

INFORMATION FOR EXERCISE PERSONNEL

REMEMBER, SOME TRAINED STAFF MAY NOT HAVE HEARD OF AS AND HOW IT AFFECTS YOU. YOU MAY NEED TO EXPLAIN WHAT THE CONDITION IS AND USE THE GUIDANCE POINTS ENCLOSED TO HELP THE TRAINER CONSTRUCT A SUITABLE GYM PROGRAMME FOR YOU. **PLEASE SHOW THESE GUIDELINES TO YOUR INSTRUCTOR.**

THIS PROGRAMME IS DESIGNED TO ENCOURAGE PEOPLE WHO HAVE ANKYLOSING SPONDYLITIS TO DO REGULAR EXERCISE.

ANKYLOSING SPONDYLITIS (AS) IS A RHEUMATOLOGICAL CONDITION THAT CAUSES INFLAMMATION IN THE JOINTS AND LIGAMENTS OF THE SPINE AND CHEST WALL. THIS INFLAMMATION CAN CAUSE SYMPTOMS OF PAIN AND STIFFNESS.

This programme is designed to encourage people who have ankylosing spondylitis to do regular exercise. Ankylosing spondylitis (AS) is a rheumatological condition that causes inflammation in the joints and ligaments of the spine and chest wall. This inflammation can cause symptoms of pain and stiffness and over time can lead to a loss of movement of the spine and a stooped posture. It usually starts between the ages of 20 and 40.

There are now some very effective treatments for AS. These include medical treatments that can reduce the symptoms and the inflammation in the spine. Consequently, anyone who has AS should be under the care of a rheumatologist who can advise on these. However, regular exercise which includes spinal mobility is one of the mainstays of treatment. It can improve the symptoms, as well as the mobility of the spine and promote general wellbeing. For this reason, the combination of medical treatments and exercises are widely recommended and can have a dramatic effect.

Unfortunately, many people with AS do not exercise regularly. This programme has been designed to make it as easy as possible for someone with AS to start exercising, even if that person has not had much experience of regular exercise or gyms before.

The programme brings together the previous evidence on exercise in AS with the most up to date guidelines on exercise prescription from the American College of Sports Medicine (ACSM) and our own experience. It is focused on maintaining spinal range of movement, good posture, and good general health.

A limitation of a published programme like this is that it cannot be tailored to each individual. This is why we believe that advice from a properly qualified exercise therapist is so useful. The following paragraphs explain some of the important points to be aware of in the assessment of a person with AS and some of the principles that are important in the exercise prescription.

INSTRUCTOR ASSESSMENT

ASSESSMENT

- AS can occasionally lead to medical conditions that can affect the heart or lungs: examples include fibrosis (scarring) of the lungs, or aortic valve regurgitation in the heart. These conditions are usually mild, but some may be worsened by exercise. We therefore recommend that everyone with AS should see a doctor before starting this exercise programme and then do so annually. Of course, most people will already be under the care of a rheumatologist who will have made this assessment.
- It is still always worth checking for any of these medical conditions, which should be considered in anyone who develops undue shortness of breath, dizziness, palpitations, chest pain or loss of consciousness.
- Ask about medication. The non steroidal anti-inflammatory drugs (NSAIDs) in particular are often used and can have an effect on blood pressure.
- Check for swelling of the peripheral joints, particularly the knees and ankle. In some people with AS, the swelling can affect these joints and this will require different treatments.
- Remember that some people with AS can develop inflammation in the eye called iritis. This causes pain in the eye, redness and blurring of vision. If this happens, that person should go directly to a hospital casualty department.
- Suggest that anyone with AS is under the care of a rheumatologist, who can advise on the most effective medical treatments for the pain, stiffness and inflammation.

