Katie Couric: While the debate goes on over embryonic stem cells[1], adult stem cells are being used to treat leukemia and there is word tonight that they may also have been used for the first time to control Type 1 diabetes. Here is our CBSnews medical correspondent, Dr Jon LaPook.

Dr LaPook: Nurse Nina Shermann is one of more than a million Americans with Type 1 diabetes. Since elementary school, she's been checking her blood sugar[2] and giving herself insulin several times a day to control the disease.
Have you thought about a day when you wouldn't have to take insulin?

Nina: I don't think about it that often. It's hard to imagine. At this point it's part of my life, I don't imagine, I can't remember not taking insulin.

LaPook: But a new experimental kind of immune therapy using adult stem cells and described today in the Journal of the American Medical Association (JAMA) might some day enable diabetics like Nina to stop taking medication altogether.

Dr Richard Burt: After this treatment, people have been completely drug-free. No medication whatsoever[3], no insulin, no other medications for their diabetes.

LaPook: Type 1 diabetics have a faulty[4] immune system that mistakenly[5] destroys insulin-producing cells in the pancreas. The result? High blood sugar.

Dr Robin Goland: Poorly-controlled[6] diabetes with very high blood sugar over decades can lead to blindness, to amputation, to heart attack, to stroke, and to kidney failure[7] needing dialysis.

LaPook: In the new treatment tested on only 15 patients, adult stem cells were removed from the blood and stored[8]. The patients then underwent a gentle[9] form of chemotherapy to break down[10] the old immune system. The stem cells were then transfused back into the blood stream with the hope of forming a new and improved immune system that wouldn't attack the pancreas.

Dr Burt: The stem cells in the body do what they normally do, that is they regenerate the immune system.

LaPook: After the treatment, 13 of the 15 patients were able to stop taking insulin, but they were only followed an average[11] of a year and a half. Experts are cautiously[12] optimistic.

Dr Goland: This is a preliminary set[13] of findings that offer some hope but this therapy is not ready for prime time.

LaPook: For now, the therapy does not apply to the nearly 20 million Americans with Type 2 diabetes. But people like Nina are hopeful they'll some day be free of a lifetime of pinpricks[14] and injections.
Dr Jon LaPook, CBSnews, New York.

Lexical helpline:

1. **stem cell:** an undifferentiated cell from which specialised cells develop
2. **blood sugar:** blood glucose, glycaemia
3. **whatsoever:** at all
4. **faulty:** that does not work correctly
5. **mistakenly:** by mistake
6. **poorly-controlled:** not correctly monitored or controlled
7. **kidney failure:** disease that may lead to the kidneys' inability to filter waste products from the blood and excrete them in the urine
8. **store (v):** put or hold something in a specific place for later use
9. **gentle:** mild, moderate
10. **break down (v):** end all resistance

11. average: median, mean
12. cautiously: carefully
13. a set: a collection of elements or things considered together
14. pinprick: small hole made by a needle