Link to last year’s webinar on "ANKYLOSING SPONDYLITIS"
https://attendee.gotowebinar.com/recording/915273432122794498

SCHORBER TEST

Perform the Schober test by marking a 10-cm length of the lumbar spine (with the patient in the erect position), starting at the fifth lumbar spinous process. Instruct the patient to flex his or her spine maximally. Remeasure the distance between the marks. Normal flexion increases the distance by at least 5 cm.

CHEST EXPANSION

Loss of chest expansion (< 3-cm difference between minimum and maximum chest diameter) is usually found only in patients with late-stage disease and is generally not helpful in diagnosis.

DIAGNOSTIC CRITERIA

NEWER CRITERIA INCORPORATING OTHER FEATURES

ESSG and Amor Criteria for Diagnosis of Spondyloarthropathy

<table>
<thead>
<tr>
<th>ESSG Criteria</th>
<th>Amor Criteria*</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inflamatory spinal pain or synovitis and one of the following:</td>
<td>Inflammatory back pain</td>
<td>1 point</td>
</tr>
<tr>
<td>Alternating buttock pain</td>
<td>Unilateral buttock pain</td>
<td>1 point</td>
</tr>
<tr>
<td>Enthesitis</td>
<td>Alternating buttock pain</td>
<td>2 points</td>
</tr>
<tr>
<td>Sacroiliitis</td>
<td>Enthesitis</td>
<td>2 points</td>
</tr>
<tr>
<td>IBD</td>
<td>Peripheral arthritis</td>
<td>2 points</td>
</tr>
<tr>
<td>Positive family history of spondyloarthropathy</td>
<td>Dactylitis (sausage digit)</td>
<td>2 points</td>
</tr>
<tr>
<td>-----------------------------------------------</td>
<td>-----------------------------</td>
<td>---------</td>
</tr>
<tr>
<td></td>
<td>Acute anterior uveitis</td>
<td>2 points</td>
</tr>
<tr>
<td></td>
<td>HLA-B27 –positive or family history of spondyloarthropathy</td>
<td>2 points</td>
</tr>
<tr>
<td></td>
<td>Good response to NSAIDs</td>
<td>2 points</td>
</tr>
</tbody>
</table>

*Diagnosis of spondyloarthropathy with 6 or more points.

European Spondyloarthropathy Study Group (ESSG); IBD = inflammatory bowel disease; NSAID = nonsteroidal anti-inflammatory drug.

### Clinical and Laboratory Features of Undifferentiated Spondyloarthropathy

<table>
<thead>
<tr>
<th>Clinical or Laboratory Feature</th>
<th>Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inflammatory back pain</td>
<td>90%</td>
</tr>
<tr>
<td>Buttock pain</td>
<td>80%</td>
</tr>
<tr>
<td>Enthesitis</td>
<td>75%</td>
</tr>
<tr>
<td>Peripheral arthritis</td>
<td>40%</td>
</tr>
<tr>
<td>Dactylitis (sausage digits)</td>
<td>20%</td>
</tr>
<tr>
<td>Acute anterior uveitis</td>
<td>1-2%</td>
</tr>
<tr>
<td>Fatigue</td>
<td>55%</td>
</tr>
<tr>
<td>Elevated ESR</td>
<td>32%</td>
</tr>
<tr>
<td>HLA-B27 –positive</td>
<td>25%</td>
</tr>
</tbody>
</table>

ESR = erythrocyte sedimentation rate.
### Diagnostic Criteria for Undifferentiated Spondyloarthropathy Using Modified Amor Criteria

<table>
<thead>
<tr>
<th>Inclusion Criteria</th>
<th>Exclusion Criteria</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inflammatory back pain</td>
<td>Diagnosis of specific spondyloarthropathy</td>
</tr>
<tr>
<td>Unilateral buttock pain</td>
<td>Sacroiliitis on radiograph = grade 2</td>
</tr>
<tr>
<td>Alternating buttock pain</td>
<td>Precipitating genitourinary/gastrointestinal infection</td>
</tr>
<tr>
<td>Enthesitis</td>
<td>Psoriasis</td>
</tr>
<tr>
<td>Peripheral arthritis</td>
<td>Keratoderma blennorrhagicum</td>
</tr>
<tr>
<td>Dactylitis (sausage digit)</td>
<td>Inflammatory bowel disease (Crohn disease or ulcerative colitis)</td>
</tr>
<tr>
<td>Acute anterior uveitis</td>
<td>Positive rheumatoid factor</td>
</tr>
<tr>
<td>HLA-B27 –positive or family history of spondyloarthropathy</td>
<td>Positive antinuclear antibody, titer &gt; 1:80</td>
</tr>
<tr>
<td>Good response to nonsteroidal anti-inflammatory drugs</td>
<td></td>
</tr>
</tbody>
</table>

