



Back Pain

Dr Marian Chan

Consultant Rheumatologist and Acute
Physician



Types of back pain

- **Mechanical back pain**
- **Inflammatory back pain**
- **Mixture of Mechanical and inflammatory back pain**



What is mechanical back pain ?

- **Common problem**
- **Usually caused by a simple muscular strain**
- **Four out of five of us at some point**
- **Usually aggravated by movement (compared to that of inflammatory back pain)**
- **Many people develop back pain for no obvious reason.**
- **Fortunately – most are self limiting – usually 6-12 weeks**



What is inflammatory back pain ?

- **Slow or gradual onset of back pain and stiffness over weeks or months , rather than hours or days**
- **Early morning stiffness and pain, wearing off or reducing during the day with movement**
- **Associated with early morning stiffness of more than one hour**
- **Improvement on mobilization**
- **Night awakening**
- **Improvement with anti-inflammatories**
- **May be associated with fatigue and tiredness**



ACUTE	CHRONIC	ACUTE on CHRONIC
Starts quickly and resolves within a few weeks	Pain last for months and years	People with Chronic back pain who have “ Bad Days”

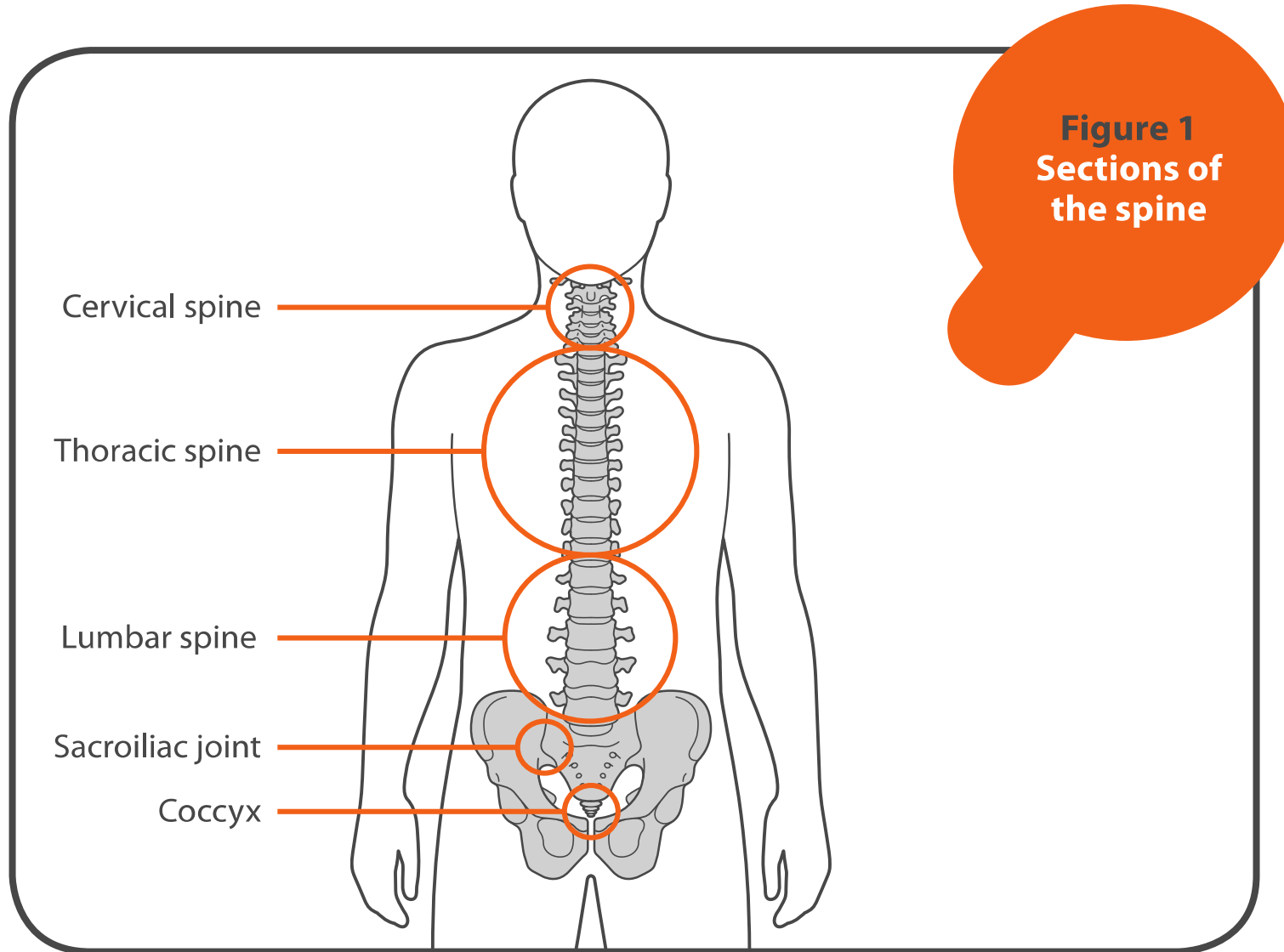
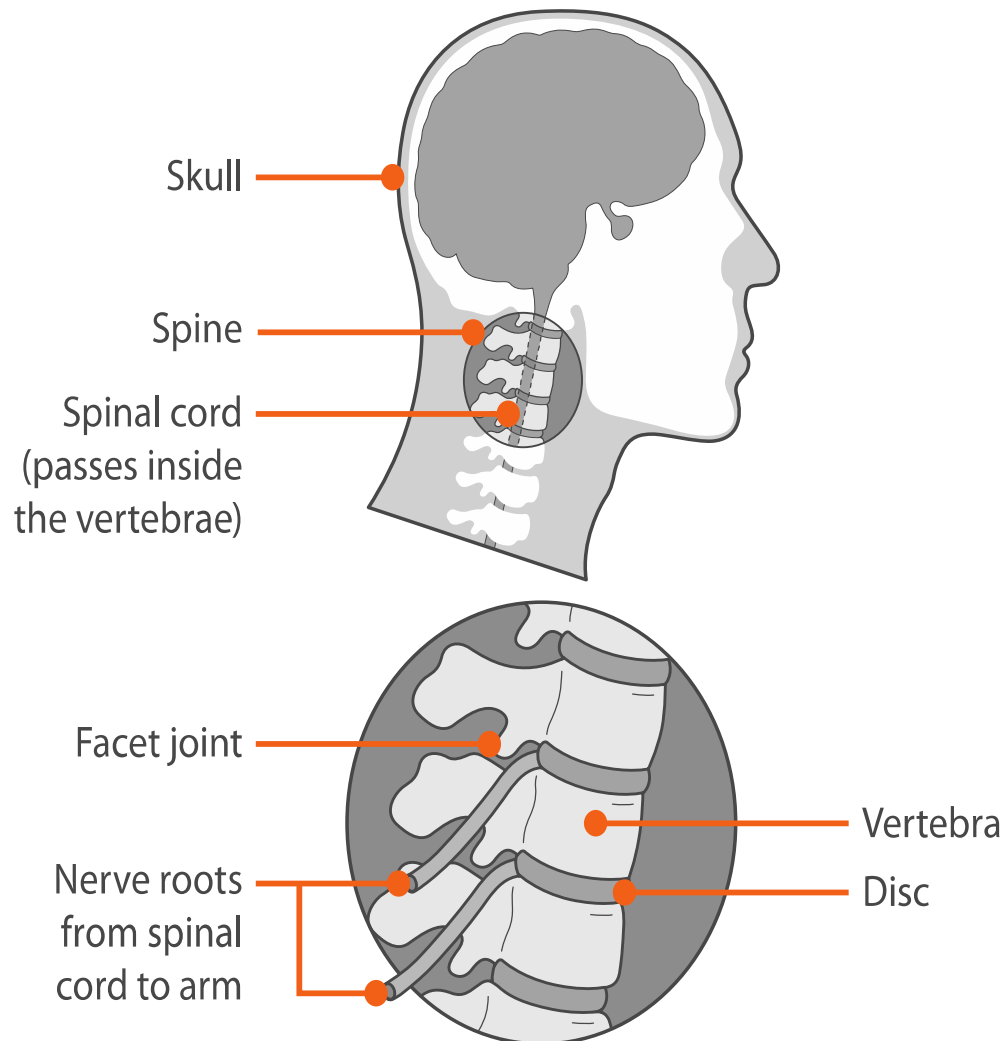


Figure 1
Sections of
the spine



Figure 2
Structure of the
head and neck



Cross-section
of the head and
neck with part of
the spine shown
magnified



What are the known causes of back pain?

