

# Ankylosing spondylitis (AS) and physical activity:

WHY

WHAT &

HOW

**Recommendations from a systemic  
review of the evidence<sup>1</sup>**

# Why physical activity is important for patients with AS



## Physical activity helps manage postural, mechanical, and functional changes<sup>1</sup>

- ▶ AS-specific activities focus on spine and peripheral joint mobility
- ▶ Patients also benefit from stretching, strengthening, and balance activities



## With regular physical activity, patients with AS may experience better sleep, mood improvement, and less fatigue<sup>2</sup>

## How to prescribe physical activity



## Focus on activities that improve/maintain spine and joint mobility<sup>1</sup>

- ▶ Create goals based on patient status and level of disease activity, including bony changes (eg, maintaining existing range, restoration of full range, normal posture)



## Also include balance, strength, and stretching activities, to help maintain/improve daily function<sup>1</sup>



## Encourage patients to choose activities they enjoy to improve adherence and positive outcomes<sup>1</sup>

- ▶ No one type of exercise has been found to be superior to another



## Stress consistency, the most important factor for exercises focusing on mobility, stretching, and posture<sup>1</sup>

# Where to exercise



Conventional home exercises have shown to be effective in small clinical trials<sup>1</sup>



Individual and supervised group settings have been shown to be beneficial, when available<sup>1</sup>



Many activities can be structured to achieve multiple goals such as flexibility and strength, posture and balance, etc<sup>1</sup>

All of the following activities have been beneficial in small trials<sup>1</sup>:



- ▶ Incentive spirometry
- ▶ Postural re-education
- ▶ Modified tai chi
- ▶ Modified pilates
- ▶ Balance/stretch
- ▶ Bicycling
- ▶ Swimming
- ▶ Step aerobics
- ▶ Walking
- ▶ Warm water exercise (including hydrotherapy)

# Precautions for patients with AS

**Modify** number of repetitions and/or amount of time each day to account for individual levels of disease activity, pain, and fatigue<sup>1</sup>

**Use caution** or modify activities that excessively challenge balance, postural stability, or cardiorespiratory function<sup>1</sup>

**Avoid** high-impact activities such as contact sports, 4-wheel driving, boating in rough seas, and fairground rides<sup>1</sup>

# More info

A wealth of information and instructional resources are available online for patients with AS and their providers. Here are some examples:

## [www.thisASlife.com](http://www.thisASlife.com)

This website offers expert advice for staying healthy and overcoming challenges associated with AS. There are links to podcasts and downloadable apps of interest, lifestyle advice ranging from exercises to relationship challenges, and a full network of other patients with AS to tap into.

## [www.spondylitis.org/Exercise-Posture](http://www.spondylitis.org/Exercise-Posture)

This section of the spondylitis.org website offers motivation and education about the importance of exercise in patients with AS.

## [www.spondylitis.org/Portals/0/Resources/Free-Downloads/Sample-Exercises.pdf](http://www.spondylitis.org/Portals/0/Resources/Free-Downloads/Sample-Exercises.pdf)

This website page lets you and your patients download a variety of specific exercises appropriate for patients at all stages of AS, to help with balance, strength, posture, and range of motion.

**References:** **1.** Millner JR, Barron JS, Beinke KM, et al. Exercise for ankylosing spondylitis: an evidence-based consensus statement. *Semin Arthritis Rheum.* 2016;45(4):411-427. **2.** O'Dwyer T, McGowan E, O'Shea F, Wilson F. Physical activity and exercise: perspectives of adults with ankylosing spondylitis. *J Phys Act Health.* 2016;13(5):504-513.

# How to keep moving with AS

Physical activity plan for

Date

times/week, for  minutes.

**Goals:** Maintain/improve posture, breathing, strength, flexibility, balance.

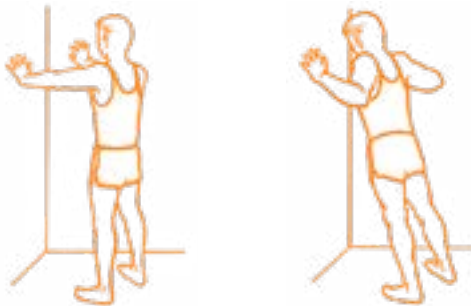
## Posture and breathing\*



STRETCH OUT



BREATHING & SHOULDER CIRCLES



PECTORAL STRETCH



QUADRICEPS STRETCH



QUADRICEPS STRENGTHENING

## Strength\*



ABDOMINAL STRENGTHENING



HIP EXTERIOR STRENGTHENING

\*Not a complete listing of possible activities.

Illustrations reprinted with permission from Spondylitis.org, <https://www.spondylitis.org/Portals/0/Resources/Free-Downloads/Sample-Exercises.pdf>.  
AS=ankylosing spondylitis.

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## Flexibility\*



NECK FLEXION & EXTENSION



NECK ROTATION



BODY ROTATION



NECK SIDE STRETCH



BODY SIDE STRETCH



HAMSTRING STRETCH



HIP & PELVIC ROTATION

## Balance and general health\*



BICYCLING

MODIFIED TAI CHI

MODIFIED PILATES

BALANCE/STRETCH

SWIMMING

STEP AEROBICS

WALKING

## Specialized options\*



WARM WATER EXERCISE

PHYSICAL THERAPY

SPIROMETRY PROGRAM

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## For more information and links to other people with AS:

[www.thisASlife.com](http://www.thisASlife.com)

[www.spondylitis.org/Exercise-Posture](http://www.spondylitis.org/Exercise-Posture)

[www.spondylitis.org/Portals/0/Resources/Free-Downloads/Sample-Exercises.pdf](http://www.spondylitis.org/Portals/0/Resources/Free-Downloads/Sample-Exercises.pdf)

\*Not a complete listing of possible activities.

Your healthcare professional is your primary source of information. You are encouraged to talk to your healthcare professional before starting any type of physical activity.

## Notes

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