



MCD

Minimal
Change
Disease

How can research help?

Research, which often requires patient participation, can lead to a better understanding of the causes, provide better diagnoses and more effective treatments, and ultimately help to find a cure.

Be part of the discovery: By studying patients, researchers can more quickly unlock the mysteries of this disease.

To get involved in research and stay informed, go to:

www.Nephrotic-Syndrome-Studies.org

or call 1-866-NephCure



Nephrotic Syndrome Study Network

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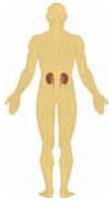


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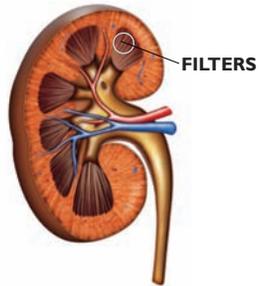
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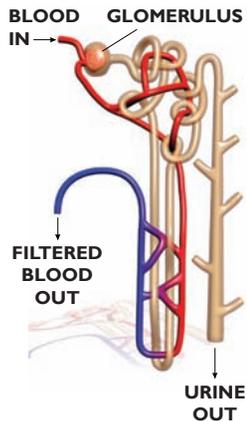
What is Minimal Change Disease?



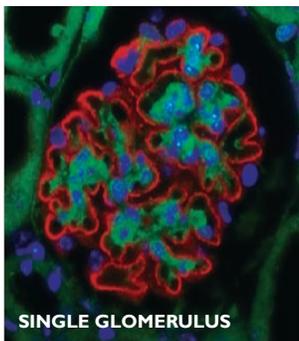
Each person has two kidneys in their lower back.



The kidneys continuously filter blood and produce urine to remove waste products, salts and excess fluid.



Each kidney is made up of approximately one million tiny filters called "glomeruli." Much as a coffee filter keeps coffee grounds in, glomeruli keep valuable cells and protein in the blood.



When glomeruli become damaged, proteins begin leaking into the urine (proteinuria). Proteinuria causes fluid to accumulate in the body and prolonged leakage can lead to kidney damage and even failure.

Symptoms, Diagnosis and Treatment

Minimal Change Disease (MCD) is one of the causes of a condition called Nephrotic Syndrome (NS). The diagnosis of MCD is given when the kidney biopsy reveals little or no change to the glomeruli or the surrounding kidney tissue. Tiny drops of a fatty substance may be present, but no scarring is seen within the kidney.

What are some symptoms of MCD?

- Proteinuria – Large amounts of protein "spilling" into the urine
- Edema – Swelling in parts of the body, most noticeable around the eyes, hands and feet, that can become painful

How is MCD diagnosed?

A series of tests are ordered:

- Urine: determine the amount of protein in the urine
- Blood: determine levels of protein, creatinine, albumin, cholesterol and others
- "Glomerular Filtration Rate" (GFR): an estimate of kidney function
- Kidney ultrasound
- Kidney Biopsy: Removal of a small portion of the kidney for examination under the microscope

How is MCD treated?

Usually a steroid called prednisone or prednisolone, is given to control proteinuria. Most patients will respond to treatment after several weeks. For some patients, the disease will come back and they will require more prednisone or other medications that suppress the immune system. If the disease does not recur for three years, there is a good chance that it will not return.

Your nephrologist may also recommend:

- Diuretics and low salt diet help to control edema
- A medication that blocks a hormone system called the renin angiotensin system (ACE inhibitor or ARB) to control blood pressure or lower urine protein
- Anticoagulants to prevent blood clots
- Statins to control cholesterol
- Maintaining a healthy diet: Correct amounts of protein and fluid intake according to your nephrologist's recommendations
- Exercising
- Not smoking
- Vitamins

What causes MCD?

MCD is "idiopathic" which means it arises without a known cause, so researchers are actively trying to learn more.

Who gets MCD?

Children of all ages and even adults can get MCD, but it mostly affects young children under the age of 5. Boys are twice as likely to have it as girls. In general, MCD eventually resolves and does not cause permanent kidney failure.