

予習課題 次の英文の内容を理解しなさい。

An estimated 60 million Americans are obese. Many people are so heavy that they gasp for air climbing stairs or even lifting themselves out of chairs. Dieting is often unsuccessful, but medical technology may have another solution for people with serious weight problems.

Obesity is no joke, even if comic books and television comedies make fun of fat people. Dieting and exercise can help many, but some patients and their doctors elect surgery that causes food to “bypass” parts of the digestive system. Nearly 20 percent of them later need another operation to correct problems; and nearly 30 percent develop nutritional deficiencies because the stomach and intestines, with their reduced capacities, can’t absorb enough vitamins and nutrients.

According to a report in *The Boston Globe*, a combination of obesity and inactivity kills 400,000 Americans each year, with the number steadily rising. Health care companies, large and small alike, want a share in the “obesity market” and are developing products other than diet pills and exercise equipment. Some patients and doctors who want to avoid the risks of bypass surgery have turned to another method of reducing food consumption. Famous companies like Boston Scientific, Johnson & Johnson and Medtronic have been joined by smaller companies such as Transneuronix, GI Dynamics and Satiety, Inc. in developing technology that will provide another way.

One kind of device, which acts the way cardiac pacemakers do, has undergone clinical trial by Medtronic and Transneuronix (which was, in fact, recently acquired by Medtronic). Known officially as an “implantable gastric stimulator,” it is considered a safer way to lose weight than surgery.

Dr. Scott Shikura of Tufts-New England Medical Center has been implanting these devices in patients in U.S. trials since 2000. Dr. Shikura connects the stimulator’s electrodes to the wall of the patient’s stomach. He says he is not sure how it works. “It may be stimulating nerves that go to the appetite centers of the brain, or affecting the production of certain hormones responsible for appetite,” he said in an interview.

The battery-operated device developed by Transneuronix is inserted under the skin of the abdomen in a relatively simple procedure. A wire implanted into the stomach wall applies mild electrical impulses that create a feeling of fullness, so the patient eats less. Even before its acquisition of Transneuronix, Medtronic was working on a similar device—a modified version of a product the company had developed previously to relieve the symptoms of a stomach disorder.

The manufacturer says it could take two years of testing before the U.S. Food and Drug Administration approves the inventions.

(注) cardiac : 心臓の、implantable gastric stimulator : 埋め込み型胃刺激器、electrodes : 電極、nerves : 神経、abdomen : 腹部、the U.S. Food and Drug Administration : 米食品医薬局（新薬の認可の権限を持つ連邦政府機関）、