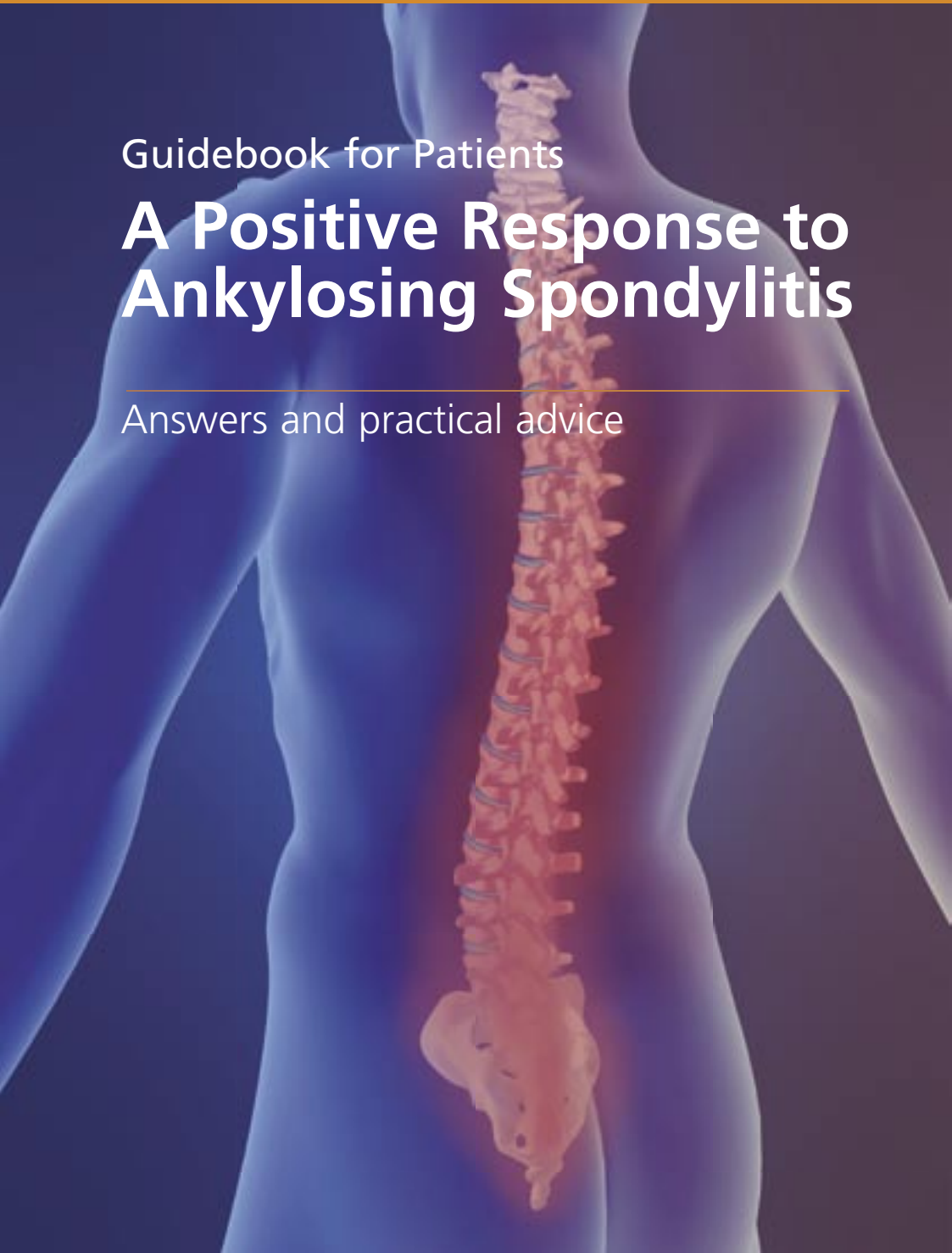


Guidebook for Patients

A Positive Response to Ankylosing Spondylitis

Answers and practical advice





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Introduction



If you have ankylosing spondylitis, which we'll call AS for short, you may well have various questions about the condition. At the National Ankylosing Spondylitis Society (NASS) we have produced this booklet to answer the questions people most frequently ask. It also contains practical advice on things you can do to self manage the condition. Your family, friends, work colleagues, and even your GP, may also be interested to read it. Further copies are available from NASS free of charge if you need them.

As well as the inevitable pain of the disease, AS often generates feelings of frustration and fear. Some people do their best to ignore the condition and even deny that they have it. Our experience, however, shows that people who take an active interest in their condition can positively influence its outcome.

There are also certain exercises that will help reduce the deterioration in your posture and mobility. We have included some examples of these in this booklet. Your physiotherapist will guide you in exercises specific to your individual needs. Thousands of our members have benefited from exercise and we hope you will, too.

To keep fully up-to-date on treatment and issues related to AS, you will certainly find it worthwhile joining NASS. There are full details about the Society and its services at the back of this booklet. Have a look at our website as well: there are some new resources to help with exercise including a DVD to use at home and an exercise pack for younger people who are newly diagnosed who may already use the gym.

