

LUPUS AND THE HEART

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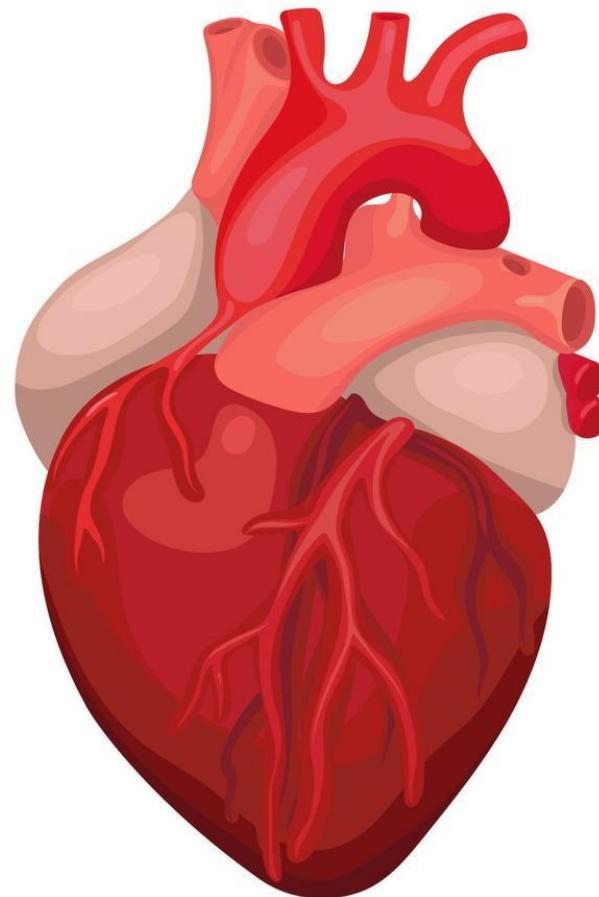
Disclosures and Conflicts of Interest

No disclosures or COI

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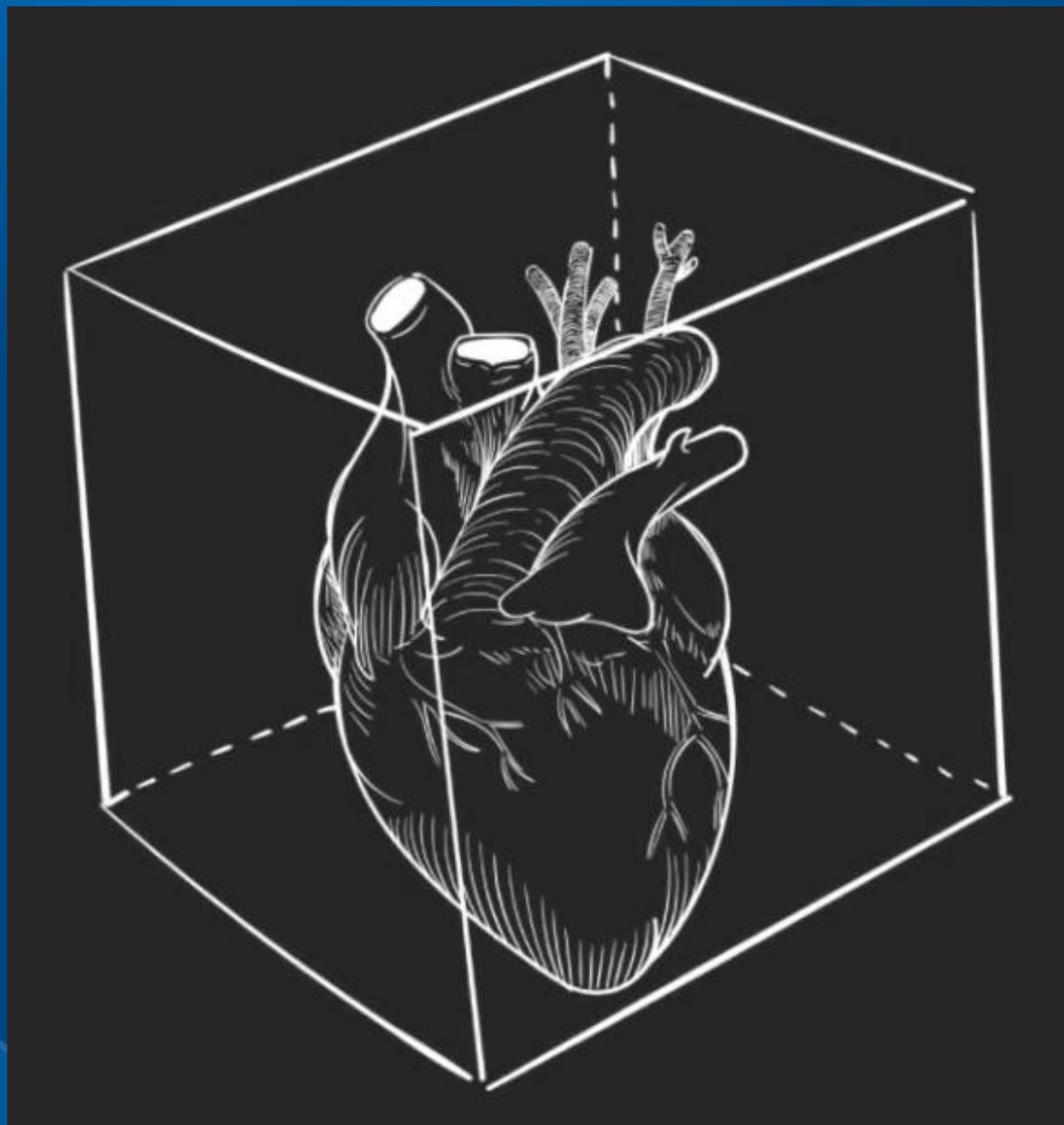