**Diagnosis of spondyloarthropathy with 6 or more points**

### Association of Spondyloarthropathies With HLA-B27

<table>
<thead>
<tr>
<th>Population or Disease Entity</th>
<th>HLA-B27 – Positive</th>
</tr>
</thead>
<tbody>
<tr>
<td>Healthy whites</td>
<td>8%</td>
</tr>
<tr>
<td>Healthy African Americans</td>
<td>4%</td>
</tr>
<tr>
<td>Ankylosing spondylitis (whites)</td>
<td>92%</td>
</tr>
<tr>
<td>Ankylosing spondylitis (African Americans)</td>
<td>50%</td>
</tr>
<tr>
<td>Reactive arthritis</td>
<td>60-80%</td>
</tr>
<tr>
<td>Psoriasis associated with spondylitis</td>
<td>60%</td>
</tr>
</tbody>
</table>
IBD associated with spondylitis 60%
Isolated acute anterior uveitis 50%
Undifferentiated spondyloarthropathy 20-25%

DUET algorithm for checking for spondylitis in patients with uveitis

---


---

FROM THE IRISH INDEPENDENT
Common sense things you can tell a patient with back pain. This material is from the Irish Independent but contains some useful ways of putting things:
Scientific research in the area of back pain has progressed in recent times and it is challenging widespread beliefs held about the condition that seems to plague so many people.

1 Back Pain is common and normal
Eighty percent of people will experience an episode of back pain during their lifetime. Experiencing back pain is like getting tired or becoming sad; we don’t necessarily like it, but it occurs to almost everybody at some point. What isn’t common, however, is not recovering from back pain. Most acute back pain is the result of simple strains or sprains and the prognosis is excellent. Within the first two weeks of an acute episode of pain, most people will report a significant improvement in their symptoms with almost 85pc of people fully recovered by three months. Only a very small number of people develop long-standing, disabling problems.

2 Scans are rarely needed
Both healthcare professionals and members of the public often consider getting a scan "just in case" there is something serious involved in their pain. However, all the evidence suggests scans only show something truly important in a tiny minority (<5pc) of people with back pain. A brief consultation with a healthcare professional (eg GP, chartered physiotherapist) would usually be able to identify if a scan was really needed based on a person’s symptoms and medical history.

3 Interpreting scans should come with a health warning
We used to think that if we got a good enough picture of the spine with scans that it would be a big help in solving back pain. However, we now know that this is most often not the case. When people have scans for back pain, the scans often show up things that are poorly linked with pain. In fact, studies have shown that even people who don’t have back pain have things like bulging discs (52pc of people), degenerated or black discs (90pc), herniated discs (28pc) and 'arthritic' changes visible (38pc). Remember, these people do NOT have pain! Unfortunately, people with back pain are often told that these things indicate their back is damaged, and this can lead to further fear, distress and avoidance of activity. The fact is that many of these things reported on scans are more like baldness - an indication of ageing and genetics that do not have to be painful.

4 Back pain is not caused by something being out of place
There is no evidence that back pain is caused by a bone or joint in the back being out of place, or your pelvis being out of alignment. For most people with back pain, scans do not show any evidence of discs, bones or joints being 'out of place'. In the very small number of people with some change in their spinal alignment, this does not appear to be strongly related to back pain. Of course, it is worth noting that many people feel better after undergoing treatments like manipulation.
However, this improvement is due to short-term reductions in pain, muscle tone/tension and fear, NOT due to realigning of body structures.

**5 Bed rest is not helpful**
In the first few days after the initial injury, avoiding aggravating activities may help to relieve pain, similar to pain in any other part of the body, such as a sprained ankle. However, there is very strong evidence that keeping active and returning to all usual activities gradually, including work and hobbies, is important in aiding recovery.

In contrast, prolonged bed rest is unhelpful, and is associated with higher levels of pain, greater disability, poorer recovery and longer absence from work. In fact, it appears that the longer a person stays in bed because of back pain, the worse the pain becomes.

**6 More back pain does not mean more back damage**
This may seem strange, but we now know that more pain does not always mean more damage. Ultimately, two individuals with the same injury can feel different amounts of pain. The degree of pain felt can vary according to a number of factors, including the situation in which the pain occurs, previous pain experiences, your mood, fears, fitness, stress levels and coping style. For example, an athlete or soldier may not experience much pain after injury until later when they are in a less intense environment.