We hope you find this booklet useful: if you have a particular question and you can't find the answer on our website, call our information officer on 0208 948 9117. We are here to provide you with information to help you manage your AS as effectively as possible, working with your medical team.

Jane Skerrett
Director of NASS



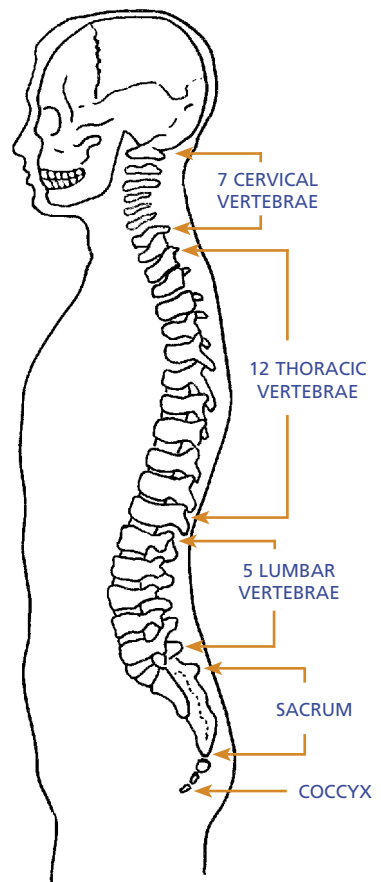
Ankylosing Spondylitis – some facts

What does ankylosing spondylitis mean?

Ankylosing means fusing together. Spondylitis means inflammation of the spine. Both words are Greek in origin. So, AS describes the condition by which some or all of the joints and bones of the spine fuse together. Entire fusing of the spine is unusual. Many people will only have partial fusion, sometimes limited to the pelvic bones.

What is the spine?

The spine is made up of 24 vertebrae and 110 joints. There are 3 sections: 7 cervical, 12 dorsal or thoracic and 5 lumbar vertebrae. The cervical, or neck section, is the most mobile. In the thoracic section each vertebrae has a rib attached to it on each side. Below the lumbar section is the diamond-shaped sacrum which locks like a keystone into the pelvis. The joints between the sides of the sacrum and the rest of the pelvis are called the sacroiliac joints. This is usually the starting-point of the condition where the low back pain and AS begin.



What exactly is AS?

AS is a painful, progressive, rheumatic disease. It mainly affects the spine but it can also affect other joints, tendons and ligaments. Other areas, such as the eyes, lungs, bowel, skin and heart can also be involved.

What causes AS?

We're not entirely sure. So far medical research has shown that 96% of people with AS in Britain all share the same genetic cell marker - Human Leucocyte Antigen B27 (HLA-B27). It is possible that some normally harmless micro-organism, which on this occasion the immune system cannot fight, comes into contact with HLA-B27 and sets up an adverse reaction. Sometimes bowel infections appear to spark off AS. Symptoms may also become apparent after a period of enforced bed rest, for example following a car accident, accelerating a previously existing mild condition.

A group of symptoms known as reactive arthritis may also lead to AS. These include iritis (or uveitis) which is inflammation of part of the iris within the eye; and conjunctivitis which causes red, gritty and painful eyes. People with reactive arthritis may also suffer from urethritis. This is inflammation of the urethra, the tube that conveys urine from the bladder out of the body. This results in pain on passing urine, discharge on the end of the penis (especially on waking up in the morning) and an increased frequency of passing urine. Women may get the pain but won't notice a discharge from the urethra. Reactive arthritis also results in arthritis, affecting the large joints, especially in the legs, together with pain in the joints of the lower back particularly at night or on waking.

What actually happens?

Inflammation occurs at the site where certain ligaments or tendons attach to bone (entheses). This is followed by some damage to bone at the site of the attachment (enthesopathy). As the inflammation subsides, a healing process takes place and new bone develops. Movement becomes restricted where bone replaces the elastic tissue of ligaments or tendons. Repetition of this inflammatory process leads to further bone formation and the individual bones which make up your backbone, the vertebrae, can fuse together. The pelvis is commonly affected first. The lower back, chest wall and neck may also become involved at different times.

Is ankylosing spondylitis the same as spondylosis?

No. They sound similar but they are different. Spondylosis is a term relating to “wear and tear” and is more common in older people. AS relates to an inflammatory condition which produces new bone and leads to fusion. The exercise therapy designed for people with AS might be harmful to those suffering from spondylosis.

Is AS common?

AS affects approximately 1 in 200 men and 1 in 500 women in Britain with varying levels of severity of disease.

Who gets AS?

Men, women and children can all suffer from AS.

It typically strikes people in their late teens and twenties, with the average age being 24. However, symptoms can start at other periods of life and there is often a delay between the onset of symptoms and a formal diagnosis being made. AS is more common in men, with nearly three times as many men having it as women.

Is AS different in men, women and children?

Yes. AS tends to affect men, women and children in slightly different ways.

Men: The pelvis and spine are most commonly affected. Other joints which may be involved are the chest wall, hips, shoulders and feet.