Objectives

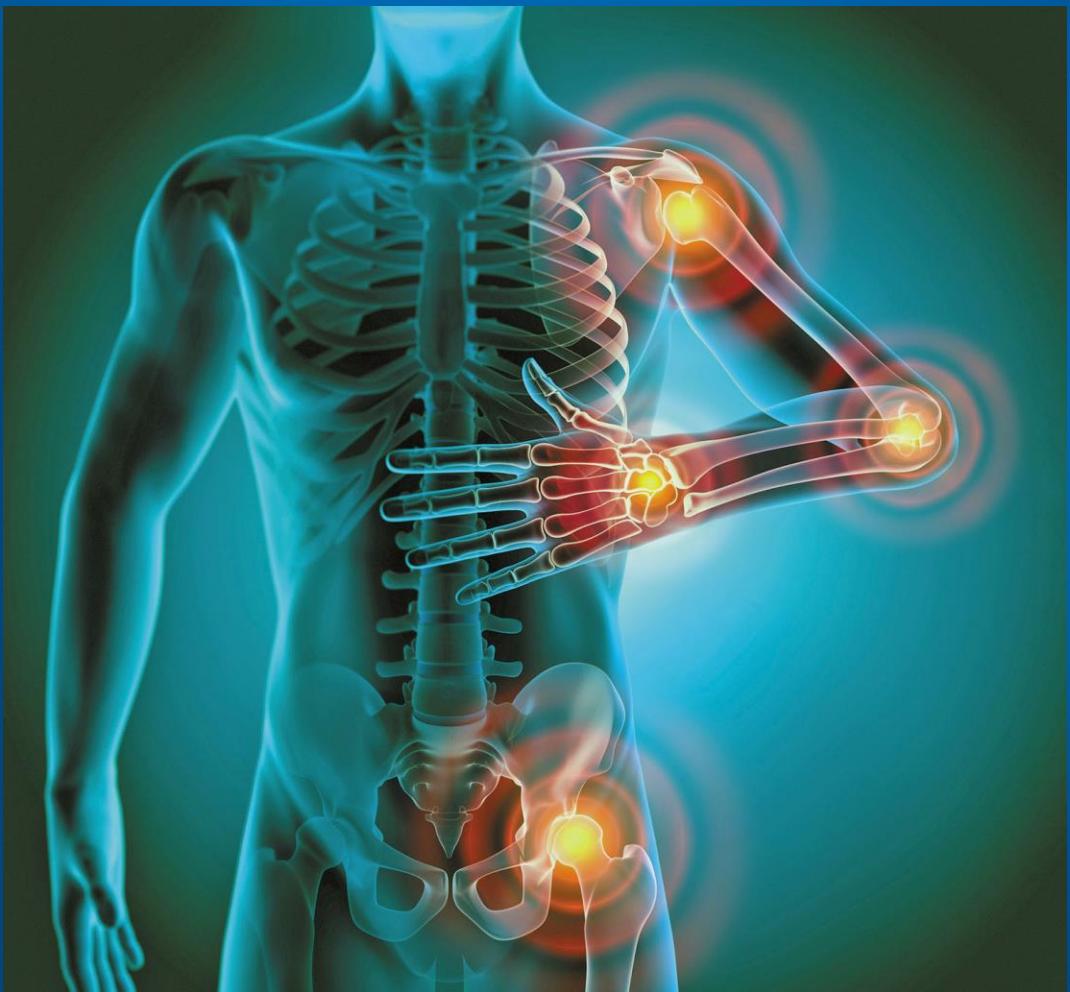


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- Understand the risk of cardiovascular disease in Lupus
- What are the warning signs of various cardiovascular diseases?
- What action to take?



Vascular Disease



- Patients with Lupus have a higher risk for heart disease in general (7-9 times higher) but specially, significantly higher for myocardial infarction (heart attack).
