NOVODETECT™

Driving change in the diagnostic journey

Kidney stones could be a sign of a genetic condition

NovoDETECT™ can help get answers you need

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Learn more about genetic testing at **MyNovoDETECT.com**.

Kidney stones may be genetic

If you or a loved one has had a kidney stone at an early age, or have had repeated or multiple stones at any age, known as recurrent kidney stones, or RKS—it's important to find out why.

Kidney stones may be caused by genes passed down at birth, and the sooner you know, the better. It is important to get a proper and timely diagnosis so that appropriate management can be initiated.

Some signs to look for...

- Single kidney stone in an infant or child under the age of 18 years old
- RKS in adults
- Calcium deposits in the kidneys (known as nephrocalcinosis)
- Family history of kidney stones
- Chronic kidney disease with no known cause
- Failure to thrive (child growing slower than expected) and end-stage kidney disease in infants

Learn more about signs and symptoms at **UnderstandingPH.com**.

In a study, ~15%

of patients with kidney stones or calcium deposits in the kidneys had a known genetic cause.

Studies have shown that a child with a kidney stone is at **high risk of having another stone form within 3 years**.

Could it be PH?

Primary hyperoxaluria, or PH, is an inherited disease that causes the body to make too much oxalate—a metabolic waste product that is removed by the kidneys. When there is too much oxalate, the kidneys can't remove it all. This excess oxalate binds to calcium and forms calcium oxalate crystals that collect inside the kidneys and can lead to:

Buildup of calcium oxalate deposits (stones) in the kidneys

Ongoing kidney damage

Buildup of oxalate outside of the kidneys can affect other organs throughout the body

Management of PH may require dialysis or dual kidney/liver transplant.

What PH means...

inherited

Primary Hyperoxaluria

too much **oxalate** **urine**

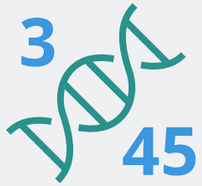
The good news is that early diagnosis and management of PH can help to slow disease progression. ***Genetic testing is the only way to know for sure.***

Learn more about primary hyperoxaluria at **UnderstandingPH.com**.

NovoDETECT™ can help provide answers you need

Sponsored by Novo Nordisk, **NovoDETECT™ is a no-charge diagnostic testing and genetic counseling service** that can help guide you and your healthcare provider in making PH management decisions. You, your healthcare provider, or your health insurance provider will not be billed for this program.

Testing is provided through **Blueprint Genetics** and **Quest Diagnostics**, offering both genetic and PH-specific metabolite testing—important tools that help find the root cause of early-onset kidney stones or RKS.



Genetic testing looks for changes in genes that may cause kidney stones to form.

- **NovoDETECT™ 3-gene PH panel** can help identify changes in genes specifically related to PH: *AGXT* (PH1), *GRHPR* (PH2), and *HOGA1* (PH3)
- **NovoDETECT™ 45-gene panel** tests for changes in PH-associated genes, plus other genes linked to kidney stone disease
- Your healthcare provider will determine which panel is right for you

PH-specific metabolite testing, if needed, helps determine substances in the urine to further assess if you have PH.

- When genetic testing alone doesn't provide answers, NovoDETECT™ uses specialized metabolite testing to clarify genetic testing results for PH

Learn more about genetic testing at **MyNovoDETECT.com**.

NOVODETECT™

How testing works

Step 1 *Talk to your healthcare provider about NovoDETECT™*

- Your healthcare provider will first confirm your eligibility
- If eligible, your healthcare provider will order a 3-gene PH or 45-gene NovoDETECT™ genetic test kit at no charge with a choice of blood or buccal (inner cheek swab) test
- When ordering, your healthcare provider may opt-in to provide you with pre- and post-genetic counseling to help you through the testing process
- If opted-in, a genetic counselor will reach out to schedule appointment times that work for you and to answer any questions you may have

Step 2 *Provide sample*

- The test kit will be sent to your home or healthcare provider's office, depending on the sample collection type (buccal or blood) chosen
- Blood samples can be collected in your healthcare provider's office, or conveniently in your home through **ExamOne**, a **Quest Diagnostics** company
- A buccal sample can be taken at home. Carefully follow test kit instructions on how to take an inner cheek swab. Information can also be found at **MyNovoDETECT.com**
- Follow the instructions found within the kit and then return the sample using the pre-paid FedEx shipping label
- The consent form provided in the kit **must** be signed and returned with your sample

Step 3 *Get results*

- Results will be made available to your healthcare provider via a secure online portal
- Results take an average of 6 weeks

No patient-identifiable information or data will be shared outside of the program. Examples of de-identified patient data are clinical diagnosis, age range, sex, and genetic variants associated with kidney stone diseases. Your healthcare provider's contact information may be shared as needed.

No samples or identifiable research data will be shared with third parties without your express permission.

Talking to your healthcare provider

When considering NovoDETECT™, you may want to ask your healthcare provider about the following:


Actor portrayals.

- Is it possible that my early-onset kidney stone or RKS symptoms have an underlying genetic cause?
- Should I talk to a genetic counselor? How will a genetic counselor be able to help me?
- What if I can't find information about my family's medical history?
- How will genetic testing impact the rest of my family? Should others, including those with kidney stones, be tested too?
- What tests should I have done and how often?

NovoDETECT™ should not affect treatment choice. Your healthcare provider and you will make the ultimate decision on your care. The full range of treatment options should always be considered before determining those that may be most appropriate for you.

Learn more about genetic testing at **MyNovoDETECT.com**.

What if you test positive for PH?

If test results indicate PH, your healthcare provider may recommend:

- **Testing of appropriate family members including parents, siblings, and children**
- **Options for you to consider that may help manage your PH**

Take a closer look at how PH is inherited and learn about current management options at **UnderstandingPH.com**.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novoDETECT™

Driving change in the diagnostic journey

NovoDETECT™ leaves no stone unturned

Novo Nordisk is committed to finding the root cause of early-onset kidney stones or RKS through diagnostic testing, including reducing delays in diagnosis of PH.

Talk to your healthcare provider about next steps and learn more about genetic testing at **MyNovoDETECT.com**.

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Blueprint Genetics

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