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Blame it on your brain: Salt and hypertension

An international research team led by scientists at McGill University, Montreal, Canada, has found that excessive salt intake "reprograms" the brain, interfering with a natural safety mechanism that normally prevents the body's arterial blood pressure from rising.

While the link between salt and hypertension is well known, scientists until now haven't understood how high salt intake increased blood pressure. By studying the brains of rats, a team led by Prof. Charles Bourque of McGill's Faculty of Medicine discovered that ingesting large amounts of dietary salt causes changes in key brain circuits.



"We found that a period of high dietary salt intake in rats causes a biochemical change in the neurons that release vasopressin (VP) into the systemic circulation," says Bourque who is also a researcher at The Research Institute of the McGill University Health Centre (RI-MUHC). "This change, which involves a neurotrophic molecule called BDNF (brain-derived neurotrophic factor), prevents the inhibition of these particular neurons by other cells."



Excessive salt intake "reprograms" the brain, interfering with a natural safety mechanism that normally prevents the body's arterial blood pressure from rising, researchers have discovered.

The team's findings, published in the journal *Neuron*, found that high salt intake prevents the inhibition of VP neurons by the body's arterial pressure detection circuit.

The disabling of this natural safety mechanism allows blood pressure to rise when a high amount of salt is ingested over a long period of time.

Blame it on your brain: salt and hypertension (cont.)

While the team's discovery advances the understanding of the link between salt intake and blood pressure, more work is needed to define new targets that could potentially be explored for therapeutic intervention.



Among the questions for further research: Does the same reprogramming effect hold true for humans? If so, how might it be reversed?

In the meantime, Bourque says, the message remains: limit dietary salt

Journal Reference:

1. Katrina Y. Choe, Su Y. Han, Perrine Gaub, Brent Shell, Daniel L. Voisin, Blayne A. Knapp, Philip A. Barker, Colin H. Brown, J. Thomas Cunningham, Charles W. Bourque. **High Salt Intake Increases Blood Pressure via BDNF-Mediated Downregulation of KCC2 and Impaired Baroreflex Inhibition of Vasopressin Neurons.** *Neuron*, 2015; DOI: 10.1016/j.neuron.2014.12.048

At Salt Skip News, we are always interested to hear from readers. Please send us your Salt Skip news, tips and salt-free or low sodium recipes...

The following QHA article, "Shed those extra kilos for your health!" is continued, courtesy of Salt Skip News

Eat less

- To lose weight permanently, you need to change your eating habits. Aim to eat more fruit and vegetables, less fatty foods, less processed foods, and less 'extra' foods like lollies, chocolate, biscuits, cakes and so on. Also, drink plenty of water, and limit soft drinks and alcohol.
- Start with small changes, such as drinking a glass of water instead of a soft drink, and eating a piece of fruit instead of a biscuit or two. Also, make changes that you don't really notice, such as replacing high-fat milk with low-fat milk, and using less oil and fat in your cooking.



Move more

- Being more active means moving around more: it doesn't necessarily mean a vigorous exercise program. Any movement helps! Aim for at least 30 minutes of physical activity each day, either in one burst or in shorter bursts that add up to at least 30 minutes.
- Small changes can increase your activity level. For example, park the car a block or two from your destination, so you have to walk a bit further, or walk to the shops instead of driving.

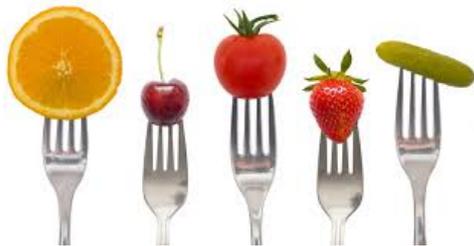


QHA article continued: "Shed those extra kilos for your health!"

Weight loss products

Because losing weight is hard, it's tempting to look for a magic bullet to make it easier. If you are thinking about using weight loss products, talk to your doctor or pharmacist. Also, be wary about any advertising claims made about such products.

Remember that weight loss medicines only work when used in combination with a lower calorie diet and a more active lifestyle.



Furthermore, like all medicines, weight loss medicines may have side effects and may interact with your other medicines.

Sources of help

It might help to talk to your dietitian or GP before embarking on a plan to lose weight. You may also like to seek advice from other health professionals. For example, a physiotherapist can help you choose suitable exercise activities that take into account any health problems you may have.



Losing weight is easier when you have support from those around you. Consider enlisting the support of friends and relatives to help you stick to your new healthy eating plan and increased activity levels, particularly during the first few weeks.

Source: Published in MedicinesTalk
This information does not replace advice from your own Doctor or health professional.

Strange but True...

- Your heart beats over 100,000 times a day!
- Most lipstick contains fish scales!
- A crocodile always grows new teeth to replace the old teeth!
- The longest recorded flight of a chicken is 13 seconds!
- The average person has over 1,460 dreams a year!
- Thomas Edison, lightbulb inventor, was afraid of the dark
- A 'jiffy' is an actual unit of time for 1/100th of a second!
- Your body is creating and killing 15 million red blood cells per second!
- A group of geese on the ground is a gaggle, a group of geese in the air is a skein!
- Scepticisms is the longest word that alternates hands when typing!
- When glass breaks, the cracks move faster than 3,000 miles per hour. To photograph the event, a camera must shoot at a millionth of a second!
- The king of hearts is the only king without a moustache on a standard playing card!
- The Mona Lisa has no eyebrows. It was the fashion in Renaissance Florence to shave them off
- Carrots are bad for rabbits in large quantities and the misconception started with the popularity of Bugs Bunny cartoons. "Err..What's Up Doc!"



Source: www.strangefacts.com

Tomato and Bean Soup

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It is perhaps well-known to readers, but Heinz Baked Beans comes in 'salt reduced' and 'no added salt' as well as the ordinary variety. The 'salt reduced' is much higher in sodium than the 'no added salt' one – which are the baked beans of choice. A great food and much under utilised!

Here's the recipe from the Heinz Baked Beans- No Added Salt can label for Tomato and Bean Soup:

1. Heat 1 tablespoon of oil in a large saucepan, add 1 chopped onion and 2 crushed garlic cloves, cook for 2 minutes, or until softened. Stir in 2 chopped sticks of celery and 1 chopped zucchini and cook for 2 minutes.
2. Stir in 420g can of chopped tomatoes (La Gina brand has trace elements of sodium only), 420g can Heinz Baked Beans – No Added Salt and 1 cup of water, bring to the boil, cover and simmer for 10-15 minutes.
3. Stir through 1 tablespoon of shredded fresh basil, season with pepper and serve. Enjoy!

BP Monitor with Salt Skip News is published every 2 months, from February to December (6 issues a year).

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