- **Poor Posture**
- **Lack of exercise**
- **Muscle strain or sprain (Trauma etc)**
- **Specific conditions**



Specific conditions

- **Age related wear and tear – Spondylosis**
- **Sciatica**
- **Spinal stenosis**
- **Osteoporosis related fracture NOT osteoporosis itself**
- **Infection**
- **Tumours**
- **INFLAMMATORY CAUSES – Ankylosing Spondylitis / Psoriatic arthritis – Axial involvement**



Spondylosis

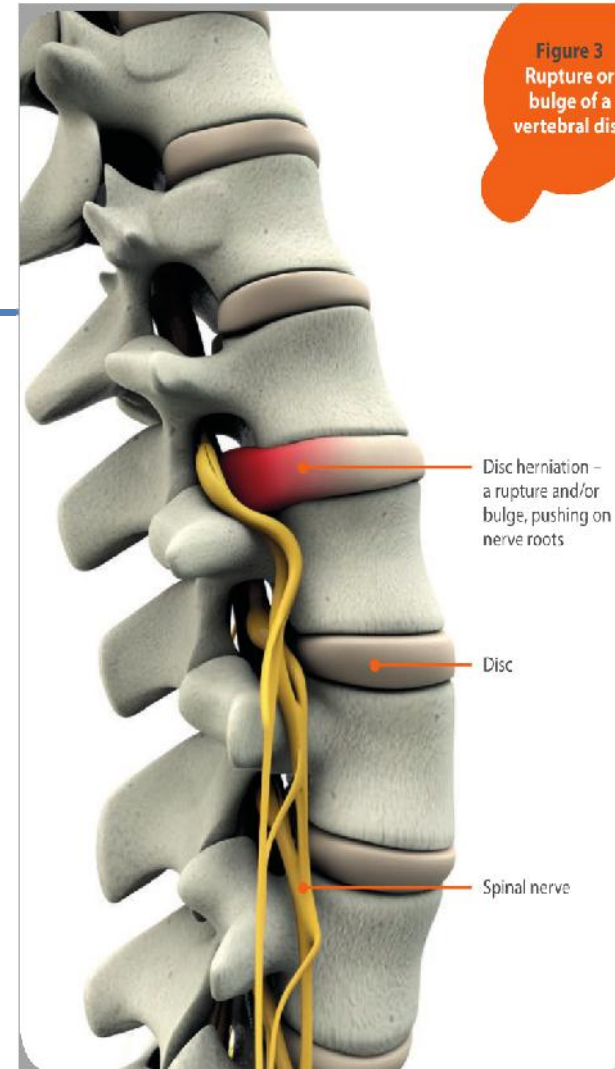
Wear and tear of the spine

- **Changes caused by osteoarthritis**
- **Discs in the spine become thinner and the spaces between the vertebrae become narrower**
- **Spurs of bone (osteophytes) may form at the edges of the vertebrae and facet joints.**



Sciatica

- **Back pain linked with pain, numbness or a tingling in the legs**
- **Due to irritation or squeezing of the sciatic nerve roots in the spine**
- **Leg pain tends to be the most troublesome symptom**
- **May not have back pain at all**
- **Most people recover fairly quickly within a few weeks to months.**





Spinal stenosis

- **Back pain is linked with pain in the legs**
- **Starts after a few minutes' walking**
- **Tends to get better very quickly when you sit down**
- **Narrowing of spinal canal or nerve root canal by bone or ligaments**



Other Rarer Causes

- **Osteoporosis related fracture NOT osteoporosis itself**
- **Infection**
- **Tumours**
- **INFLAMMATORY CAUSES – Ankylosing Spondylitis / Psoriatic arthritis – Axial involvement**



Inflammatory back pain



Inflammatory back pain – what are the causes ?

- **Ankylosing Spondylitis/Axial Spondyloarthritis = inflammation of the spinal ligaments**
- **Psoriatic arthritis related**
- **Inflammatory bowel diseases related (Crohn's or Ulcerative colitis)**



Progressive deformity due to AS over a period of 36 years

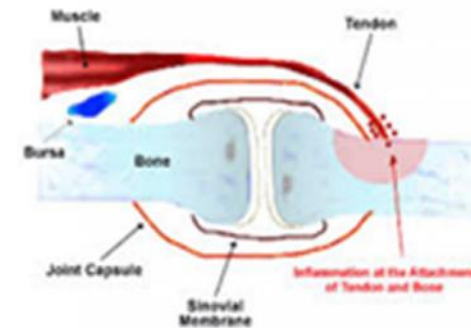
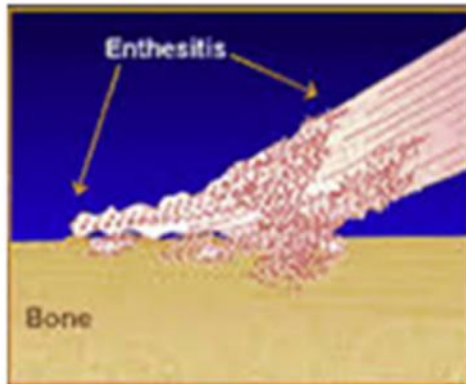
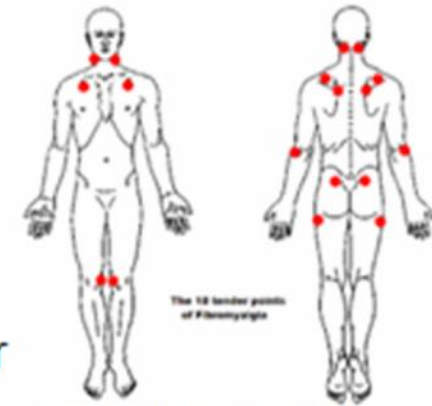