Women: Involvement of the spine is generally less severe than in men. The pelvis, hips, knees, wrists and ankles are the most commonly involved.

Children: It is unusual for a child under the age of 11 to develop symptoms of AS. The joints which are typically affected first are the knees, ankles, feet, hips and buttocks. They rarely suffer from back pain. In youngsters, AS may lead to persistent hip disease ultimately requiring a hip replacement sometime in adult life.

What are the symptoms of AS?

Typical symptoms of AS include:

- 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.
- Persistence for more than three months (as opposed to coming on in short attacks).
- Feeling better after exercise and feeling worse after rest.
- Weight loss, especially in the early stages.
- Fatigue.
- Feeling feverish and experiencing night sweats.

How can I be sure I have AS?

If you have the typical symptoms of AS, back pain and stiffness which is worse with rest and better with activity then you should see your GP. If your GP suspects AS you should be referred to a rheumatologist at a hospital. Tests which might be used to help diagnose your AS could include: a physical examination to assess your flexibility and joint tenderness, blood tests and magnetic resonance imaging (MRI) or x-rays which will show whether or not there is any inflammation or damage to the joints.

Does AS affect other joints?

Yes. AS sometimes causes aching, pain and swelling in the hips, knees and ankles. Indeed, any joint can be affected. In most cases the pain and swelling will settle down after treatment. It is particularly important to stretch the hip joint to prevent stiffening in a bent position making you lean forward. The heel bone can become particularly troublesome causing pain in two areas. Most common is the under surface, about three centimetres from the back of the foot. This is called plantar fasciitis and can last for many weeks. It may respond to an insole for the shoe designed to take weight off that part of the heel. Pain can also arise at the back of the heel where the Achilles tendon is attached to the heel bone. Pressure from the shoe may aggravate the pain.

Does AS affect other organs?

Yes. AS can sometimes affect the eyes, heart and lungs. These effects are not life-threatening and they can be treated with relative ease.

How does AS affect the eyes?

AS can cause inflammation of the iris and its attachment to the outer wall of the eye, the uvea. 40% of people with AS will develop iritis or uveitis on one or more occasions. Usually the first symptom is a slight blurring of vision in one eye but the main symptoms are pain, sensitivity to light together with a bloodshot eye. To avoid permanent damage you should receive prompt treatment. It is a good idea to go straight to a casualty department where you can be treated by an ophthalmology team, rather than to your GP. Tell them that you have AS. They will give you eye-drops which will reduce the inflammation in a matter of hours. Continue treating yourself with the eye-drops for as long as the inflammation persists.

How does AS affect the heart?

AS is a condition that results from inflammation within the body and research is ongoing into what affect that inflammation can have on the heart. Currently evidence for increased cardiovascular (CV) risk is stronger for rheumatoid arthritis (RA) than it is for AS. In order to lower cardiovascular risk, AS should be controlled adequately, cardiovascular risk should be evaluated by a medical professional and, if considered suitable, medications including cholesterol lowering drugs and blood pressure lowering drugs should be used. People with AS should not smoke.

How does AS affect the lungs?

AS should not make you any more susceptible to lung or chest infections. However, it may affect the rib joints and the muscles between the ribs making breathing, sneezing or coughing painful. As a result, the lungs fail to become fully ventilated. You will find some exercises in the exercise section of this booklet to help you maintain normal chest wall movement. Rarely the lungs may get scarred, a condition known as apical pulmonary fibrosis. This will show up on an X-ray but does not usually cause any symptoms. In more severe cases of AS the chest wall may become quite fixed and affect air entry in and out of the lungs. This does not mean you stop breathing! The diaphragm muscle continues to work and your stomach moves in and out as you breathe. Large meals and tight

clothing will increase the effort of breathing so you may find it more comfortable to avoid these. It is also vital to avoid smoking since this will not only make breathing more difficult but it could cause potentially serious lung and chest infections and research appears to show smoking makes AS symptoms worse.

Are any other diseases associated with AS?

A skin condition called psoriasis is associated with AS. Psoriasis causes scaly patches on the skin and scalp. It can also lead to a slightly different form of arthritis. A sexually acquired infection known as Non-Specific Urethritis (NSU) can be caused by an organism called chlamydia. This leads to urethritis and sometimes other features of reactive arthritis. Ulcerative colitis and Crohn's disease are also related to AS but are not caused by it. The symptoms are bouts of bloody diarrhoea, often with fever, weight loss, and an associated peripheral arthritis in some cases. Low bone density (osteoporosis) can also be associated with AS.

Does AS affect everybody the same way?

No. AS is a very variable disease. Some people have virtually no symptoms whereas others suffer more severely. However, at NASS we know that those patients who follow an appropriate course of exercises tend to do better than those who don't.

What is the risk of passing it on to my children?

If an individual carries the B27 gene, then there is a 50% chance of the gene being passed onto their child. However, 7% of the general population have the gene and only 5% or so of those individuals develop AS. Thus the chance of any of your children getting AS is very small. If a child does develop joint problems, then a referral to a rheumatologist would be sensible – see page 5.

