

# Cardiovascular-Kidney-Metabolic Syndrome

## What is cardiovascular-kidney-metabolic (CKM) syndrome?

CKM syndrome is a relatively new term for a health condition that occurs as a result of having (or being at risk for) a few or all of the following health problems:



- Cardiovascular disease, also known as “heart disease”
  - » Includes heart failure, atrial fibrillation, coronary heart disease, stroke, or peripheral artery disease



- Kidney disease



- Metabolic risk factors
  - » Includes high blood pressure, high cholesterol and/or triglyceride levels, prediabetes, type 2 diabetes, a smoking history, or being overweight or obese

Having CKM syndrome raises a person’s risk of harmful health events, such as a heart attack, stroke, or even death. Identifying CKM syndrome early is important to slow overall disease progression, protect organs such as the kidneys and heart, and prevent harmful health outcomes.

## Why hasn’t my doctor mentioned CKM syndrome?

Although doctors have known for some time that having multiple conditions such as obesity, type 2 diabetes, kidney disease, and heart disease can lead to harmful health outcomes, CKM syndrome is a new term. Many adults in the United States have CKM syndrome and don’t know it.

## Who is at risk for CKM syndrome?

Having the health problems listed earlier raises a person's risk of having CKM syndrome. In fact:

- In the United States, ~9 of 10 adults and ~8 of 10 young adults (aged 20 to 44 years) have CKM syndrome (Stage 1 or higher).
- Adults aged 65 years and older are the most likely to have advanced CKM syndrome (Stages 3 or 4).
- Many may not notice symptoms of CKM syndrome until Stage 4.

## How is CKM syndrome managed?

Stages of CKM Syndrome	What signs and symptoms might I have?	What can I do to prevent progression of CKM syndrome?	What might my doctor recommend?
<b>Stage 0:</b> No risk factors for CKM syndrome	None. You are at a healthy weight and do not have any health problems.	<ul style="list-style-type: none"> <li>• If not already doing so, eat healthy foods such as fruits, vegetables, whole foods, beans, nuts, seeds, and plant-based or lean animal proteins.</li> <li>• Stay active. Aim for 30 minutes of exercise every day.</li> <li>• Prioritize healthy sleep.</li> <li>• Avoid smoking and limit alcohol.</li> </ul>	No treatment is needed. Keep up the good work!
<b>Stage 1:</b> Excess body fat is the first sign of CKM syndrome	You may be overweight, obese, or have been told you have prediabetes.	<ul style="list-style-type: none"> <li>• See guidelines for Stage 0.</li> <li>• Work with a registered dietitian or your doctor to make a plan to lose weight or manage prediabetes.</li> <li>• See your doctor regularly.</li> </ul>	<p>Your doctor may discuss lifestyle changes to help with weight loss or prediabetes.</p> <p>If you've been unsuccessful on your own, medications or even surgeries can help with weight loss or prediabetes.</p>

Stages of CKM Syndrome	What signs and symptoms might I have?	What can I do to prevent progression of CKM syndrome?	What might my doctor recommend?
<p><b>Stage 2:</b> CKM syndrome begins to affect overall health</p>	<p>You may have high blood pressure, high cholesterol or triglyceride levels, type 2 diabetes, or kidney disease.</p>	<ul style="list-style-type: none"> <li>• See guidelines for Stages 0 and 1.</li> <li>• Keep your blood pressure, blood sugar, cholesterol, and triglyceride levels within a goal range.</li> <li>• Learn to log your blood pressure or blood glucose levels at home and review these values with your doctor.</li> <li>• Take all medications as prescribed.</li> <li>• Keep all appointments with your doctor.</li> </ul>	<p>In addition to the guidelines for Stage 1, your doctor may recommend medications to manage your blood pressure, cholesterol and/or triglyceride levels, or blood sugar, or medications to slow progression of kidney disease.</p>
<p><b>Stage 3:</b> CKM syndrome begins to affect blood vessels in the heart and body</p>	<p>The blood vessels in your heart and body are thickening. You may have advanced kidney disease or a high risk of having a heart attack or stroke in the next 10 years.</p>	<p>See guidelines for Stages 0, 1, and 2.</p>	<p>In addition to the guidelines for Stages 1 and 2, your doctor will review your medications to make sure you are on a regimen that lowers your risk of harmful health outcomes such as a heart attack, stroke, or kidney failure.</p>
<p><b>Stage 4:</b> CKM syndrome is affecting the blood vessels in the heart and body</p>	<p>Your doctor has diagnosed you with heart failure, atrial fibrillation, coronary heart disease, stroke, or peripheral artery disease. You may also have advanced kidney disease or kidney failure.</p>	<p>See guidelines for Stages 0, 1, 2, and 3.</p>	<p>See guidelines for Stages 1, 2, and 3.</p> <p>Medications play a key role in managing CKM syndrome. The main goal of these treatments is to improve your health.</p>

## Next Steps

If you think you may have CKM syndrome, talk to your doctor.

If you are overweight or obese and interested in losing weight, ask your doctor about:

- An exercise regimen that is right for you.
- Seeing a registered dietitian to help with weight loss.
- Any medications or procedures that will keep you healthy and help you lose weight.



Taking a proactive approach to CKM syndrome will help keep you healthy in the long run. Healthmap Solutions knows that many of the above changes are not easy, but they are possible! Please call the Healthmap Care Navigation team at **1-800-481-0474 (TTY: 711)** for help with these goals. Patients must meet program requirements to access Healthmap services.

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1-800-481-0474 (TTY: 711) | [healthmapsolutions.com/patient-resources](https://healthmapsolutions.com/patient-resources)

## REFERENCES

Ndumele et al, "Cardiovascular-Kidney-Metabolic Health: A Presidential Advisory From the American Heart Association," *Circulation*. 2023.

Aggarwal R et al, "Prevalence of Cardiovascular-Kidney-Metabolic Syndrome Stages in US Adults, 2011-2020," *JAMA*. 2024.