Little H, Swinson DR, Cruickshank B. *Am J Med.* 1976;60:279-285.
Reproduced with the permission of Cahner's Publishing Co.



Enthesitis

- Inflammation around enthesis
- Insertion site of ligaments, tendons, joint capsules or
- Enthesis – Dense collagen, fibrocartilage, adjacent bursa and synovial folds
- E.g Achilles tendonitis, Plantar fasciitis, Iliac crests greater





Ankylosing Spondylitis





CLINICAL EXCELLENCE, QUALITY & SAFETY





Can be associated with other conditions

- **Uveitis – Inflammation of the eye**
- **Inflammatory bowel disease – Ulcerative colitis, Crohns'**
- **Skin and nail psoriasis**
- **Family history of above!**





Prevalence of Back pain

- **Point prevalence 12-35%**
- **Lifetime prevalence 49-80%**
- **Annual prevalence in UK (OPCS surveys 1997)
37% (3.5 million/year)**
- **Male=female**
- **No regional differences**
- **Increases with age**
- **Prevalent population 17.3 million**



Economic Burden

- **Approximately 9% adults visit GP every year with back pain, average 1.66 consultations with doctor, 0.06 with nurse (OPCS 1996)**
- **1997-8 cost of a consultation with doctor in surgery £14, home £46; nurse £9 surgery/£12 home.**
- **Total primary care cost in 1998 £140 million**



Other costs associated with back pain

Out patient attendances	£ 159 million
Day cases	£ 109
In patient care	£ 218
NHS Radiology	£77
Osteopaths	£ 173
Physiotherapy NHS	£ 151
Physiotherapy private	£ 100
Total direct cost	£1632

Total costs including work days lost, informal care, incapacity £6,650 million - £12,300 million

- **Maniadakis and Gray, Pain 2000**



WHEN should I see my doctor ?

- **Very severe and lasts for a very long period of time**
- **Stops you doing your everyday activities**
- **RED FLAG SYMPTOMS**



RED FLAG SymPTOMS

- **Night awakening**
- **Change in bowel habits**
- **Change in Urinary habits**
- **Weakness of legs**
- **Numbness of legs and genital area**
- **Weight loss**
- **Fevers**
- **Rapid worsening of back pain**



Pain Relief

- **Paracetamol**
- **Non-steroidal inflammatory – Ibuprofen**
- **Don't be scared to take Pain Relief regularly**
- **If no effect for 10 days – review with doctor**
- **Check contraindications – Gastric ulcers, allergies, asthma**
- **Others – Gabapentin, amitriptyline**



**Wear and tear of
the spine can cause
pain as we age,
but it isn't always
a problem.**

**Remember that
severe pain
doesn't
necessarily mean
there's a serious
problem.**



Exercise

Bed rest for more than a couple of days is bad for you and makes it harder to get going again. Try to keep active.

Gradually increase your level of activity and do some regular exercise.



RESEARCH SHOWS THAT EXERCISE

- Leads to shorter and less frequent episodes of back pain
- Releases endorphins (your body's natural painkillers) which improve pain and make you feel happier
- **Might make your back feel a bit sore at first but it doesn't cause any harm – so don't let it put you off**
- Take some painkillers beforehand too.



REGULAR Exercise

- **Choose a form of exercise that you enjoy**
- **Helps to make you flexible and stronger and increases your stamina**
 - **Swimming**
 - **Walking**
 - **yoga or Pilates**
 - **going to the gym**

Continue to exercise regularly and don't stop when the pain is gone and you're feeling better.