What is the end result?

AS is not life threatening. AS seems to affect everybody slightly differently. In general, though, you will probably find that the symptoms come and go over many years. In the classic case, the lumbar spine can become stiff, caused by the growth of additional bone, as can the upper spine and neck. If you pay attention to your posture and exercise, you can prevent this from becoming too serious.



Treatment Advice

Medication

There is no cure for AS, however non-steroidal anti-inflammatory drugs (NSAIDs) and pain killers will help to reduce pain and improve your sleep and general well-being.

Over 80% of people with AS take NSAIDs and/or pain killers to reduce inflammation and relieve pain and stiffness. For people who experience side-effects with NSAIDs, simple pain killers such as paracetamol may be effective. For others, especially those who suffer from inflammatory bowel disease (Crohn's disease and ulcerative colitis) or peripheral joint arthritis, a disease-modifying antirheumatic drug like sulphasalazine may be required. In those people with severe AS a new type of treatment is now available. It is called anti-TNF or Biological treatment and is given by injection. It is only offered to those with the worst forms of AS.

But drugs are only half the answer. Appropriate exercise is crucial to managing your AS. The drugs should enable you to carry out exercise with less pain.

Physiotherapy

This can greatly influence the outcome of your AS. A physiotherapist will teach you an exercise and stretching routine for daily use and will remind you to be aware of your posture. You will also learn how to increase the range of movement of certain joints, particularly spine and hips. It is important to keep your muscles strong because lack of movement can weaken them and it may take a long time to build them up again. You also need to learn how to stretch the muscles that become shortened. Any form of cardiovascular exercise where you get out of breath has many benefits such as improving chest expansion, decreasing fatigue and improving sleep.

Contact NASS for information about our exercise DVD (Fight Back) for use at home and guide to exercising safely in the gym (Back to Action) for newly diagnosed patients. On joining the Society you can also attend supervised weekly evening group physiotherapy sessions organised by your nearest NASS branch. There is a small charge per session. You will find some examples of exercise later in this Guidebook.

It is important to remain physically active and to enjoy the recreational exercise you choose to undertake. Swimming is very beneficial since all of the muscles and joints are exercised in a gravity free environment. Vary your swimming strokes as much as possible. If it helps, use a snorkel when swimming on your front. It is best to avoid contact sports such as rugby and wrestling. Caution should be taken with high impact sports like netball, basketball, tennis and step aerobics if it worsens your symptoms. Whatever the activity, wearing trainers with an impact absorbing insole will help lessen the jarring on your joints.

Posture

This relates to the position of your body at any time during the day or night. Poor posture will be detrimental to the ultimate position of your spine. It is beneficial to stretch out for 10 minutes a day lying on a firm surface on your back with your knees at right angles – feet dangling towards the floor. When adopting this position and when sleeping, use as few pillows as possible.

You may find complementary forms of exercise such as pilates or yoga effective in improving your posture, balance, mobility and strength.

Alternative therapies

We encourage people to do whatever they find helps, provided it is not dangerous. Due to the extra bone formation and possible osteoporosis, which may increase your risk of sustaining a fracture, forceful manipulative treatments and sports massage should be avoided.

NASS members have tried alternative therapies such as acupuncture, deep tissue massage, aromatherapy, reflexology and homeopathy. So far none have been shown to have any advantage over conventional medical treatment, although there is evidence to suggest that massage and relaxation techniques provide some benefit. If you do want to try alternative remedies, please make sure that the practitioner fully understands the nature of AS and is a member of their relevant professional body.

Surgery

Surgery plays a very small part in the management of this condition. About 6% of people with AS need to have a hip replaced. This will successfully restore mobility and eliminate pain of the damaged joint. In rare cases surgery is used to restore a straighter posture of the spine and neck.



Leading a Normal Life

If you learn to self manage your AS, you should be able to continue your usual activities and lead a normal life.

Carry on working

Most people with AS are highly motivated and are reported to have less time off work than average. Indeed, the majority remain in full-time employment. When you are at work, pay special attention to the position of your spine both when sitting and standing.

If you sit at a desk or table maintain a correct posture by adjusting your chair to avoid having to bend forwards. Do not sit or stand in one position for too long. If you are required to stay in one position, wriggle, move or stretch as many joints as possible, as often as possible.

Take extra care when driving

You may well find an increase in pain and stiffness during prolonged car driving. So, on long journeys it is important to make frequent stops to stretch. Use a small cushion behind your back to help maintain a good position. Also, make sure your car is fitted with correctly adjusted head-restraints as even a relatively small impact can be serious for people with neck problems. If your neck is stiff or rigid, you may have difficulties at junctions. Try attaching additional mirrors to your windscreen and dashboard. You can find these at most car accessory shops. If you have a rigid neck or severe peripheral joint involvement, we would strongly advise you to inform DVLA in Swansea and your car insurance company.

Don't let AS ruin your sex-life

AS should not normally interfere with lovemaking. If, however, you are having problems with your hips, your AS is in a flaring stage or you have lost a considerable amount of spinal movement, you may need to use your ingenuity to find comfortable and satisfying positions. It is important to discuss these issues with your partner to make sure they understand your feelings. Good communication and a sense of humour will help you maintain a fulfilling sex life.