- Since Lupus largely affects premenopausal women (a group of population with overall lower rates of cardiovascular disease), despite overall small numbers of patients with concomitant lupus and heart attack the relative risk is about 3-times higher.
- Similarly, higher risk for stroke, reportedly as high as up to two to three-fold.

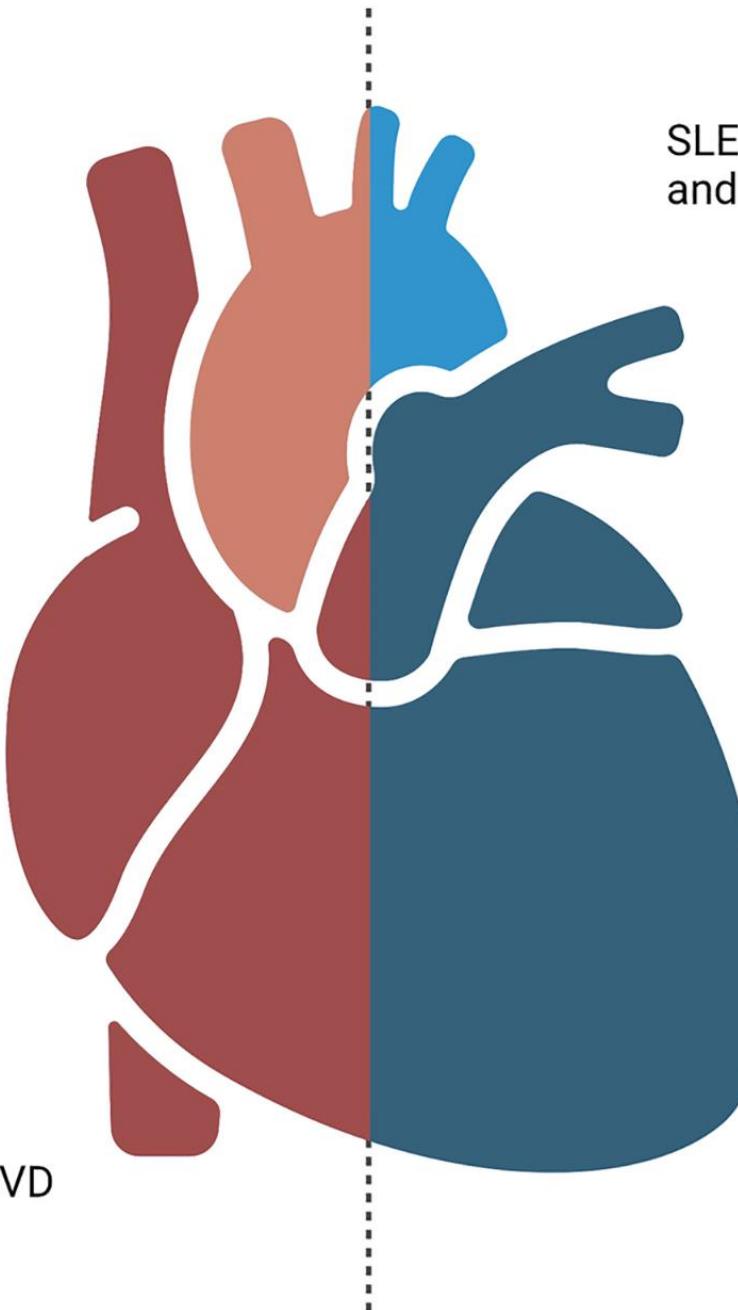
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Traditional Risk Factors