Furthermore, our nervous system has the ability to regulate how much pain a person feels at any given time. If a person has back pain it might be that their nervous system has become hypersensitive and is causing the person to experience pain, even though the initial strain or sprain has healed.

This can mean the person feels more pain when they move or try to do something, even though they are not damaging their spine.

Once people with back pain can distinguish between the 'hurt' they are feeling from any concerns about 'harm' being done to their back, it is easier to participate in treatment.

**7 Surgery is rarely needed**
Only a tiny proportion of people with back pain require surgery. Most people with back pain can manage it by staying active, developing a better understanding about what pain means, and identifying the factors which are involved in their pain.

This should help them continue their usual daily tasks, without having to resort to surgery.

On average, the results for spinal surgery are no better in the medium and long-term than non-surgical interventions, such as exercise.

**8 Schoolbags are safe - worrying about schoolbags might not be**
Many people believe that children carrying a heavy schoolbag might cause back pain. However, research studies have not found this link, revealing no differences in schoolbag weight between those children who do and do not go on to develop back pain. However, if a child - or their parent - believes that their schoolbag is too heavy, the child IS more likely to develop back pain, highlighting the importance of fear in the development of back pain.

Given concerns about inactivity and obesity in children, carrying a schoolbag may actually be a simple healthy way for children to get some exercise.

**9 The perfect sitting posture may not exist**
Should we all sit up straight? Contrary to popular belief, no specific static sitting posture has been shown to prevent or reduce back pain. Different sitting postures suit different people, with some people reporting more pain
from sitting straight, others from slouching. So while slouching gets a bad press, there is no scientific evidence to support this. In fact, many people with back pain can adopt very rigid postures (eg sitting extremely upright) with little variation.

The ability to vary our posture, instead of maintaining the same posture, together with learning to move in a confident, relaxed and variable manner is important for people with back pain.

**10 Lifting and bending are safe**
People with back pain often believe that activities such as lifting, bending and twisting are dangerous and should be avoided. However, contrary to common belief, the research to date has not supported a consistent association between any of these factors and back pain.

Of course, a person can strain their back if they lift something awkwardly or lifting something that is heavier than they would usually lift. Similarly, if a person has back pain, these activities might be more sore than usual. This, however, does not mean that the activity is dangerous or should be avoided.

While a lifting or bending incident could initially give a person back pain, bending and lifting is normal and should be practiced to help strengthen the back, similar to returning to running and sport after spraining an ankle.

**11 Avoiding activities and moving carefully does not help in the long-term**
It is common, especially during the first few days of back pain, that your movement can be significantly altered. This is similar to limping after spraining your ankle, and generally resolves as the pain settles. While initially hard, getting back doing valued activities which are painful, or feared, is important. Many people, after an episode of back pain, can begin to move differently due to a fear of pain or a belief that the activity is dangerous. Such altered movement can be unhealthy in the long term and can actually increase the strain on your back.

**12 Poor sleep influences back pain**
When someone has pain, a good night's sleep can be hard to get. However, it works both ways as sleep problems can lead to back pain in the future. In the same way that poor sleep can make us more stressed, give us a headache, make us tired or feel down, it can also cause or prolong back pain. So, improving sleeping routine and habits can be very helpful in reducing pain.

**13 Stress, low mood and worry influence back pain**
How we feel can influence the amount of pain we feel. Back pain can be triggered following changes in life stress, mood or anxiety levels.

In the same way that these factors are linked to other health conditions like cold sores, irritable bowel syndrome and tiredness, they have a very large effect on back pain. As a result, managing our stress, mood and anxiety levels through doing things we enjoy, and engaging in relaxation can be really beneficial in helping back pain.

**14 Exercise is good and safe**
Many people with pain are afraid of exercise and avoid it as they think it may cause them more problems. However this is not true! We now know that regular exercise helps to keep you and your body fit and healthy, and actually reduces pain and discomfort. It relaxes muscle tension, helps mood and strengthens the immune system once started gradually.

All types of exercise are good, with no major differences in effectiveness between them - so pick one you enjoy, can afford and which is convenient.
Walking, using the stairs, cycling, jogging, running and stretching are all good and help relax all the tense muscles in your body. When you are in pain, starting exercise can be very hard. Under-used muscles feel more pain than healthy muscles. Therefore, if feeling sore after exercise, this does not indicate harm or damage to the body.

