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Study examines impact of extra pounds on kidney function

CALGARY — Over the years, health scientists have drawn clear links between obesity and sleep apnea, and sleep apnea and deteriorating kidney function. Now, researchers are investigating whether excess weight alone has a harmful effect on the kidneys.

In a new study underway in Calgary, a team of researchers is seeking people of different body shapes and larger sizes, who do *not* have sleep apnea, to take part in the study.

“Diabetes and high blood pressure are two of the biggest risk factors for kidney damage but a growing body of research now suggests that how weight is distributed may affect kidney function,” says Dr. Sofia Ahmed, a nephrologist and principal investigator in the study.

“Anything that creates extra wear and tear on the kidneys can contribute to a loss in function, in the same way that a car that’s driven hard over time can’t continue to perform at the same high level. In our study, we hope to learn more about what the relationship may be between increased weight and how it is distributed – such as apple or pear shapes – and kidney function.”

In particular, researchers will be looking at a hormonal system called the renin-angiotensin system and whether extra weight has an impact on it and, in turn, how hard the kidneys have to work to keep a person’s blood clean.

Calgarian Arlene MacCallum was one of the early recruits to the study.

“My father had kidney disease and died at quite a young age, and my husband is a kidney transplant recipient,” she says. “It just seemed natural that I would get involved in something like this that might shed more light on how kidney disease develops.”

Individuals interested in taking part in the study first have a screening history taken and then a physical exam.

“We’re looking for people who are generally in good health and who don’t have any underlying health conditions, such as diabetes,” says Ann Zalucky, a medical student who is helping lead the study as part of her MD/MSc degree in the University of Calgary’s Leaders in Medicine Program.

“We’re interested in all sorts of body compositions and sizes.”

One stipulation is that participants must not have sleep apnea. If they pass through the initial screening, they’ll be sent home with a device that measures their breathing and heart rate during sleep to determine if they have sleep apnea.

If eligible, participants will be asked to come in for one study visit that lasts about three hours. During the study visit, blood will be drawn and various physiological measures taken.

The study is funded by Alberta Innovates – Health Solutions. Dr. Ahmed is also a member of the Libin Cardiovascular Institute of Alberta.

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Anyone interested in taking part in the study should contact the research co-ordinator at 403-210-7434 or email at dsola@ucalgary.ca.

Alberta Health Services is the provincial health authority responsible for planning and delivering health supports and services for more than four million adults and children living in Alberta. Its mission is to provide a patient-focused, quality health system that is accessible and sustainable for all Albertans.

The University of Calgary is a leading Canadian university located in the nation's most enterprising city. The university has a clear strategic direction – “Eyes High” – to become one of Canada's top five research universities by 2016, grounded in innovative learning and teaching and fully integrated with the community of Calgary. For more information, visit ucalgary.ca.

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B-roll of a study participant undergoing testing is available at:

URL: <ftp://208.118.126.84>
Folder: B-ROLL-KIDNEY FUNCTION RESEARCH-HD
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