

Cardiovascular risk management in rheumatic diseases

This is the lay version of the EULAR recommendations for managing cardiovascular risks in people with rheumatic and musculoskeletal diseases. [The original publication can be downloaded from the EULAR website: \[www.eular.org\]\(http://www.eular.org\).](#)

[Drosos GC, Vedder D, Houben E, et al. EULAR recommendations for cardiovascular risk management in rheumatic and musculoskeletal diseases, including systemic lupus erythematosus and antiphospholipid syndrome. Annals of the Rheumatic Diseases Published Online First: 02 February 2022. doi: 10.1136/annrheumdis-2021-221733](#)

Introduction

EULAR gives advice to doctors, nurses and patients about the best way to treat and manage diseases. These are the first EULAR-endorsed recommendations for management of cardiovascular risk in people with certain types of rheumatic and musculoskeletal diseases (RMDs).

Doctors, other health professionals, and patients, worked together to develop these new recommendations. The patients in the team ensured that the patient point of view was included. The authors looked at the evidence from the literature on cardiovascular risk and its management in people with gout, vasculitis, systemic sclerosis, myositis, mixed connective tissue disease, Sjögren's syndrome, systemic lupus erythematosus, and antiphospholipid syndrome. The recommendations are based on an evidence-based approach and expert consensus.

What do we already know?

Cardiovascular diseases affect the heart and blood vessels. Types of cardiovascular disease include heart attacks and stroke. People with inflammatory RMDs have an increased risk of developing and dying from cardiovascular disease compared to people in the general population.

Recommendations for managing cardiovascular risks in people with RMDs such as rheumatoid arthritis have been available since 2010. New evidence has shown that there are increased cardiovascular risks in people with other kinds of RMDs such as gout, vasculitis, systemic sclerosis, myositis, mixed connective tissue disease, Sjögren's syndrome, systemic lupus erythematosus, and antiphospholipid syndrome. The higher cardiovascular risks in people with these RMDs is not explained only by differences in traditional risk factors that cause cardiovascular disease (for example, smoking or being overweight). Instead, it is thought that the chronic inflammation involved in the underlying RMD might also play a role. This suggests that treatment recommendations are needed that are tailored to people with these rheumatic conditions.

What do the recommendations say?

In total, there are four overarching principles and 19 recommendations. The principles emphasise the need for increased awareness of the elevated cardiovascular risk in people with RMDs in comparison to the general population, and encourage regular screening, assessment, and management of modifiable risk factors. They also highlight the need to educate people about their risks, the need to stick to their treatment, and lifestyle changes they could make.

The recommendations are split into two groups because the advice varies depending on your underlying RMD. The first set of recommendations is for people with gout, vasculitis, systemic sclerosis, myositis, mixed connective tissue disease, or Sjögren's syndrome. The second set of recommendations is for people with systemic lupus erythematosus or antiphospholipid syndrome.

Each recommendation is based on the best current knowledge from studies of scientific evidence or expert opinion. The more stars a recommendation has the stronger the evidence is. However, recommendations with limited scientific evidence may be important, because the experts can have a strong opinion even when the published evidence may be lacking.

One star (*) means it is a recommendation with limited scientific evidence.

Two stars (**) means it is a recommendation with some scientific evidence.

Three stars (***) means it is a recommendation with quite a lot of scientific evidence.

Four stars (****) means it is a recommendation supported with a lot of scientific evidence.