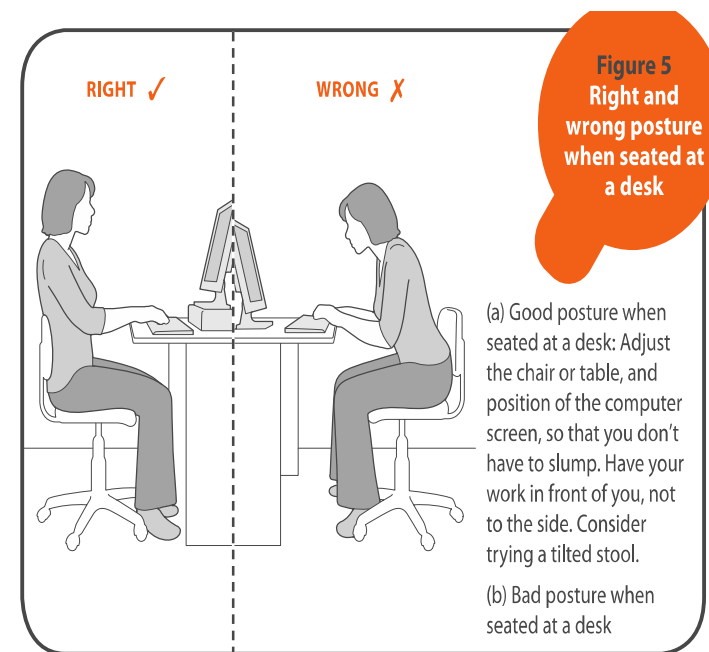
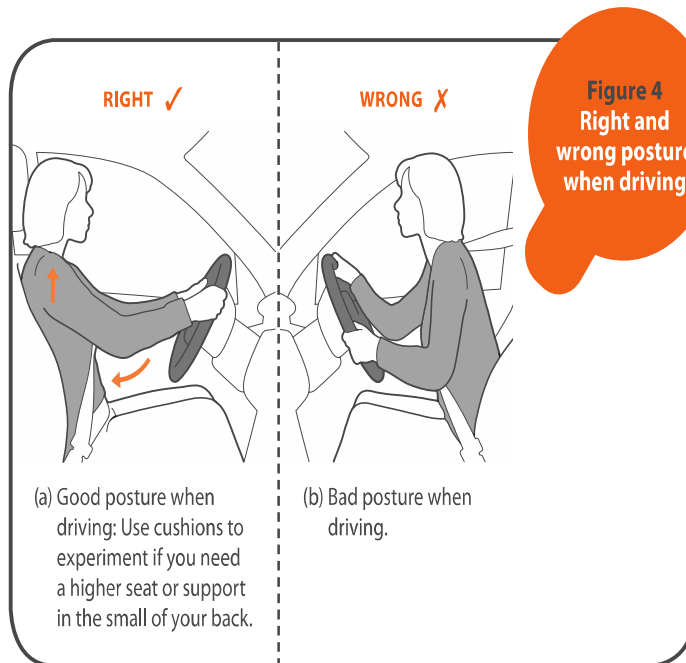
Physical therapy

- **Physiotherapy**
- **Manual therapy – Osteopaths and Chiropractors**

Need to continue prescribed exercise and advice even after pain has settled



posture





OTHERS

- **Complimentary medicine – Acupuncture**
- **Lifting correctly**
- **Heat and Ice packs**
- **TENS machines**
- **Pain Management programmes**



SURGERY- RARE!!!!

- **VERY FEW PEOPLE NEED THIS (LESS THAN 2 percent)**
- **Spinal stenosis**
- **Severe Sciatica – only if conservative measures have not worked**
- **Rarely – if bowel or urinary issues**



Outlook

- For most people the outlook is good, with 75–90% of people recovering within a few weeks.
- Pain does tend to come back (recur) every now and then, similar to the way headaches or colds can recur.
- Two-thirds have some pain a year later, although over 90% are able to work.
- If the back problem has been present for a long time then the symptoms are more likely to keep coming back, and only a third of people make a full recovery a year later.
- **Most people manage to lead a normal life and stay at work with the right pain relief and exercise.**



How you respond emotionally to having back pain has an important impact on how quickly you get better

- **HENCE –**
 - **how you feel about your back pain**
 - **your mood**
 - **your sleeping patterns.**
- **Sometimes unhelpful beliefs are encouraged by well-meaning friends or relatives –
INCREASE ANXIETY**



ARE tests helpful and necessary ?

- **NO**
- **Most back pain involves the soft tissues of the back (such as the muscles or ligaments) and these can't be seen on an x-ray.**
- **Some wear-and-tear changes in the bones and joints of the back are common as we age, and although these changes can be seen on an x-ray, they're not often related to back pain**



references

- **Management of Back pain – Joan Hester – Consultant in pain Medicine – King’s college hospital**