

Honey offers beneficial boost to our gut bacteria

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The bacteria in our gut influence whether we get fat, whether we develop cancer and can influence allergies and our mental health. Nural Cokcetin tested 25 Australian honeys and found they offered a significant boost to beneficial gut bacteria. The favourable changes can be achieved with just 20g of honey consumed daily. This is Nural's presentation at FameLab 2017, a science communication competition run by the British Council. Nural was the audience choice winner & FameLab Australia winner.

Transcript

Robyn Williams: FameLab is a global competition for young scientists to spruik their research, usually at PhD level. The contenders are judged by their clarity, their charisma, and of course their science. The national finals have just been held in Fremantle, and the winner was Nural Cokcetin from the University of Technology in Sydney, who showed us an artificial gut she'd built, and the wonderful effect she's found of honey on your microbiome.

Nural Cokcetin: I study our microbiome, using this artificial gut system that I built in the lab, replicating what happens from the mouth through to the stomach, all the way down to the colon. These gut bacteria down here, we've got good and bad, play a huge role in our lives. They help us digest our food, they make essential vitamins, and they remove toxins, they influence our hormones, our immune systems and even the way our brains work. Today we are much more focused on creating and maintaining this healthy gut.

Our microbiome can change as we get older, when we take antibiotics, and with our diet. It thrives when we eat certain foods called prebiotics, which are complex sugars, often found in veggies like chicory root, artichoke and garlic. So these feed not only us but also our bacterial friends.

Honey is a popular home remedy for digestive problems throughout all of history, but is there any science behind this, and could it be linked to our microbiome? I have tested over 25 different Australian honeys in this system, and one of the reasons that we are looking at these honeys is that they also have complex sugars that could be feeding these gut bacteria. So let's take a look at my Poo-Tube channel to see these results. So all of these honeys boost the populations of the beneficial bacteria which then made compounds that stop the growth of the harmful ones. With honey in this system, even some of these harmful bacteria started doing good things instead, and they made products that helped to protect against colon cancer, the second biggest cancer killer in Australia.

The next step was to see if this translated in real life. So in a world-first clinical study, we had 50 volunteers eating honey while I looked at the changes in their microbiome. And amazingly I did see significant benefits, and best of all, just 20 grams of honey a day was enough.

My research has directly contributed to developing the first ever prebiotic honey, now registered as a therapeutic agent in Australia. A healthy gut can have huge health benefits because our

microbiome is involved in a number of bowel diseases and can influence whether we get fat, develop cancer or suffer from allergies or mental health issues. So a spoonful of honey to treat your microbiome, I guess you can say I've got a good gut feeling about this.

Judge: Nural, I could start off by saying where do I buy it, but before you go into the commercial bit, you tested 25 different honeys, so what's the difference between them all?

Nural Cokcetin: We get our honey from nectar, so the honeybees visit different flowers, collect the nectar, and they turn that into honey. Each of the different flowers is a honey type. So in Western Australia, actually one of the ones that I tested in the system is jarrah honey. You've got spotted gum, yellow box, so it depends on the flowers that the bees visit to collect the nectar.

Judge: I just love this, I think it's great. I've never heard about a building an artificial bowel before but good on you, I think it's wonderful. I wanted to talk about issues that we hear about eating disorders. And we've heard how often they do have a very strong effect on our mental state. Could you explain a little bit more about that?

Nural Cokcetin: So one of the cool things about your gut microbiome, and we are finding this out more and more, it's quite a hot topic actually at the moment, there's a direct link from the gut to the brain, so it sends signals to your brain, and that can influence also serotonin, which is associated with the feeling of happiness, it's actually produced in the gut. So it's all your bacteria communicating with each other and you get a huge boosts or not so many boosts of this serotonin, that can interact with your brain.

Judge: We have huge issues about mental health in our community, so you think honey could be something that could sweeten our whole society?

Nural Cokcetin: I mean, I wouldn't say it's a cure, yet, but anything that we can do to help improve our balance of bacteria in our gut is a step in the right direction.

Guests

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Further Information

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Credits

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