

# Understand Your Kidney Lab Tests

## Lab Tests Detect Kidney Disease

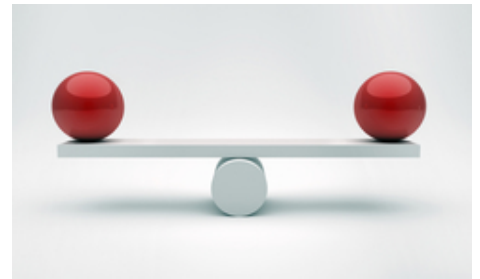
Kidney disease can be silent until a LOT of damage has been done. You can feel well but may still have a problem. How does your doctor know? Kidneys that don't work well don't remove as many wastes from your blood. These wastes—and other substances, like minerals and protein—can be measured in your blood or urine. These test results can tell your doctor if you have a problem.



## Maintaining Balance

The main job of healthy kidneys is to keep water and key minerals in your body in balance. They do this by sending wastes from your blood into your urine.

Your health care team knows what this balance in your blood should look like. They can see it in your blood and urine tests.



## Test Results Show Problems and Progress

Each blood or urine test has a “normal range.” If your levels are outside of the normal range, it means that you may have a health problem. Looking at which levels are outside of normal gives your care team clues about what to look for. You might want to check out the National Kidney Disease Education Program [Kidney Test Results fact sheet](#)\*.



Watching the *trends*—how much your levels go up or down over time—tells your care team how quickly or slowly kidney disease is getting worse. If you have a kidney problem, your lab tests will help you know if your efforts and your care team's are working to help slow the rate.

\* Links will take you outside of the Department of Veterans Affairs website. VA does not endorse and is not responsible for the content of the linked websites.

## Reading Your Test Results

Your blood test results tell you what's going on *inside* your body. They can be a vital health clue that something is wrong, even if you feel well.

Your blood test results may look like this VA lab report (click on the image to enlarge).

Looking at the whole page may be confusing. You might be tempted to just skip it—but please don't. Your blood test results are a tool that can help you track your health. Learning how to read and track them can help you feel more in control.

--- CHEMISTRY - GENERAL ---						
SERUM	NOV 19	OCT 29	AUG 29	AUG 29	UNITS	REFERENCE RANGES
	2012	2012	2012	2012		
NA	1432		141	139	mmol/L	135 - 145
K		4.1	4.1		mmol/L	3.5 - 5
CL			102		mmol/L	100 - 110
CO2			27		mmol/L	20 - 30
BUN			16		mg/dL	7 - 25
CREAT			1.00		mg/dL	.5 - 1.5
eGFR			80		mL/min	
GLUCOSE			105		mg/dL	Ref: < 199
CA, TOT					mg/dL	8.5 - 10.5
PROTEIN					g/dL	6 - 8.5
ALBUMIN					g/dL	3.2 - 5
PO4					mg/dL	2.5 - 5

Click on image to enlarge

## What to Look for in Lab Results

Try to look at just a few test results at a time. You can do this on your lab printout by covering up most of the page with a sheet of paper so you can focus on what you're looking for.

You should see the name of the test, then the dates of your most recent tests with the results. A column labelled "**Units**" tells you how the test results are reported. Then, you'll see a column labelled "**Reference Ranges.**" This tells you what the normal, healthy level is for each test. Now, you can look at *your results* to see if they are in the normal range.

--- CHEMISTRY - GENERAL ---						
SERUM	NOV 19	OCT 29	AUG 29		UNITS	REFERENCE RANGES
	2012	2012	2012			
NA	1432		141		mmol/L	135 - 145
K		4.1	4.1		mmol/L	3.5 - 5
CL			102		mmol/L	100 - 110
CO2			27		mmol/L	20 - 30
BUN			16		mg/dL	7 - 25
CREAT			1.00		mg/dL	.5 - 1.5
eGFR			80		mL/min	
GLUCOSE			105		mg/dL	Ref: < 199

Click on image to enlarge

## Out-of-Range Results

On most lab test reports, any result that is outside of the normal range is marked with an asterisk, a comment, or a letter code to get attention.

In this example, MOST of the results are out of the normal range, so most have a letter code next to the test result. We've highlighted the "out-of-range" results in yellow so you can find them.

L means the result is *lower* than the normal range.

H means the result is *higher* than the normal range.

Look at glucose, for example. The result is 250 and it is labeled H—higher than the normal range. Click on the picture to enlarge the report so you can see it better.

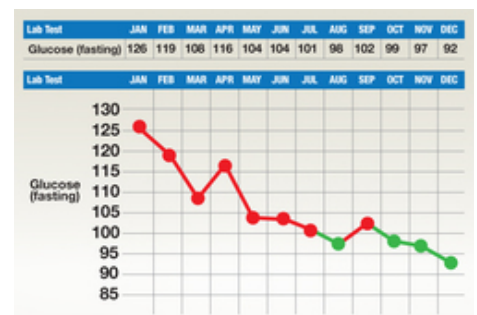
SERUM	NOV 19 2012 14:30	OCT 29 2012 20:30	AUG 29 2012 13:25	UNITS	REFERENCE RANGES
NA			124 L*	mmol/L	135 – 145
K		4.1	4.1	mmol/L	3.5 – 5
CL			88 L	mmol/L	100 – 110
CO2			27	mmol/L	20 – 30
BUN			16	mg/dL	7 – 25
CREAT			1.00	mg/dL	5 – 1.5
eGFR			80	mL/min	
GLUCOSE			250 H	mg/dL	Ref: < 199
CA, TOT			7.5 L	mg/dL	8.5 – 10.5
PROTEIN			5.0 L	g/dL	6 – 8.5
ALBUMIN			1.9 L	g/dL	3.2 – 5
PC4			1.2 L	mg/dL	2.5 – 5

Click on image to enlarge

## Tracking Your Lab Results

Ask your care team for a copy of your lab results. You can use your results to get a better handle on how you are doing over time. There are two ways to do this. First, you can just keep a simple table with the results, as often as you get them. Or, you can GRAPH your lab tests so you can see the ups and downs. Here, we show results by month for a year. You can even color-code your results—red for out-of-range and green for values that are in the normal range.

The *trends* are just as important as the numbers you get. Are your numbers staying the same? Going up? Going down? Looking at the trends will help you see whether your actions to help slow your CKD are paying off.



Click on image to enlarge

## Using Your Lab Test Results

Your kidney lab tests are a window into what's happening inside your body. Use them to help track your progress and see if what you eat and drink and your medications are helping to slow the rate of your kidney disease.



U.S. Air Force photo by Osakabe Yasuo