

microbiota could play a causal role in growth impairments in children.”

“But it also supports the idea that maybe we should look at gut microbiota when we deal with strategies to prevent and treat undernutrition,” she says, and adds that this applies not only to children, but also to adults, including elderly people.

Isolated good bacteria

Brahe is particularly impressed that Fan and colleagues were able to identify specific strains of bacteria that, when added to the young mice, restored the gut flora to normal.

“As the results in this study also suggest, it might be possible to counteract the growth impairment in children by colonising the gut with specific bacteria,” says Brahe.

“That’s interesting as it means that maybe we can identify specific bacteria that can prevent growth impairments and for instance provide these to the children through probiotic supplements,” she says.

Brahe also sees applications that go beyond undernourished infants and include treatments for children and adults that have experienced other types of growth abnormalities. This includes problems experienced by overweight or obese patients, who are at the other end of the malnourishment scale.

But she emphasises, there is a long way to go before such treatments could be rolled out.

Tackling global malnutrition

For Fan, the results are an exciting development in the fight to end malnutrition in some of the world’s poorest countries.

According to Fan, low-income countries like Malawi have the highest prevalence of stunting, where as many as 70 per cent of children under the age of three suffer from stunted growth. And this is associated with many other effects, she says.

“It not only effects the child’s risk of morbidity and mortality, but also mental and motor development, and there’s also studies that show a link to reduced educational achievement, adult productivity, and earning potential later in life,” says Fan.

“So it’s really a priority in countries like Malawi, where it’s a major public health problem,” she says.

“Gut microbes appear to play an important role, but they’re not the only factor. So now, we’re looking into these other factors, such as viral or parasitic causes and also the role of other systemic infections,” says Fan.

Video: Nutrition in two minutes (World Food Program).

 [Malnourishment in infants is a major public health issue in developing countries, where millions of children suffer debilitating conditions such as growth stunting. New research suggests that a solution could be found in the stomach's gut bacteria. \(Photo: Flickr UNAMID\)](https://www.flickr.com/photos/unamid-photo/10033713715/) [7]

 [In Mirriah, Niger, mothers are encouraged to screen their children for early signs of malnutrition. \(Photo: Flickr European Commission DG ECHO\)](https://www.flickr.com/photos/69583224@N05/15841690090) [8]

 [10033713715_03467ba047_o.jpg](https://www.flickr.com/photos/10033713715_03467ba047_o.jpg) [9]

Fact box

What is Malnutrition?

The inability to consume enough food to meet your dietary requirements.

It includes malnourishment and chronic hunger.

On the other end of the scale is obesity.

It occurs when you eat too few or too many nutrients.

What are health effects?

Growth stunting, which affects 161 million children around the world.

Increased risk of death.

Diet-related diseases, such as cardiovascular disease and respiratory problems.

Reduced cognitive development.

Source: Food and Agriculture Organisation of the United Nations.

[Nutritional supplements keep dying HIV patients alive](#) [10] [Paleo diet better for weight loss than nutrition recommendations](#) [11] [Turning toxic vegetable refuse into nutritious animal feed](#) [12] [Better health with a Nordic diet](#) [13] [Genes determine effect of diet and exercise](#) [14] [Yuemei Fan](#) [15] [Lena Kirchner Brahe](#) [16] [Gut bacteria that prevent growth impairments transmitted by microbiota from malnourished children.](#) DOI 10.1126/science.aad3311 [6]

[Catherine Jex](#) [17]

February 21, 2016 - 06:25

This field is not in use. The footer is displayed in the mini panel called "Footer (mini panel)"

Source URL: <http://sciencenordic.com/healthy-gut-microbes-could-treat-malnutrition>

Links:

[1] <http://sciencenordic.com/category/section/health>

[2] <http://sciencenordic.com/health>

[3] <http://sciencenordic.com/malnutrition>

[4] <http://sciencenordic.com/microbes>

[5] <http://sciencenordic.com/category/countries/finland>

[6] <http://science.sciencemag.org/cgi/doi/10.1126/science.aad3311>

[7] http://sciencenordic.com/sites/default/files/10033713715_03467ba047_o.jpg

[8] http://sciencenordic.com/sites/default/files/15841690090_0cfcee14a8_o.jpg

[9] http://sciencenordic.com/sites/default/files/10033713715_03467ba047_o_0.jpg

[10] <http://sciencenordic.com/nutritional-supplements-keep-dying-hiv-patients-alive>

[11] <http://sciencenordic.com/paleo-diet-better-weight-loss-nutrition-recommendations>

[12] <http://sciencenordic.com/turning-toxic-vegetable-refuse-nutritious-animal-feed>

[13] <http://sciencenordic.com/better-health-nordic-diet>

- [14] <http://sciencenordic.com/genes-determine-effect-diet-and-exercise>
- [15] http://www.uta.fi/med/dih/personnel/staff/fan_y.html
- [16] <http://nexs.ku.dk/ansatte/?pure=da/persons/312916>
- [17] <http://sciencenordic.com/content/catherine-jex>