**15 Persistent back pain CAN get better**

Since back pain is associated with many factors that vary between individuals, treatments that address the relevant factors for each individual can be effective. Failing to get pain relief after lots of different treatments is very frustrating and cause people to lose hope. However, this is very common as most treatments only address one factor, for example someone goes for a massage for their sore muscles, but doesn’t address their sleep or fitness or stress levels. By identifying the different contributing factors for each individual and trying to address them, pain can be significantly reduced and people can live a happier and healthier life.

* Mary O’Keeffe (University of Limerick), Dr Kieran O’Sullivan (University of Limerick), Dr Derek Griffin (Tralee Physiotherapy Clinic)

-----------------------------------------

The Assessment of SpondyloArthritis International Society (ASAS)-endorsed recommendation for early referral of patients suspected for having axial spondyloarthritis by primary care physicians or non-rheumatologists

Patients with *chronic back pain (duration \(\geq 3\) months) with back pain onset before 45 years of age* should be referred to a rheumatologist if at least one of the following parameters is present:

- Inflammatory back pain*
- Human leucocyte antigen-B27 positivity
- Sacroiliitis on imaging, if available (on X-rays or MRI)†
- Peripheral manifestations (in particular arthritis, enthesitis and/or dactylitis)‡
- Extra-articular manifestation (psoriasis, inflammatory bowel disease and/or uveitis)‡
- Positive family history for spondyloarthritis‡
- Good response to non-steroidal anti-inflammatory drugs‡
- Elevated acute phase reactants§

*Any set of criteria, preferably ASAS definition of inflammatory back pain:* at least four out of five parameters present: (1) age at onset \(\leq 40\) years; (2) insidious onset; (3) improvement with exercise; (4) no improvement with rest; and (5) pain at night (with improvement upon getting up).

† Only if imaging available, not recommended as a routine screening parameter.
‡ According to the definition applied in the classification criteria for axial
spondyloarthritis.[16]
Arthritis: past or present active synovitis diagnosed by a physician.
Enthesitis (heel): past or present spontaneous pain or tenderness at examination of the site of the insertion of the Achilles tendon or plantar fascia at the calcaneus.
Dactylitis: past or present dactylitis, diagnosed by a physician.
Extra-articular manifestation: past or present psoriasis, inflammatory bowel disease and/or uveitis anterior, confirmed by a physician.
Good response to non-steroidal anti-inflammatory drugs (NSAIDs): 24–48 h after a full dose of a NSAID the back pain is not present any more or is much better.
Family history of SpA: presence in first-degree (mother, father, sisters, brothers, children) or second-degree (maternal and paternal grandparents, aunts, uncles, nieces and nephews) relatives of any of the following: (1) ankylosing spondylitis; (2) psoriasis; (3) acute uveitis; (4) reactive arthritis; and (5) inflammatory bowel disease.
§C-reactive protein serum concentration or erythrocyte sedimentation rate above upper normal limit after exclusion of other causes for elevation.

American College of Rheumatology/Spondylitis Association of America/Spondyloarthritis Research and Treatment Network 2015 Recommendations for the Treatment of Ankylosing Spondylitis and Nonradiographic Axial Spondyloarthritis

http://www.rheumatology.org/Portals/0/Files/Recommendations%20for%20the%20Treatment%20of%20Ankylosing%20Spondylitis.pdf

******************************************************************************

Inflammatory back pain (IBP) parameters, according to experts
Parameter Criteria

1 Age at onset, 40 years
2 Insidious onset
3 Improvement with exercise
4 No improvement with rest
5 Pain at night (with improvement upon getting up)

Sensitivity 77.0% and specificity 91.7% if at least four out of five parameters are present. Note that sensitivity and specificity refer to the presence of IBP, not to diagnosis.

New criteria for inflammatory back pain in patients
with chronic back pain: a real patient exercise by experts from the Assessment of SpondyloArthritis international Society (ASAS)

********************************************************************************

EUROPEAN GUIDELINES FOR THE MANAGEMENT OF ACUTE NONSPECIFIC LOW BACK PAIN IN PRIMARY CARE

The full article is available through a link on this page

********************************************************************************

EUROPEAN GUIDELINES FOR THE MANAGEMENT OF CHRONIC NON-SPECIFIC LOW BACK PAIN

The full article is available through a link on this page

Recommendations in the European clinical guidelines for diagnosis and treatment of chronic low back pain

Diagnosis

Diagnostic triage to exclude specific pathology and nerve root pain

Assessment of prognostic factors (yellow flags) such as work related factors, psychosocial distress, depressive mood, severity of pain and functional impact, prior episodes of low back pain, extreme symptom reporting, and patient’s expectations

Imaging is not recommended unless a specific cause is strongly suspected

Magnetic resonance imaging is best option for radicular symptoms, discitis, or neoplasm

Plain radiography is best option for structural deformities
Treatment

*Recommended*—Cognitive behaviour therapy, supervised exercise therapy, brief educational interventions, and multidisciplinary (biopsychosocial) treatment, short term use of non-steroidal anti-inflammatory drugs and weak opioids.