Older Age
Male Sex
Hypertension
Dyslipidemia
Smoking
High Fasting Glucose/
Diabetes Mellitus
Abdominal Obesity
Physical Inactivity
Family History of CVD

SLE-Related Risk Factors

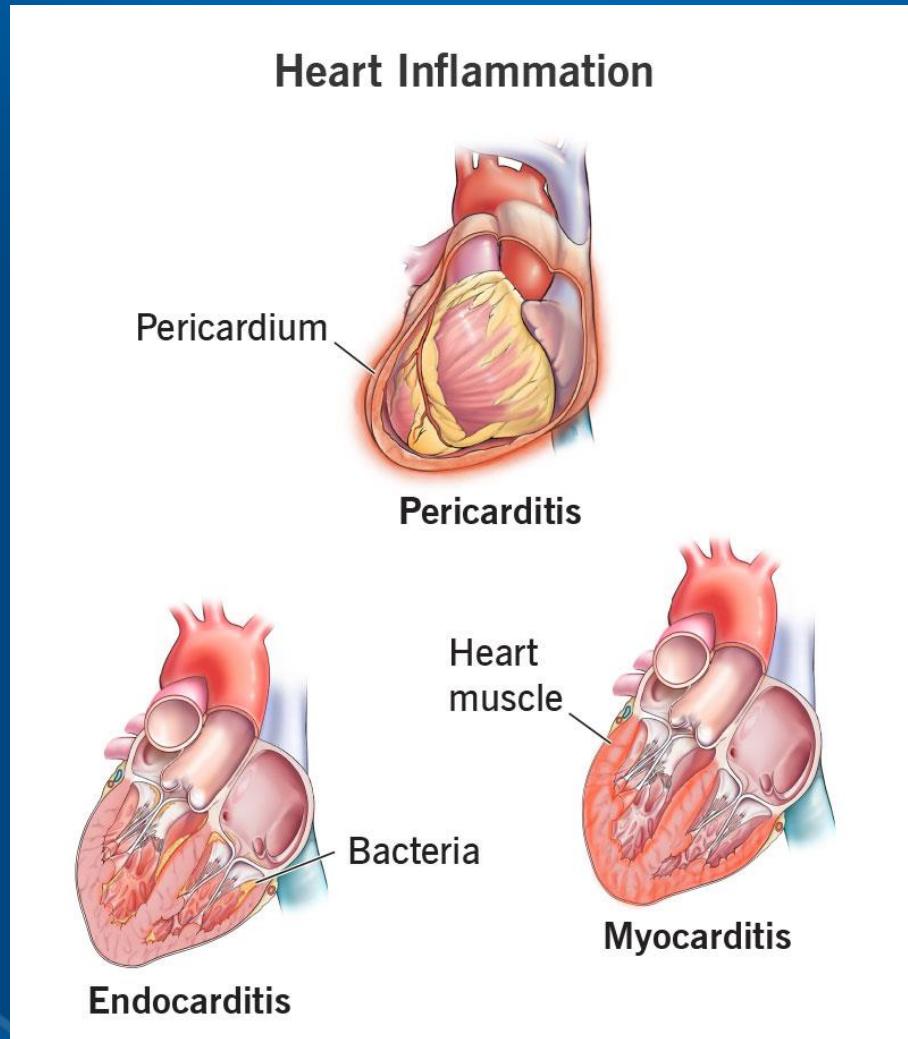
SLE Disease Activity
and Duration
Aberrant Adaptive
Immune Responses
Pro-inflammatory
Cytokine Signaling
Elevated Type I IFN
Dysregulated
NET Formation
Dysfunctional HDL
and Oxidative Stress
Autoantibodies



Warning signs of Vascular disease

- Chest pain or tightness, particularly worse with exertion.
- If lasting > 15 minutes without resolution, need to seek immediate help.
- Shortness of breath.
- FAST symptoms for stroke.

