Disc Disease

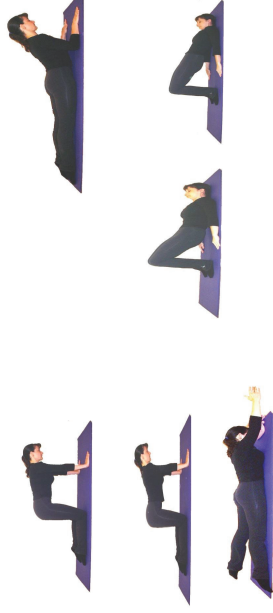
- The intervertebral discs dry out, becomes brittle and subject to tears.
- This is more prevalent with lack of movement and sedentary life style as well as excessive over use.
- This leads to dysfunction, instability and inflammation
- Osteophytes (bony spurs) Are often formed which may cause

### Spinal Stenosis

#### Examples of Disc Problems



## Suggested Exercise (these may need modification for older adults)



## Suggested Exercise (these may need modifications for some older adults and for various types of herniated disc)



## Stenosis

- Spinal stenosis is a narrowing or stenosis of the spinal canal.
  - This can lead to pressure on the nerves and decreased space between the discs in the back.
- Exercise Consideration –
- perform moderate mobility exercises, moderate flexion may open the spine – avoid extension in lumbar spine and lumbar rotation.

## Degenerative Disc Disease Considerations

- General moderate mobility
- Pelvic and core stability
- Always work in pain free range



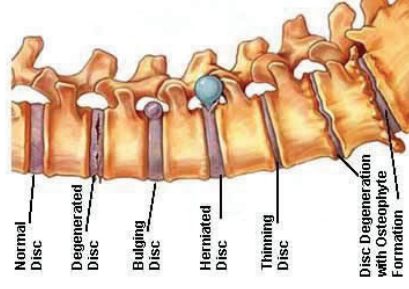
- Consider exercise suitability for other conditions e.g. osteoporosis or wrist injury



## Piriformis syndrome

- A neuromuscular disorder that occurs when the sciatic nerve is compressed or otherwise irritated by the piriformis muscle
  - This can produce symptoms such as pain, tingling and numbness in the buttocks and along the path of the sciatic nerve descending down the lower thigh and into the leg.
- Exercise Considerations:
- Avoid exercises that use external rotation of the hip (clam and prone squeeze)
  - Strengthen glut max and glut med
  - General pelvic and trunk stability

## Examples of Disc Problems



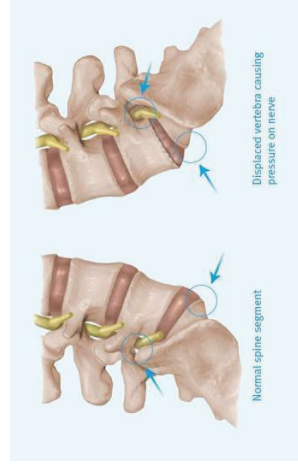
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## Spondylosis

- **Spondylosis** is degenerative arthritis of the joints between the spinal vertebrae, (known as Spinal Osteo-arthritis).
- Keep mobility with good quality movement exercises
- Avoid excessive exercise or exercises that increase symptoms of pain
- Spondylosis in the neck avoid lifting head and shoulders but use moderate neck mobility

## Spondylolisthesis

the anterior displacement of a vertebra or the vertebral column in relation to the vertebrae below



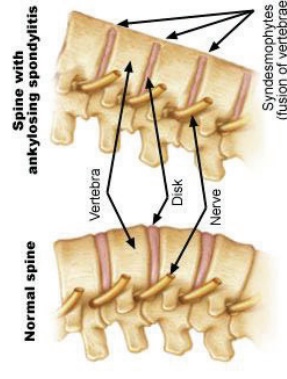
## Exercise prescription

- Extension of the spine will exacerbate Spondylolisthesis, as the vertebrae will be pushed more forward. As flexion of the spine will often alleviate the symptoms of Spondylolisthesis, part of a normal treatment regimen should include moderate flexion exercises to take the pressure off the back of the vertebrae.
- Maintain mobility – avoid extension exercise in the lumbar spine - reduce range of movement on lumbar rotation (hip rolls)



## Ankylosing Spondylitis

is an autoimmune disease involving the spine and sacroiliac joints.

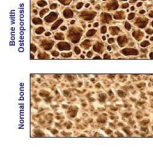


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- Spondylitis means inflammation in the joints of the spine. As the inflammation goes and healing takes place, bone grows out from both sides of the vertebrae and may join the two together; the stiffening this causes is called ankylosis.
- Exercise to keep as much mobility as possible. As RA reduce exercise during flare up.
- Use moderate moves in flexion – pelvic tilts lumbar cat stretch
- Extension and rotation may help improve pain

## Osteoporosis/Osteopenia

- Commonly referred to as 'brittle bone disease'. This bone disorder is characterised by low bone density and deterioration in the structure of the bone.
- Osteopenia is considered a precursor to osteoporosis.



## Exercise

- Bone Loading important !!!
- Avoid Trunk flexion – specifically any thoracic flexion (lumbar spine mobility such as partial shoulder bridge – lumbar cat stretch etc are good)
- Avoid Fixed rotation – they can rotate but should limit the range of movement
- Functional exercises are important
- Use a few mats to increase padding under the spine
- Perform standing and mat based exercises use strength based exercise

## Arthritis

- Osteoarthritis (OA) – a degenerative joint disease as a result of trauma to the joint, infection of the joint or age.
- Rheumatoid Arthritis (RA) – a chronic, systemic autoimmune disorder that causes the immune system to attack the joints where it causes inflammation and destruction.

## Exercise

- OA & RA – mobility range of movement exercises.
- OA & RA – Functional exercises.
- RA must not exercise during a flare up.
- OA may find too much loading of joint will aggravate the condition and cause pain later.
- Avoid locking out of joints
- Exercise may be uncomfortable but should not increase symptoms of pain
- Encourage regular and moderate activity
- Aqua exercise may be useful initially

## REMEMBER

- If in doubt – refer out!!!