*To be considered*—Back schools and short courses of manipulation and mobilisation, noradrenergic or noradrenergic-serotonergic antidepressants, muscle relaxants, and capsicum plasters. *Not recommended*—Passive treatments (for example, ultrasound and short wave) and gabapentin. Invasive treatments are in general not recommended in chronic non-specific low back pain.


Chronic LBP

- In contrast to acute low back pain, only very few guidelines exist for the management of CLBP.

- CLBP is not a clinical entity and diagnosis, but rather a symptom in patients with very different stages of impairment, disability and chronicity. Therefore assessment of prognostic factors before treatment is essential.

- Overall, there is limited positive evidence for numerous aspects of diagnostic assessment and therapy in patients with non-specific CLBP.

- In cases of low impairment and disability, simple evidence-based therapies (i.e. exercises, brief interventions, and medication) may be sufficient.

- No single intervention is likely to be effective in treating the overall problem of CLBP of longer duration and more substantial disability, owing to its multidimensional nature.

- For most therapeutic procedures, the effect sizes are rather modest.

- The most promising approaches seem to be cognitive-behavioural interventions encouraging activity/exercise.

- It is important to get all the relevant players onside and to provide a consistent approach.

*****************************************************************************
Summary of recommendations for **diagnosis** of acute non-specific low back pain

1. Case history and brief examination should be carried out

2. If history taking indicates possible serious spinal pathology or nerve root syndrome, carry out more extensive physical examination including neurological screening when appropriate

3. Undertake diagnostic triage at the first assessment as basis for management decisions

4. Be aware of psychosocial factors, and review them in detail if there is no improvement

5. Diagnostic imaging tests (including X-rays, CT and MRI) are not routinely indicated for non-specific low back pain

6. Reassess those patients who are not resolving within a few weeks after the first visit, or those who are following a worsening course

******************************************************************************

Summary of recommendations for **treatment** of acute non-specific low back pain

1. Give adequate information and reassure the patient

2. Do not prescribe bed rest as a treatment

3. Advise patients to stay active and continue normal daily activities including work if possible

4. Prescribe medication, if necessary for pain relief; preferably to be taken at regular intervals; first choice paracetamol, second choice NSAIDs

5. Consider adding a short course of muscle relaxants on its own or added to NSAIDs, if paracetamol or NSAIDs have failed to reduce pain

6. Consider (referral for) spinal manipulation for patients who are failing to return to normal activities

7. Multidisciplinary treatment programmes in occupational settings may be an option for workers with sub-acute low back pain and sick leave for more than 4 - 8 weeks

******************************************************************************

**STarT Back Tool for Back Pain**
The Keele STarT Back Screening Tool

Patient name: ___________________________ Date: __________

Thinking about the **last 2 weeks** tick your response to the following questions:

<table>
<thead>
<tr>
<th></th>
<th>Question</th>
<th>Disagree</th>
<th>Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td></td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>1</td>
<td>My back pain has <strong>spread down my leg(s)</strong> at some time in the last 2 weeks</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>I have had pain in the <strong>shoulder</strong> or <strong>neck</strong> at some time in the last 2 weeks</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>I have only <strong>walked short distances</strong> because of my back pain</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>In the last 2 weeks, I have <strong>dressed more slowly</strong> than usual because of back pain</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>It’s not really safe for a person with a condition like mine to be physically active</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6</td>
<td><strong>Worrying thoughts</strong> have been going through my mind a lot of the time</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>I feel that <strong>my back pain is terrible</strong> and <strong>it’s never going to get any better</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>In general I have <strong>not enjoyed</strong> all the things I used to enjoy</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

9. Overall, how **bothersome** has your back pain been in the **last 2 weeks**?

<table>
<thead>
<tr>
<th></th>
<th>Not at all</th>
<th>Slightly</th>
<th>Moderately</th>
<th>Very much</th>
<th>Extremely</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
</tr>
<tr>
<td></td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>1</td>
</tr>
</tbody>
</table>

**Total score (all 9):** ___________  **Sub Score (Q5-9):** ___________
The STarT Back Tool Scoring System

- Total score
  - 3 or less
    - Low risk
  - 4 or more
    - Sub score Q5-9
      - 3 or less
        - Medium risk
      - 4 or more
        - High risk

© Keele University 01/08/07
Funded by Arthritis Research UK