Recommendations for people with gout, vasculitis, systemic sclerosis, myositis, mixed connective tissue disease, or Sjögren's syndrome

- **Traditional risk factors should be thoroughly assessed. Standard cardiovascular prediction tools used in the general population are recommended in people with these RMDs.***
Several tools are used to measure people's cardiovascular risk factors to try to help predict their risk of developing cardiovascular disease. No studies have tested the accuracy of these tools in people with gout, vasculitis, systemic sclerosis, myositis, mixed connective tissue disease, or Sjögren's syndrome. However, they have been developed based on studies in large numbers of people in the general population and it is recommended that they be used in people with RMDs.
- **The normal Framingham score tool may underestimate risk in some people; collecting additional information is recommended in people with ANCA-associated vasculitis.*****
If you have a type of vasculitis called ANCA-associated vasculitis, a tool called the Framingham score might underestimate your cardiovascular risk. It is recommended that healthcare professionals use additional information from a model called EUVAS to support the Framingham score in this group of people.
- **Blood pressure management should follow recommendations used in the general population.***
There is no evidence to suggest that blood pressure management needs to be tailored differently in people with people with gout, vasculitis, systemic sclerosis, myositis, mixed connective tissue disease, or Sjögren's syndrome. Healthcare professionals should follow the normal recommendations used to manage blood pressure in the general population.
- **Diuretics should be avoided in people with gout.***
Diuretics are a type of medicine used to treat blood pressure. They work by increasing the amount of water in your urine. Where possible, thiazide and loop diuretics should be avoided in people with gout because they can increase serum uric acid levels, which could cause a gout flare. If needed, calcium channel blockers or losartan can be considered instead.
- **Beta blockers should be avoided in people with systemic sclerosis.***
Beta blockers are a type of medicine used to treat blood pressure. They work by blocking the action of the hormone epinephrine, known also as adrenaline, slowing down your heart beat. These medicines should not be used in people with systemic sclerosis because they can worsen Raynaud's phenomenon – a circulation problem which is common in people with systemic sclerosis.
- **Lipid management should follow recommendations used in the general population.***
Statins are a type of medicine used to lower lipid levels. There is no evidence to suggest that lipid management needs to be tailored differently in people with gout, vasculitis, systemic sclerosis, myositis, mixed connective tissue disease, or Sjögren's syndrome in comparison to the general population.

Healthcare professionals should follow the normal recommendations used to manage lipids in the general population.

- Standard use of platelet inhibitors for primary prevention is not recommended. Treatment with platelet inhibitors should follow recommendations used in the general population.****

Aspirin is a nonsteroidal anti-inflammatory drug that works by stopping platelets from clumping together. It has traditionally been used as a blood thinner. However, the most recent evidence suggests that using aspirin to prevent cardiovascular events is not recommended unless indicated for other reasons.
- People with gout should lower their serum uric acid level to potentially lower the risk of cardiovascular events and cardiovascular mortality.*****

If you have gout, there is a link between the level of uric acid (urate) in your blood and your risk of cardiovascular events. It is therefore possible that it is possible that achieving lower uric acid levels can decrease your cardiovascular risk. You should aim for a level less than 0.36 mmol/L (6 mg/dL).
- In people with gout there is no preference for a particular urate-lowering therapy from the cardiovascular point of view.******

Current guidelines for gout recommend allopurinol as the first treatment choice followed by febuxostat. There does not appear to be a difference between the two treatments in terms of the number of cardiovascular events experienced by people taking them.
- In people with ANCA-associated vasculitis, remission induction and maintenance will reduce cardiovascular risk.*****

If you have a type of vasculitis called ANCA-associated vasculitis, evidence suggests that there is a link between your disease activity score and a higher risk for cardiovascular events. Achieving remission of your vasculitis could help to reduce your cardiovascular risk.
- In people with giant-cell arteritis an optimal steroid regimen that balances the risk of relapse and side effects may also reduce cardiovascular risk.*****

In patients with vasculitis, systemic sclerosis, myositis, mixed connective tissue disease, or Sjögren's syndrome the primary goal is to control disease with the lowest possible dose of glucocorticoids (steroid medicines). Studies in people with a type of vasculitis called giant-cell arteritis found a higher cardiovascular risk in people with a higher steroid dose (either daily or cumulative over time). The likelihood of relapse in people with this condition should be balanced against their cardiovascular risk.

