

# Medical Tests: The Basics

*Your health care may include medical tests like blood tests and X-rays. Tests are one of several tools in a doctor's toolbox. Your doctor can help you decide whether any medical tests are right for you.*

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## What are medical tests?

**Medical tests are one tool that your doctor uses to care for you.** To understand your medical needs, your doctor will consider different kinds of information like your age, gender, symptoms, medical history, and physical exam. Often, that information is enough to know how to care for you. Sometimes, your doctor may need more information and may suggest ordering one or more medical tests.

## What does a medical test do?

A medical test can:

- **Diagnose symptoms.** If you have new symptoms, like chest pain or a cough, a medical test may help your doctor diagnose these symptoms, which means figuring out what is or is not causing them.
- **Check on a known medical condition.** If you already know you have a medical condition, like diabetes or kidney disease, a medical test can help see how the condition is doing.
- **Screen for a new condition, based on your risk factors.** Certain medical tests are recommended for patients *who don't have* symptoms, based on factors like age and gender. Examples include screening for breast cancer with a mammogram or screening for high cholesterol with a blood test.

## What kinds of results might you see?

**Tests with a "reference range":** A reference range captures the results of 95% of healthy people. Results inside the reference range are considered normal. Results outside of the reference range may be flagged as high or low.

- Example: Complete Blood Count (CBC)

**Tests with a "positive" or "negative" result:** A positive test result implies that you have a condition, while a negative result implies that you don't have a condition, based on a certain cut-off number.

- Examples: COVID-19 PCR test, HIV antibody test

**Tests with a descriptive report:** Imaging and pathology tests are reviewed and interpreted by doctors with special training. Reports may include their assessment and recommendations for follow-up.

- Examples: Chest X-ray, Pap smear

For more information on specific medical tests, please see [www.labtestsonline.org](http://www.labtestsonline.org).

## What are the downsides of medical tests?

- Tests can take time and cost money.
- Tests may cause stress, discomfort, and, in rare cases, physical injury.
- Test results are not always accurate.
- Sometimes, test results can lead to extra tests or treatments that may not help you.

## What else do I need to know about test results?

### False-positive results

- Sometimes a test has a "positive" result, suggesting that you *have* a disease when you actually *don't* have it. This false alarm is called a "false-positive."
- Some medical tests are more likely to have false-positives. These include mammograms for women and prostate cancer tests for men.
- These false alarms may cause stress. They can also lead to a "cascade" or series of follow-up tests and treatments that may not help you.

### Unexpected results (also called "incidental" findings)

Sometimes a test finds something that you weren't looking for. For example:

- A set of blood tests like a Complete Blood Count may show one or more results that are higher or lower than the normal (reference) range. This could be for reasons unrelated to your health.
- An imaging test to look for a particular issue may show nearby shadows or growths. For example, a chest scan to look for a lung infection may show a small lump in your thyroid gland.

Abnormal or unexpected results are common, yet they can be stressful. Although they are usually nothing to worry about, such results may make you want to take action. This can lead to more tests and treatments that may not help you. Your clinician can help you understand if your test results are important for your health.

## How can I tell whether or not a medical test is right for me?

The potential benefits and downsides of medical tests are different for different medical tests and depend on some other factors.

In some cases, your doctor will recommend a medical test because the benefits outweigh the downsides.

- For example, if you have symptoms of HIV infection, the benefits of getting a blood test for HIV likely outweigh any downsides.

In other cases, your doctor will *not* recommend a medical test because the downsides outweigh the benefits. For example:

- "Routine" yearly blood tests, urine tests, or electrocardiograms are not useful in most cases, unless you are checking on a known medical problem, like diabetes.
- If you have fever and diarrhea for one day, you probably don't need to get a test of your stool. Watching and waiting, also called the "test of time," is often the best choice.

Sometimes, your doctor will ask about your preferences and then decide if a test is right for you. In these cases, you and your doctor will talk about the best choice.

- For example, mammograms for women in their 40s have a very small chance of catching cancer early. They are more likely to cause false alarms and lead to more tests. Balancing this trade-off is a decision a patient and doctor can make together.