Don't let AS put you off pregnancy

Generally speaking, pregnancy in AS is not a problem since it is unlikely to have reached a stage where it could cause a difficult birth. However, if you have serious problems with your hips you may need a caesarean section. During pregnancy the growing baby can create a tendency to pull the spine forward and increase pain when standing up. Use of a maternity support will help to spread the weight of the pregnancy higher up the spine. Wherever possible, medicines should be avoided in pregnancy. It is particularly important to avoid anti-inflammatory drugs in the later stages of pregnancy. To compensate for not taking anti-inflammatory medication, try to increase your exercise/stretching programme. After the first three months, and provided your pregnancy is normal and you are supervised by your physiotherapist, hydrotherapy in a warm pool can help take the place of your drugs. It is unlikely that NSAIDs can cause problems for the baby when breast feeding but mothers are strongly advised to seek advice from their doctor or midwife, as the advice for each of the drugs is a little different. If you are on anti-TNF drugs, you should avoid becoming pregnant but if you do, you should also avoid breast feeding.

Don't let AS affect an application for life insurance.

Many life insurance companies do not understand AS and may try to add a loading to your policy. At NASS we feel this is grossly unfair and so we suggest you shop around and always appeal against any loading.

Get other people involved

It is quite natural for people with AS to feel isolated, particularly just after diagnosis. To help you adjust to having AS it is important that you enlist the support and encouragement of your family and friends. Involve other people by helping them to understand about AS and how it affects you. They may even like to improve their own fitness and join you in your exercise and sports activities. You should consider joining your local NASS branch. A list of branches is available from the NASS office. You will meet other people with similar problems to you who can offer help and advice based on their own experience.

Join **NASS** now!

Please turn over to find a membership form to pay by cheque or direct debit or alternatively you can join online by visiting our website www.nass.co.uk

Here are ten reasons why you should join NASS today:

1. A newsletter twice a year packed with news and information including personal experiences from other people with AS
2. Access to a wide range of resources including publications, exercise materials to help you understand the disease and manage your symptoms
3. A brand new website with the most up to date information on the world of AS
4. The ability to talk in confidence to someone about any issue or aspect of AS
5. Access to the network of local branches providing regular supervised hydrotherapy and physiotherapy sessions
6. The chance to share experiences with other people through the Members' Forum and AS News
7. The opportunity to influence the future of AS by participating in research projects and give your views on research priorities
8. The opportunity to have your voice heard by taking part in member surveys
9. A commitment from NASS to help improve services through its continuous campaigning on behalf of people with AS
10. The opportunity to help yourself and others with AS throughout the UK

MEMBERSHIP AND DONATION FORM

Thank you for joining NASS. Please tick ✓ the subscription rate you wish to pay and return this form to:

NASS
UNIT 0.2, ONE VICTORIA VILLAS
RICHMOND, SURREY, TW9 2GW

SUBSCRIPTION RATES

- | | | | |
|--|-----|--|------|
| <input type="checkbox"/> UK Membership | £20 | <input type="checkbox"/> Concession | £6 |
| <input type="checkbox"/> Overseas Membership | £25 | <input type="checkbox"/> Life Membership | £250 |

Membership £

Donation £

Total £

Please pay by cheque or direct debit.

(Please note we cannot accept Direct Debits for less than £15 due to the administration costs incurred)

GIFT AID DECLARATION

Please tick ✓

- Please treat the enclosed gift as a Gift Aid donation; OR
- Please treat all gifts that I make today and in the future as Gift Aid donations; OR
- Please treat all gifts that I have made in the last 6 years and all future gifts of money that I make from the date of this declaration as Gift Aid donations.**

I understand that I must pay an amount of income tax and/or capital gains tax in each tax year (6 April one year to 5 April the next) in the UK that is at least equal to the tax that the charity will reclaim on my gift for that tax year (currently 25p for each £1 given). I will notify you if I wish to cancel the declaration, change my name or home address or I no longer pay sufficient tax on my income and/or capital gains.

Signature: _____ Date: ____ / ____ / ____

Tax claimed by the charity:

- The charity will reclaim 28p of tax on every £1 you give up to 5 April 2008
- The charity will reclaim 25p of tax on every £1 you give on or after 6 April 2008
- The Government will pay the charity an additional 3p on every £1 you give between 6 April 2008 and 5 April 2011. This transitional relief for the charity does not affect your personal tax position.

If you pay income tax at the higher rate, you must include all your Gift Aid donations on your Self Assessment tax return if you want to receive the additional tax relief due to you.

MEMBER DETAILS: Please complete in BLOCK CAPITALS

Title First name(s) Surname

Home Address

..... Post code

Telephone number: Home Mobile

Email address

Have you been diagnosed with ankylosing spondylitis?

What is your occupation?

Instruction to your Bank or Building Society to pay by Direct Debit

Please send this completed instruction to:

Service User No.