Myocardial and Pericardial Disease

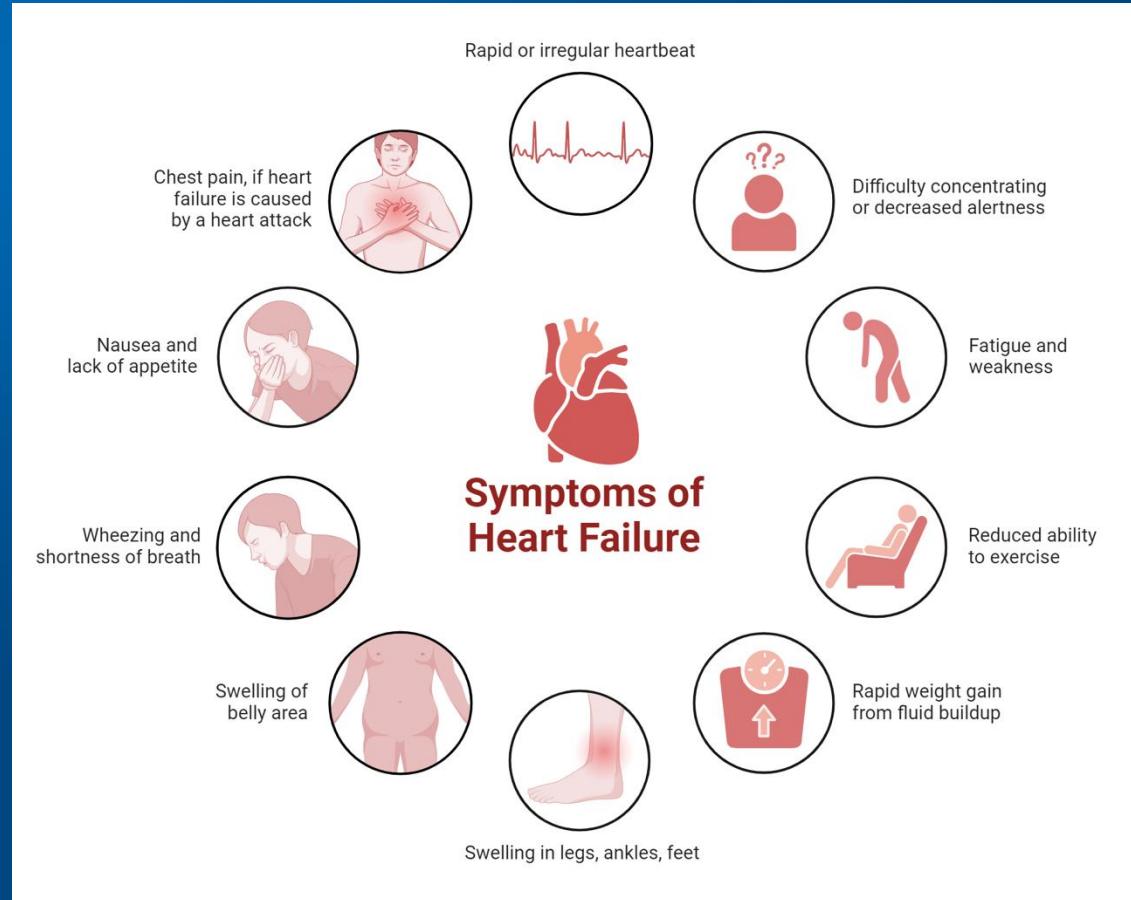


- Myocarditis – inflammation of heart muscle. It is rare. Typically, a sequela of untreated lupus inflammation.
- Pericarditis – inflammation of the lining surrounding the heart. Most common form of “heart inflammation” in Lupus. As many as 30-40% patients with Lupus may suffer from it.
- Endocarditis – typically due to infection in a non-lupus patient. In lupus it is related to anticardiolipin antibodies. Mostly affects the “mitral valve” (the valve in between the left upper and left lower chamber) in the form of stenosis (narrowing) or regurgitation (leakiness). Also called “Libman-Sacks Endocarditis”

Heart Failure

- Inflammation of heart in any form can lead to clinical development of and/or clinical symptoms of heart failure.
- However, heart failure could be a result of other pathway thru which lupus can affect heart – by heart attack or by valve disease or by way of electrical conduction system diseases.
- Could be due to lupus associated comorbid conditions – hypertension or kidney disease.

Warning signs of Myocardial/Pericardial disease



- Chest pain that is worse with lying down – especially in case of pericardial disease.

