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Does an Apple a Day Really Keep the Doctor Away?

On Monday April 13th our speakers were Prof Josh Lewis and Dr Marion Mundt from the School of Medical Health Science at ECU based in Joondalup.

Josh and Marion reminded us how healthy eating for seniors can lessen our chance of a heart attack or stroke by reducing vascular calcification in our arteries. Their research has also found that the same healthy eating can reduce our chance of developing dementia in future years.

Their evidence from clinical trials has shown that by eating 5 serves of green vegetables per day especially broccoli, cauliflower, cabbage and Brussel sprouts, showed a reduction in calcification of the blood vessels in the aorta. Eating 2 serves of fruit strong in flavonoids was also recommended. Apples were found to contain very high level of flavonoids especially if you eat the whole apple skin and core (not the pips). Other good fruits to eat are blueberries, blackberries, red grapes and tomatoes. Red wine and chocolate are also high in flavonoids but should be consumed in moderation! Even consuming black tea and green tea is beneficial to our cardiovascular health but do not add milk to them.



Initially, Josh's major research was involved in bone mineralisation in the elderly and his team had collected about 8000 bone density scans (Dexas) from elderly females of which most of these seniors had had one or more fall.

During this research Josh noticed that those females with lower bone density had also developed higher vascular calcification in their aorta and spinal blood vessels.

So: Could they use their bone density results to predict cardiovascular future health in these same patients?

A world wide study of this would be required, but analysing the cardiovascular tests needed a detailed radiographer's report on each one and was time consuming. It would take them about 50 years to fully analyse the 730,000 Dexas scans that they already had in Australia.

This is where "computer learning" or AI as we know it could enable this research to be undertaken worldwide.

Marion, who is currently a Research Fellow in Computer Science at ECU, is developing an AI algorithm to automatically detect and measure blood vessel disease from images of these bone scans. So far these results are very promising, predicting with about 85% correlation with the clinical trials.

Josh's current research is now investigating how seniors with low bone density can be tempted to increase their intake of green leafed vegetables. His team has now produced an ice cream made from cauliflower and Brussel sprouts and another one from chocolate and broccoli! We are all looking forward to sampling these in the future!



Helen White

So the answer to the title question is YES! Science has proved this!