- Assess the shape of the spine. In AS, there is a tendency for the lumbar spine to flatten and lose its lordosis. The thoracic curvature can increase into a kyphosis and the cervical spine may straighten up.
- Assess the range of movement of each part of the spine. There is a tendency for all parts of the spine to lose range of movement. If you wish to make a recording of range of movement, flexion of the lumbar spine can be measured with the modified Schober test and overall movement can be assessed using the Bath Ankylosing Spondylitis Metrology Index (BASMI). For details and a copy please visit www.nass.co.uk
- Assess flexibility, particularly of the anterior muscles, including hip flexors, abdominals and pectorals.
- Assess strength, particularly of the extensor muscle groups including lower back, gluteal muscles and shoulder external rotators and retractors.
- Assess the overall level of cardiovascular fitness and conditioning.

NOTES ON THE EXERCISE PRESCRIPTION

- Consider the best time of day to exercise because the symptoms can vary a great deal through the day and may be particularly bad in the morning.
- The warm up is particularly important before a strength or cardiovascular session, because stiffness is such a major symptom of AS. However, a warm bath is good preparation for a stand-alone flexibility or mobility session and is convenient for the end of the day or the evening.

- Mobility exercises should take each part of the spine through the full range of movement in a gentle controlled way with a hold at the end of range. Pay particular attention to movements that are reduced, but remember that it will not be beneficial or possible to force the spine into a range that is uncomfortable. The emphasis is on promoting extension of the spine.

- Include mobility exercises of the chest wall and breathing to promote full expansion of the chest.

- Ensure that there is an excellent understanding of good posture and give a practical demonstration during the session. Remember that if the spine has lost range of movement, it may not be possible to get back to a neutral position.

- When considering flexibility, promote flexibility of the large anterior muscles such as the abdominals, pectorals and hip flexors that might pull the spine into flexion if they remain tight. The flexibility programme should probably not be done just before the strength or cardiovascular exercises because the stretching may inhibit the activity of those muscles.

- When considering the strength programme, promote the strength of extensor muscles such as gluteus maximus, lower back and latissimus dorsi as these will tend to pull the spine into an extensor pattern.

NOTES ON THE EXERCISE PRESCRIPTION

■ The strength component of this programme starts with two sets of low weight, high repetition movements. This can be progressed to three or four sets as the strength improves.

■ There are no sit-ups, abdominal strengthening or core stability exercises in this programme, although there is a section on posture. The reason for this omission is that the focus of the programme is to encourage an upright posture and strong extensor muscles. When reviewing an individual's programme, the inclusion of some exercises to improve abdominal tone and core stability should be considered.

■ When considering cardiovascular fitness, assess the current level of conditioning.

Some people with AS may not have been doing exercise recently and may be deconditioned. This programme recommends 30 minutes of cardiovascular exercise 5 times a week at a moderate intensity. This can be gradually progressed as appropriate.

■ Most people with AS will find impact activities such as running on roads too painful and should do non-impact activities such as cycling, swimming or using the crosstrainer. Those who are able to run without pain can be reassured that it is fine to continue while they remain pain free. They should be given advice on good running technique including correct running shoes and a training regime that avoids excessive road running.

■ Rowing is a very good aerobic exercise, but the stresses that this exercise puts through the thoracic spine makes it unlikely that many people with AS will be able to manage sustained exercise on a rowing machine. We have suggested that the time on a rowing machine is limited to 10 minutes. Demonstration of good technique is very important.

■ Avoid sports that lead to forceful direct impacts to the trunk such as rugby or ice hockey.

■ Gentle manual therapies such as massage can be helpful, but therapies that use manipulations or high velocity thrusts are unproven and cannot be recommended in AS.

EXERCISES SHOULD AIM TO:

Strengthen extensor muscle groups

- Low back
- Trunk
- Shoulder blades
- Buttocks

Stretch anterior muscle groups

- Pectorals
- Biceps
- Quadriceps (especially over the front of the hip joint)

Also stretch/keep length in all major muscle groups

- Hamstrings
- Chest
- Triceps/biceps
- Calves
- Inner thigh

Use a regime that involves low weight but high repetition to extensor and anterior muscle groups

- Gradually increase the weight used during extensor exercises (see point 1 above), as tolerated
- Keep anterior muscle work low weight and high repetition at all times