CAF, Kings Hill, West Malling, Kent, ME19 4TA

NASS
Unit 0.2, One Victoria Villas
Richmond, Surrey, TW9 3GW

CAF Ref No. **FS 1016**

Name(s) and address of account holder(s)

Mr/Mrs/Miss/Ms

Address

Post Code

FOR CAF OFFICIAL USE ONLY – This is not part of the instruction to your Bank/Building Society.

Date of first payment on or after;

/ /

Bank/Building Society account number

Branch Sort Code

- - -

Instruction to your Bank or Building Society.

Please pay CAF Re NASS debits from the account detailed in this instruction subject to the safeguards assured by the Direct Debit Guarantee. I understand that this instruction may remain with CAF Re NASS and if so, details will be passed electronically to my Bank/Building Society.

Name and full postal address of your Bank/Building Society

To: The Manager

Address:

Postcode

Signature:

Date:

/ /

Banks and Building Societies may not accept Direct Debit Instructions for some type of accounts.

This guarantee should be detached and retained by the Payer

The Direct Debit Guarantee

- This guarantee is offered by all Banks and Building Societies that take part in the Direct Debit Scheme. The efficiency and security of the scheme is monitored and protected by your own Bank or Building Society
- If the amounts to be paid or the payment dates change CAF Re NASS will notify you ten working days in advance of your account being debited or as otherwise agreed.
- If an error is made by CAF Re NASS or your Bank or Building Society, you are guaranteed a full and immediate refund from your branch of the amount paid.
- You can cancel a Direct Debit at any time by writing to your Bank or Building Society. Please also send a copy of your letter to us.

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Some Practical Advice

There are certain things you can do that will help you manage AS more easily. There are also some things you should avoid.

Get a suitable chair

The ideal chair either at home or at work has a firm seat and an upright, firm back, preferably extending to the head. A chair with arms will also help to relieve weight from the spine. The seat should not be too long, as you may have difficulty in placing your lower spine into the back of the chair. The chair should be of a height which will allow you to keep a right angle with the knee and hip joints. Office chairs should be adjustable. Whatever you do, avoid low, soft chairs and sofas as they will encourage bad posture and increase pain.

Watch how you sit

Try to move your spine regularly, straighten it out and stretch it by sitting tall and pulling your shoulders back. Try not to sit for too long. Stand up, walk about and limber up.

Sleeping/Choosing a bed

Take care with your bed, mattress and pillow. The ideal bed should be firm, without sag, but not too hard. If you have an interior sprung mattress with a sprung base which is not very firm, place a sheet of chipboard or plywood between the mattress and the base. Try to use as few pillows as possible. A feather pillow can be moulded to suit any position and still give your neck good support. If you decide to buy a new bed it does not need to be the most expensive. You should choose an ordinary interior sprung mattress with a firm edge. If possible, lie on the mattress for 20 minutes before purchasing to see if it is comfortable. Firm foam mattresses can be considered but must be on a firm base. Some AS patients find "memory foam" mattresses and pillows helpful.

Try heat or cold

In its various forms heat will help to relieve pain and stiffness. Many people find a hot bath or shower first thing in the morning and/or before bed reduces pain and stiffness, especially if some stretching

exercises are done at the same time. You may also find hot water bottles, wheat bags or electric blankets useful in bed. If you have a particularly inflamed area, an ice-pack or bag of frozen peas wrapped in a damp tea towel may help. But do take care as ice can burn: oil on the skin helps to prevent burning but do not leave an ice pack in place for more than 10 minutes.

Don't wear a corset or a brace

Some doctors who are not familiar with the modern management of AS prescribe corsets and braces. These often make matters worse, as they hold the spine rigid. And, with AS, not moving leads to not being able to move!

Eat well

You will need to eat a good nourishing diet with plenty of protein found in meat, fish and pulses. Eat fruit and vegetables for vitamins and drink milk for calcium. However, avoid becoming overweight.

Alcohol

Alcohol in moderation is not bad for AS. However, anti-inflammatory drugs and alcohol can both affect the stomach lining and should therefore not be taken together.

Don't smoke

AS can reduce the capacity of the lungs. Smoking can make this even worse, making you more prone to lung infections and shortness of breath. If you are a smoker, it is therefore important that you stop.



Some Useful Exercises

In conjunction with medication, regular exercise will help you manage your AS more easily. After an initial assessment, your physiotherapist will teach you exercises specific to your needs and how to incorporate them into your daily routine. You may find them a little difficult and painful at first but it is certainly worth persisting with them. These are a few examples of exercises you can do. It is recommended that you warm up before exercising and cool down with stretches to finish.

An example of a warm up could be:

Vigorous marching on the spot for one minute with high stepping and arms punching upward for 20 seconds, forwards for 20 seconds and sideways for 20 seconds.

We have tried to show exercises which are suitable for most patients. If you are in any doubt about your ability to carry out any of the exercises please check with your doctor or physiotherapist first. NASS cannot take any responsibility for any problems arising from the exercises shown.

