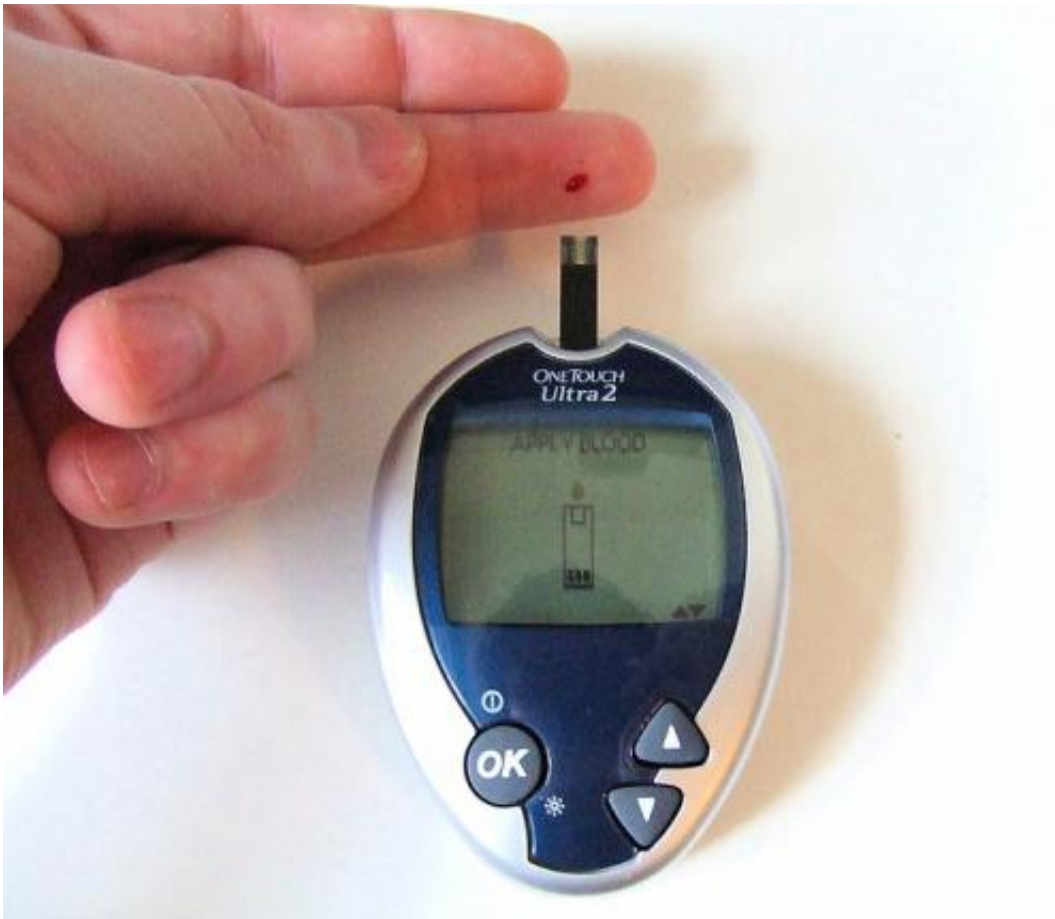


Study links low thyroid function to greater odds of type 2 diabetes

April 3 2016



Blood glucose monitoring. Credit: Wikipedia

Having too little thyroid hormone in the blood—even in the low-normal range—raises the risk of developing Type 2 diabetes, especially in

people with prediabetes, a new study in nearly 8,500 people finds. The study results will be presented Sunday at the Endocrine Society's 98th annual meeting in Boston.

Prediabetes is a mild elevation in blood glucose, or sugar, level that usually occurs before diabetes develops. One of every 10 people with prediabetes will develop Type 2 diabetes every year, according to the Hormone Health Network.

In the new study, the risk of developing Type 2 diabetes over long-term follow-up increased by 13 percent for people with low [thyroid function](#)—often called [underactive thyroid gland](#) or hypothyroidism—or even those with low-normal thyroid function. However, the [diabetes risk](#) was up to 40 percent higher for individuals with reduced thyroid function if they already had prediabetes, the investigators reported.

"These findings suggest we should consider screening people with prediabetes for low thyroid function," said lead investigator Layal Chaker, MD, of Erasmus Medical Center, Rotterdam, the Netherlands.

Currently, experts recommend thyroid screening of people with Type 1 diabetes, because they have a greatly increased risk of [thyroid disease](#). Both Type 2 diabetes and hypothyroidism occur more often in older adults. However, Chaker said the association of thyroid function with Type 2 diabetes and prediabetes remains unclear.

Thyroid hormones are crucial for the regulation of metabolism, which is how the body converts food into energy or stores it. Hypothyroidism slows metabolism and can lead to weight gain. According to Chaker, past research has found a link between hypothyroidism and reduced sensitivity to the hormone insulin, another risk factor for Type 2 diabetes.

The study by Chaker and her colleagues included 8,452 participants from the Rotterdam Study, a population-based study in adults age 45 or older that reflects the general population in the Netherlands. Participants had an average age of 65 years. All participants had blood tests to measure their blood sugar and thyroid function. They were reexamined every two or three years to check for the development of Type 2 diabetes, and their medical records also were reviewed.

Over an average follow-up of nearly eight years, 1,100 participants developed prediabetes and 798 developed diabetes, according to the study abstract.

The researchers found that even among participants whose thyroid function was in the normal range at first measurement, progression from prediabetes to diabetes was reportedly 1.4 times higher for those in the lowest third of thyroid function levels compared with the highest third.

"We found it surprising that even people whose thyroid function was in the low-normal range had an increased risk of diabetes," Chaker said.

"Future studies should investigate whether screening for and treatment of subclinical hypothyroidism [mildly low thyroid function] is beneficial in subjects at risk of developing [diabetes](#)."

Provided by The Endocrine Society

Citation: Study links low thyroid function to greater odds of type 2 diabetes (2016, April 3) retrieved 2 May 2024 from

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