### The Prairie Doc Perspective

# The story of edema

#### **By Richard P. Holm MD**

Joe was a 60something diabetic patient arriving at the emergency room swollen, very short of breath, and with fluid leaking from sores over his pittingswollen legs. His swellingpuffiness or edema, worse in the legs, extended up all over his body even around his eyes.

When his kidneys were tested we found elevated waste in the blood and protein in the urine, indicating kidneys weren't effectively excreting waste products, and yet were losing important proteins into the urine. We also learned his diet was terrible, his diabetes was out of control, his prostate had been troubling him for vears, and his heart pump was weak after his heart attack five years earlier.

He was one sick fella, problems piling upon problems, and so we admitted him into the hospital.

Edema, that puffy, swollen, sock-denting problem, formerly called dropsy, is very common to the human condition, and can simply be due to poorly functioning veins and their tiny venous valves. Poor varicose veins are treated by

support hose and/or elevating the legs.

Edema can also be due to a weak heart when the pump doesn't have enough push and pull to either push the blood through the kidneys or to pull the blood back to the heart from extremities and the lungs. Mostly heart weakness is treated with diuretics and medicines.

Sometimes in men, the prostate will block urine flow enough to slow down kidney function causing edema. This can be fixed with catheters, prostate surgery, or prostate shrinking meds.

But the most challenging cause for edema happens when blood levels of egg-whitelike protein get too low. This makes blood thin and watery so that fluid leaks out of blood vessels into tissue. Low blood protein can be due to several problems: a diet lacking in essential protein building blocks; a liver that isn't making enough protein; or kidneys that no longer hold onto those proteins as they are filtered, resulting in protein lost into the urine. Low blood protein is difficult to treat.

Indeed, Joe's problem

with edema had several causes. We treated him by elevating and wrapping his legs, by medicines enhancing the heart pump and removing excess fluid, by a catheter opening up urine flow, and finally by improving nutrition and diabetic control. Long-term kidney problems wouldn't go away for Joe, but for now we could help.

After a week in the hospital, Joe lost twenty pounds of water and went home without a catheter, breathing easy, leg sores healing.

Dr. Rick Holm wrote this Prairie Doc Perspective for "On Call®," a weekly program where medical professionals discuss health concerns for the general public. "On Call®" is produced by the Healing Words Foundation in association with the South Dakota State University Journalism Department. "On Call®" airs Thursdays on South Dakota Public Broadcasting-Television at 7 p.m. Central, 6 p.m. Mountain. Visit us at

OnCallTelevision.com.



"I DON'T KNOW WHAT'S WRONG WITH ME, DOC...BUT I JUST DON'T CARE
ABOUT JUSTIN BIEBER ..."

# Governor seeking interns for summer term

PIERRE – Gov. Dennis Daugaard is currently seeking applications for two summer 2014 Governor's Office Internships in Pierre. The positions will be paid and run from May to September 2014.

Governor's office interns have the opportunity to work at the highest level of state government, learning about and preparing legislation to be introduced in the next legislative session.

Interns' duties will depend on interests and strengths. Typical duties will include aiding the governor's general counsel, conducting policy research, preparing policy briefings and staffing the governor, lieutenant governor and first lady.

The positions are open to

all undergraduate or graduate-level students. Preference will be given to South Dakota residents attending South Dakota colleges or universities.

Students who are interested in receiving credit should also apply. The governor's staff is open to working with individual

universities and professors to secure credit for the internship program.

Interested students should submit a resume, cover letter and two letters of recommendation by March 1, via e-mail, to

Patrick.Weber@state.sd.us.
For more information on duties or logistics, visit http://sd.gov/governor/Internship or contact Patrick Weber at Patrick.Weber@state.sd.us or (605) 773-5999.

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