

② 次の英文を読んで、設問に答えよ。（\*は注があることを示す）

Martha, a mother of two from Connecticut, has suffered from depression for the better part of two decades. She has been to psychiatrists and psychologists and tried dozens of medications, but nothing seemed to <sup>(1)</sup>work very well or for very long. Then last June she heard about an experimental treatment being tested at the New York State Psychiatric Institute at Columbia University. <sup>(2)</sup>It involved aiming a powerful magnet at a spot on the brain to reset the wayward neural circuits that keep Martha, and millions like her, stuck in the downward spiral of depression.

( 3 ), Martha agreed to the treatment and soon found herself sitting in a chair under a squat, gray crescent that administered a series of magnetic pulses to the top of her head. The treatment lasted for one hour, five times a week, for six weeks. “I started to see signs of change by about the third week,” she says. “By September, <sup>(4)</sup>I was on top again. I could take pleasure in things like food and sunshine.” Returning to the institute every once in a while for repeat sessions of what researchers call repetitive transcranial magnetic stimulation (rTMS), <sup>(5)</sup>Martha has kept her symptoms at bay for the better part of six months.

That’s no fluke, according to a small group of doctors who have reported similar successes at research centers around the world. <sup>(6)</sup>The National Institute of Mental Health (NIMH) is sufficiently intrigued that it has asked the New York institute and three other groups to conduct a rigorous study of 240 depressed patients, comparing the effects of magnetic stimulation against a \*placebo. “Within the next few years, we’ll have a better idea of whether rTMS is safe and effective for depression,” says Dr. Sarah Lisanby, who is leading the study at the institute. There is also growing interest in exploring the use of the technique for the treatment of anxiety disorders, schizophrenia, stroke and perhaps epilepsy.

Although researchers freely confess that they don’t know how rTMS <sup>(1)</sup>works, they do have some ideas. It has long been clear that neurons in different parts of the brain can act in concert. Of particular interest are the circuits that link the areas of the \*cortex that help us reason and plan our lives with more deeply embedded zones