

Firstborn? That may increase a man's risk of being overweight

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Warning: Being a firstborn may be hazardous to your health. So suggests a small study of middle-age men in New Zealand. Compared with their younger brothers, the firstborns weighed more and were less sensitive to insulin.

Researchers had recruited the guys to be part of clinical trials testing whether olive leaf extract or krill oil could improve their metabolic health. All of the volunteers were between the ages of 35 and 55, and all were overweight, with a [body mass index](#) between 25 and 30.

To study the effects of birth order, they pulled out data from trial participants who were either the first or second child born in their family. Men were excluded if they had diabetes, [high blood pressure](#) or high cholesterol, or if they were on any medications that might affect these conditions. Smokers and other tobacco users were also dropped from the analysis. The final group included 26 firstborns and 24 seconds.

Though men in both groups were about the same height - on average 5 feet 10 inches for the older brothers and 5 feet 9 inches for the younger - there were significant differences in weight. The average weight for the older brothers was just over 200 pounds, while the younger brothers averaged 185 pounds. As a result, their BMIs diverged as well: 29.1 for the firstborns and 27.5 for the seconds.

These differences arose despite the fact that men in both groups had similar amounts of body fat. The older brothers averaged 32.2 percent

body fat, compared with 29.9 percent for the younger. The difference wasn't statistically significant.

However, there was a real difference in [insulin sensitivity](#), which was 33 percent lower in the firstborn men than the younger brothers. (When the body doesn't respond properly to insulin, it can lead to problems like diabetes, heart disease and obesity.) This difference was seen even after researchers controlled for the amount of exercise the men got, their fat mass and other factors.

The researchers at the University of Auckland speculated that something had happened in the womb that made the firstborns more vulnerable to these metabolic problems.

One possibility they mentioned was placental blood flow. A first pregnancy causes changes in certain arteries in the uterus, and those changes are permanent. That means firstborns don't get the benefit of these changes from the moment of conception, but second children do. (This might also explain why firstborns generally have lower birth weights than the next child, they said.)

The researchers said that their results may not apply to women. In fact, they may not generalize beyond middle-age overweight white men (92 percent of the [men](#) in the study were of European descent). Still, the results were intriguing enough to warrant further study, they wrote.

The results were published Thursday in the journal *Scientific Reports*, a Nature publication.

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