REPEAT EACH OF THE FOLLOWING EXERCISES AT LEAST 5 TIMES

1. Exercises in lying

Starting position:
Lying on your back,
both knees bent,
feet on floor.



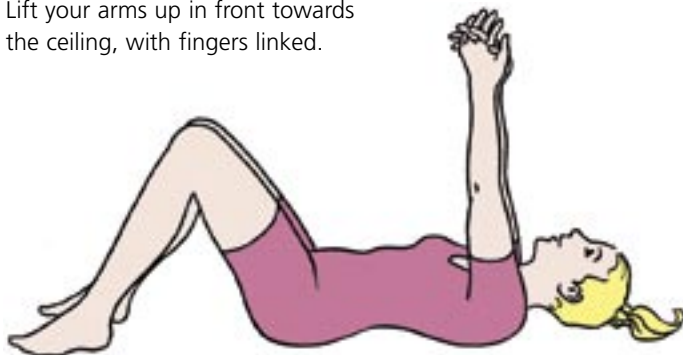
1a Bridging

Lift your hips off the floor
as high as possible, hold for
5 seconds and
lower slowly.



1b Spinal Rotation

Lift your arms up in front towards the ceiling, with fingers linked.



Take your arms to the right as far as possible while taking your knees to the left as far as possible. Turn your head to the same side as your arms. Repeat to the opposite side.



2. Exercises in 4 point kneeling

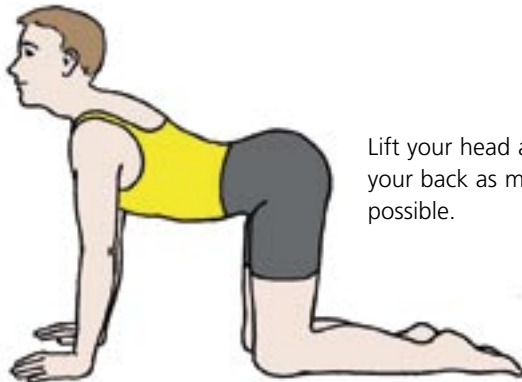
Starting position:

Kneel on all fours. Keep your hands shoulder width apart and directly under your shoulders. Keep your knees hip width apart and directly under your hips.



2a Cat Stretch (spinal flexion & extension)

Keeping your elbows straight throughout, tuck your head between your arms and arch your back as high as possible.



Lift your head and hollow your back as much as possible.

2b Superman Stretch (spinal extension)

Keeping your head up, raise your right arm forwards as you raise your left leg backwards to be parallel with the floor. Hold for 5 seconds. Return to all fours and change to raising your left arm and right leg.



3. Chair Exercises in sitting

Starting position:

Sit on a stable kitchen/dining room chair with your feet on the floor, hooked around the legs of the chair:



3a Spinal side flexion

Place your hands by your sides. Hold the back of the chair with your left hand. Bend sideways as far as possible, without bending forwards, reaching your right hand towards the floor.

Repeat to the opposite side



3b Spinal Rotation



With your hands clasped on your forearms at shoulder level, turn your upper body to the right as far as possible.

Repeat to the opposite side.



3c Neck Rotation



Hold the sides of the chair seat. Turn your head to the right as far as possible without letting your shoulders turn.

Repeat to the opposite side.



4. Leg Stretches

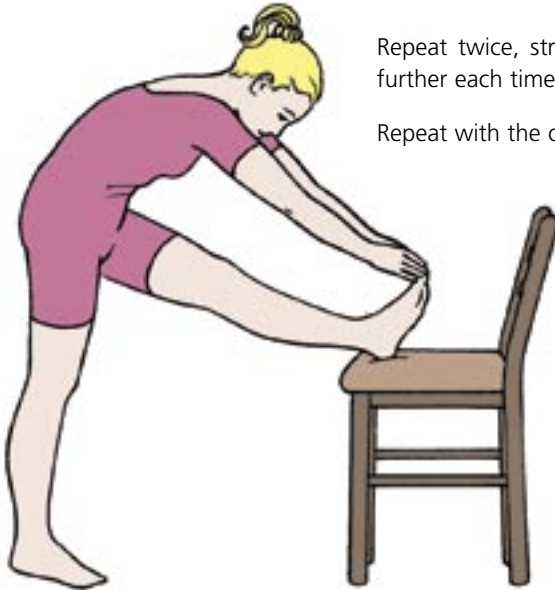
4a Hamstring stretch

Stand facing a kitchen chair, with a padded seat for comfort. Place your right heel on the seat, keeping the knee straight, and reach forwards as far as possible with both hands towards your foot. Feel the stretch at the back of your right thigh. Hold for 6 seconds. Relax.



Repeat twice, stretching a little further each time. Relax.

Repeat with the opposite leg.

