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Fractional excretion of sodium

Fractional excretion of sodium is the amount of salt (sodium) that leaves the body through urine compared to the amount filtered and reabsorbed by the kidney.

Fractional excretion of sodium (FENa) is not a test. Instead it is a calculation based on the concentrations of sodium and creatinine in the blood and urine. Urine and blood chemistry tests are needed to perform this calculation.

How the Test is Performed

Blood and urine samples are collected at the same time and sent to a lab. There, they are examined for salt (sodium) and creatinine levels. Creatinine is a chemical waste product of creatine. Creatine is a chemical made by the body and is used to supply energy mainly to muscles.

How to Prepare for the Test

Eat your normal foods with a normal amount of salt, unless otherwise instructed by your health care provider.

If needed, you may be told to temporarily stop medicines that interfere with test results. For example, some diuretic medicines (water pills) can affect test results.

How the Test will Feel

When the needle is inserted to draw blood, some people feel moderate pain. Others feel only a prick or stinging. Afterward, there may be some throbbing or slight bruising. This soon goes away.

Why the Test is Performed

The test is usually done for people who are very ill with acute kidney disease. The test helps determine if the drop in urine production is due to reduced blood flow to the kidney or to kidney damage itself.

What Abnormal Results Mean

A meaningful interpretation of the test can be made only when your urine volume has dropped to less than 500 mL/day.

FENa of lower than 1% indicates decreased blood flow to the kidney. This can occur with kidney damage due to dehydration or heart failure.

FENa higher than 1% suggests damage to the kidney itself.

Risks

There are no risks with providing the urine sample.

There is little risk involved with having your blood taken. Veins and arteries vary in size from one person to another and from one side of the body to the other. Taking blood from some people may be more difficult than from others.

Other risks of having blood drawn are slight, but may include:

- Excessive bleeding
- Multiple punctures to locate veins
- Fainting or feeling lightheaded
- Blood accumulating under the skin (hematoma)
- Infection (a slight risk any time the skin is broken)

Alternative Names

FE sodium; FENa

References

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