Recommendations for people with systemic lupus erythematosus or antiphospholipid syndrome

- Thorough assessment of traditional cardiovascular risk factors and disease-related risk factors is recommended to guide risk factor modification.*****

There is not enough evidence to recommend a specific tool for cardiovascular risk assessment in people with systemic lupus erythematosus or antiphospholipid syndrome. Healthcare providers should carefully consider both traditional risk factors and disease features to estimate your risk for heart attack or stroke in order to help manage risk factors that you can change.
- Blood pressure management depends on individual factors and underlying RMD.*/*****

In people with systemic lupus erythematosus, lower blood pressure is associated with lower rates of cardiovascular events. If you have systemic lupus erythematosus, you should aim for a blood pressure target of less than 130/80 mm Hg to lower the risk for cardiovascular events***

If you have lupus nephritis, drugs called angiotensin-converting enzyme inhibitors or angiotensin receptor blockers are recommended if you have a urine protein-to-creatinine ratio higher than 500 mg/g, or if you have arterial hypertension.*

In people with antiphospholipid syndrome, there is no evidence to recommend a specific blood pressure target or antihypertensive medication. If you have antiphospholipid syndrome, your blood pressure should be managed according to recommendations used in the general population.*

- **Lipid management should follow recommendations used in the general population.***
In people with systemic lupus erythematosus, hyperlipidaemia (high cholesterol levels) can increase your risk for heart attack or stroke. Statins are a type of medicine used to lower cholesterol levels. There is no evidence to suggest that people with systemic lupus erythematosus or antiphospholipid syndrome should be treated for high cholesterol levels in a way different from the recommendations used to manage hyperlipidaemia in the general population.
- **Use of low-dose aspirin for cardiovascular prevention should be individualised.*****
Depending on their cardiovascular risk profile, people with systemic lupus erythematosus may be candidates for preventative strategies, including low-dose aspirin. Recommendations should follow those in the general population.

Asymptomatic carriers with a high-risk antiphospholipid antibody profile with or without traditional risk factors, should receive preventative treatment with low-dose aspirin (75–100 mg daily).

In people with SLE and no history of thrombosis or pregnancy complications, those with a high-risk antiphospholipid antibody profile should receive preventative treatment with low-dose aspirin. This can also be considered in some people with low-risk antiphospholipid antibody profile on a case-by-case basis.

- **In people with systemic lupus erythematosus, low disease activity should be maintained to reduce cardiovascular risk.*****
Evidence suggests that there is a link between your disease activity score and a higher risk of cardiovascular events. Controlling your lupus could also help to reduce your cardiovascular risk.
- **If you have systemic lupus erythematosus, treatment with the lowest possible glucocorticoid dose is recommended to minimise potential cardiovascular harm.*****
Steroid medicines called glucocorticoids are used to help manage lupus, but have been linked to a higher risk of heart disease and stroke. Glucocorticoids should be prescribed at the lowest possible dose to minimise the risk for cardiovascular events.
- **In systemic lupus erythematosus, no specific immunosuppressive medication can be recommended for lowering the risk of cardiovascular events.*****
Immunosuppressives are medications used to control the exaggerated activity of the immune system in people with systemic lupus erythematosus. Based on current evidence, no specific immunosuppressive medication used to treat systemic lupus erythematosus can be recommended to reduce cardiovascular risk in people with this RMD.
- **In people with systemic lupus erythematosus, hydroxychloroquine should be considered to also reduce the risk of cardiovascular events.*****

Hydroxychloroquine is recommended for all patients with systemic lupus erythematosus (unless contraindicated for some reason) and should also be considered to help reduce cardiovascular risk.

Summary

Overall, these recommendations emphasise the need to strike a balance between treating the underlying RMD and considering people's individual cardiovascular risks. EULAR hope these recommendations will enable healthcare providers and patients to tailor care to individual needs, and help improve cardiovascular health in people with RMDs.

Recommendations with just one or two stars are based mainly on expert opinion and not backed up by studies, but these may be as important as those with three or four stars.

If you have any questions or concerns about your disease or your medication, you should speak to a health professional involved in your care.