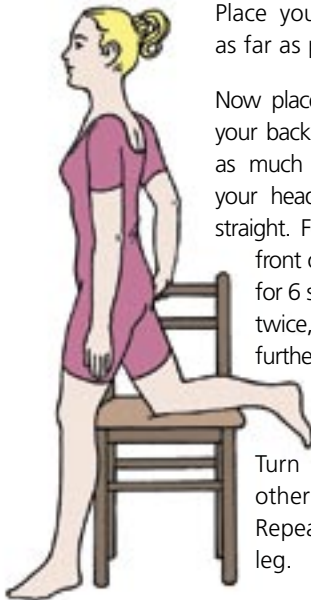


4b Hip flexor stretch



Face the side of the chair and hold the chair back with your right hand.

Bend your right knee and place your right shin on the seat.



Place your left foot forward as far as possible.

Now place both hands behind your back. Bend your left knee as much as possible, keeping your head up and your back straight. Feel the stretch at the front of your right hip. Hold for 6 seconds. Relax. Repeat twice, stretching a little further each time. Relax.

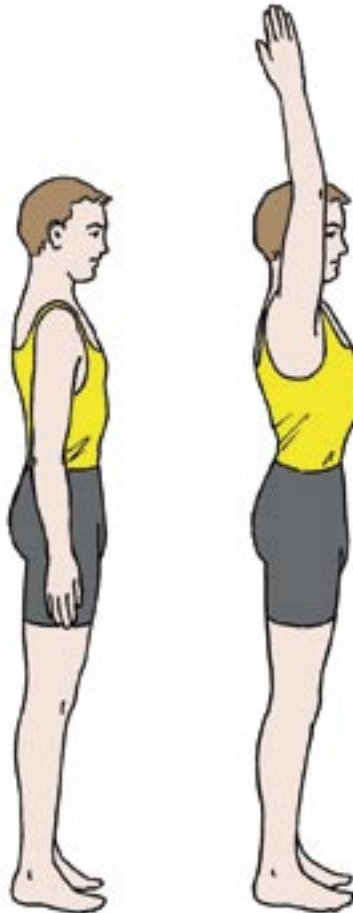
Turn round to face the other side of the chair. Repeat with the opposite leg.



5. Posture Stretch

Stand with your back to the wall, shoulders and buttocks against the wall and heels as close to the wall as you can. Tuck your chin in and push the back of your head towards the wall. Keep your shoulders down.

Stretch up as tall as possible without lifting your heels. Hold this position. Raise your right arm forwards and upwards while keeping your elbow straight, your upper arm close to your ear and your thumb towards the wall. Lower and repeat with opposite arm.



Help from the National Ankylosing Spondylitis Society (NASS)

NASS was founded in 1975 at the Royal National Hospital for Rheumatic Diseases in Bath. Its members include people with AS, their families and friends together with physiotherapists, doctors and research scientists working on the problems of the disease.

The Society exists to:

- provide support, education and information about managing the social and medical aspects of AS;
- provide a forum to educate health professionals and the public in the problems of the disease;
- fund a small amount of research;
- influence governmental bodies and the National Health Service to provide improved treatment facilities;
- encourage and assist in the formation of similar societies in other countries.

Keep informed with AS News

To keep you fully up-to-date, the Society publishes a twice yearly membership journal called *AS News*. This publication contains articles by doctors, research scientists, physiotherapists and sufferers themselves on various aspects of AS. It also features news from our branch organisations, our foreign sister societies and a correspondence section from members of the Society. Information and prices of our other publications are also listed.

Keep mobile with NASS Exercise Programmes

The experience of NASS members shows that effective management of the condition relies on a combination of anti-inflammatory drugs with a programme of regular and vigorous exercises designed to stretch ligaments and strengthen muscles to maintain mobility and good posture. To help you learn this necessary programme, the Society is building up a network of branches around the country. All of these are supported by physiotherapists who supervise regular exercise sessions for members after working hours. In addition, an exercise DVD for home exercises (*Fight Back*) and a guide to exercising safely in the gym (*Back to Action*) are available to purchase from the NASS office or via the website.

Joining is easy

To join simply complete the membership form and return it with a cheque made out to NASS or send in the direct debit form. Or you can join via our website.

Contact Addresses

National Ankylosing Spondylitis Society (NASS)

Unit 0.2 The Fergus Rogers Centre

1 Victoria Villas

Richmond Surrey TW9 2GW

T: 0208 948 9117. F: 0208 940 7736. E: nass@nass.co.uk

www.nass.co.uk

AStretch

ASstretch is a group of physiotherapists that steer the management and improve the understanding of AS in the UK.

www.astretch.co.uk

Arthritis Research UK

Copeman House

St Mary's Gate

Chesterfield

Derbyshire S41 7TD

(Raises and distributes money for research)

T: 0300 7900 0400 or 01246 5580 33

www.arthritisresearchuk.org

Arthritis Care

18-20 Stephenson Way

London NW1 2HD

T: 020 7380 6500

www.arthritiscare.org.uk

Crohn's and Colitis UK

4 Beaumont House

Sutton Road

St Albans

Herts AL1 5HH

T: 0845 130 2233 or 01727 844296

www.nacc.org.uk

Psoriasis Association

Dick Coles House

2 Queensbridge

Northampton

Northants NN4 7BF

T: 0845 676 0076

www.psoriasis-association.org.uk



Produced by the Royal National Hospital
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