Arrhythmias/Conduction System Disorders

- Tachycardia (faster heartbeat) more common than bradycardia or blocks (slower heartbeat).
- Most common – extra beats from upper chambers (PACs), atrial fibrillation or flutter. Ventricular arrhythmias less common.
- Arrhythmias more common when lupus is not well controlled.
- Hydroxychloroquine chronic use could be associated with arrhythmias and/or myocardial dysfunction.

Warning signs of Conduction system disorders

- Palpitations.
- Feeling of skipped beats.
- Lightheadedness, dizziness, unexplained passing out episodes.
- Sudden death.

WHAT ACTIONS TO TAKE?

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Lupus patients in research studies with lower rates of cardiovascular disease had better control of lupus disease activity and better control of other cardiovascular risk factors.



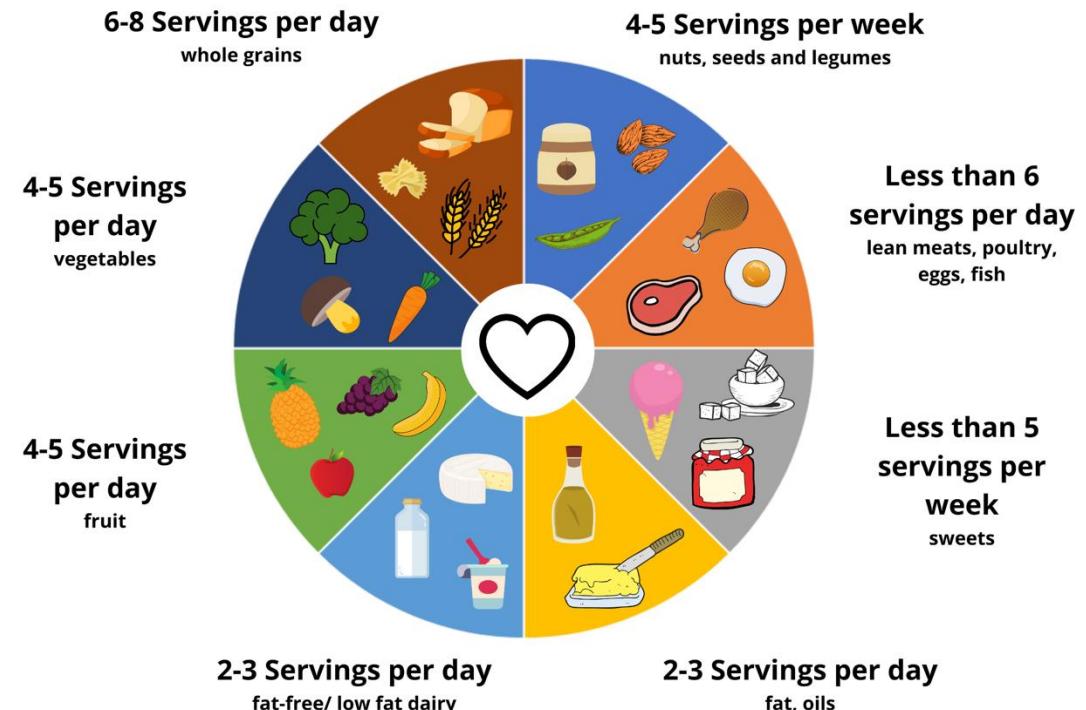
Risk of heart disease can be reduced by following three major principles:

- Better control of the inflammation and lupus activity.
- Better control of the risk factors for cardiovascular disease that patients with lupus are pre-disposed to.
- Limit use of corticosteroids.

Dietary modifications



DASH DIET



- Filling low calorie vegetables
- Fruits
- Lean proteins



- Salt
- Added sugars
- Fats

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Physical Activity Recommendations

How much activity do I need?

Moderate-intensity aerobic activity

Anything that gets your heart beating faster counts.

at least
150
minutes
a week



AND

Muscle-strengthening activity

Do activities that make your muscles work harder than usual.

at least
2
days
a week



Tight on time this week? Start with just 5 minutes. It all adds up!

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Summary

- Lupus patients have a higher risk for various cardiovascular disease largely owing to the chronic inflammatory nature of SLE and also due to the association between lupus and traditional cardiovascular risk factors.
- Watch out for warning signs and report them as soon as possible for assessing potential need for a specialist referral.
- Three main principles of risk mitigation – reduce lupus inflammation, minimize steroid use and control risk factors.
- Dietary modifications and physical activity are helpful in achieving cardiovascular as well as overall benefits.



HAPPY HOLIDAYS!