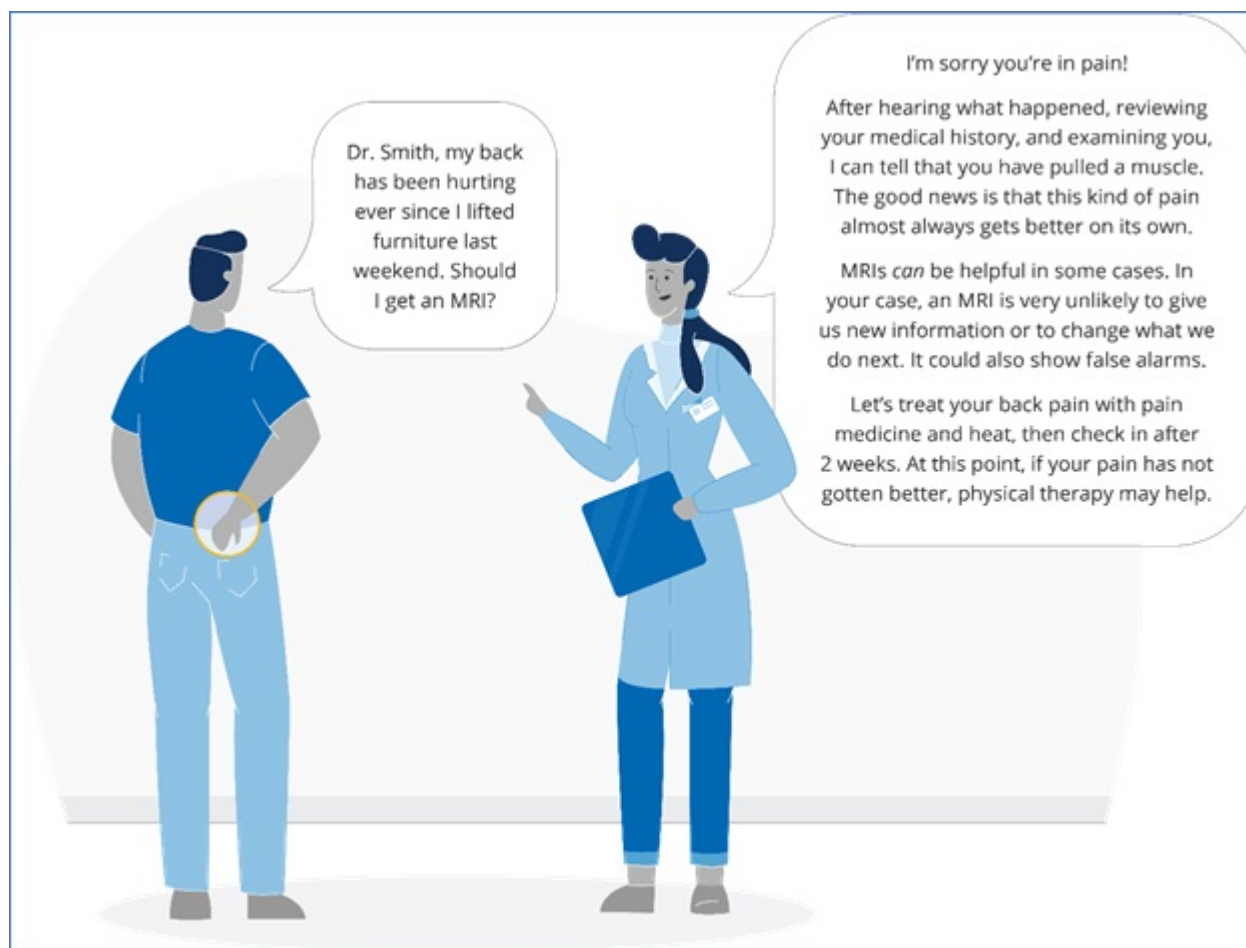
## Talk with your doctor about whether a medical test is right for you.

It's a good idea to prepare for your visit. Write down questions for your doctor ahead of time.

Some questions you may want to ask your doctor include:

- How will this test change what we do next?
- What are the possible benefits and downsides of this test?
- What else can we do instead of this test?

You need to feel comfortable with your medical plan. If you are worried that you might have a specific health problem, like cancer, tell your doctor. Together you can decide what tests are right for you and what the results mean for your health.



*Source: This material was created by Ishani Ganguli, Robert S. Rudin, and Nitya Thakore as part of a study funded by the Robert Wood Johnson Foundation.*

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