

## MEDICAL BREAKTHROUGHS RESEARCH SUMMARY

TOPIC: **PREVENTING ACUTE KIDNEY FAILURE**  
REPORT: **MB #4729**

**BACKGROUND:** Kidney failure is linked to a number of factors, like toxic exposure to environmental pollutants, certain acute and chronic diseases, kidney trauma and severe dehydration. Some of the symptoms that are associated with kidney failure are reduced urine, swelling in the ankles, feet, and legs from retention of fluids, confusion, seizures, and even coma. Kidney failure is mostly caused by loss of blood flow to the kidneys which can be caused by heart disease, dehydration, severe burn, allergic reaction, or sepsis. Urine elimination problems, a blood clot in the kidneys, lupus, scleroderma and for those with cancer, chemotherapy drugs are also causes of kidney failure. There are five types of kidney failure: acute prerenal, acute intrinsic, chronic prerenal, chronic intrinsic and chronic post-renal.

(Source: <https://www.healthline.com/health/kidney-failure#causes>)

**DIAGNOSING:** There are many tests that can be used to determine acute kidney failure. There is urine output measurement that looks at how much a patient urinates in 24 hours. Patients can also take blood tests, imaging tests, or kidney tissue sampling. With most people already in the hospital, doctors try to use IV fluids to balance the amount of fluids in the blood. Kionex can be used prevent the accumulation of high levels of potassium in the blood. Too much potassium can cause irregular heartbeats. Patients can also be put on dialysis or medication to remove toxins and restore blood calcium levels. They may also recommend lower potassium foods such as apples, peppers and grapes. They may also recommend limiting phosphorus and avoiding products that have added salts.

(Source: <https://www.mayoclinic.org/diseases-conditions/kidney-failure/diagnosis-treatment/drc-20369053>)

**NEW PROCEDURE:** Along with the Waterman Protocol for acute kidney failure, the FDA has approved a new drug created by Johnson and Johnson called INVOKANA. It was approved to reduce the risk of end stage kidney disease and cardiovascular events such as chronic kidney disease. This is also the first treatment for diabetic kidney disease.

Researchers in Dallas are also looking into the effect of N-acetylcysteine on cytokines and markers of oxidant stress after patients get an acute renal failure post liver transplant.

(Source: <https://www.kidney.org/news/fda-approves-new-drug-to-treat-diabetes-related-kidney-disease> <https://clinicaltrials.gov/ct2/show/NCT01907061?cond=acute+kidney+failure&cntry=US&draw=2&rank=2>)

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**If this story or any other Ivanhoe story has impacted your life or prompted you or someone you know to seek or change treatments, please let us know by contacting Marjorie Bekaert Thomas at [mthomas@ivanhoe.com](mailto:mthomas@ivanhoe.com)**