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Stabilizing diabetes: Old drug could help millions

Joe Dwinell Tuesday, June 13, 2017



'RESETS THE IMMUNE SYSTEM': Dr. Denise L. Faustman, above, of Massachusetts General Hospital, is testing an old vaccine, which could help millions with Type 1 diabetes.

Dr. Denise L. Faustman is testing a cheap “penny vaccine” that could bring hope to millions struggling with Type 1 diabetes.

The researcher from Massachusetts General Hospital said BCG — a vaccine used against tuberculosis that’s been around since 1921 — could reverse the deadly effects of the disease.

“This offers hope for the first time that people with the long-standing disease will have long-term benefits,” Faustman told the Herald last night. “And to think it’s due to a cheap, 100-year-old generic drug.”

Faustman has launched a five-year clinical trial using BCG on 150 people from all over the U.S. — and seven slots are still open, she added.

“BCG can reset the immune system to a normal state,” she added. “It can get you back to normal levels of blood sugar.”

Type 1 diabetes, once called juvenile diabetes, affects people of all ages and can lead to blindness and fatal heart attacks and require amputations.

It’s a mystery why diabetes, which is an “autoimmune” disease, pits the body’s immune system against itself, targeting the pancreas and destroying insulin-producing cells.

The possible answer, according to Faustman, is the bacillus Calmette- Guerin (BCG) — or what she called a “penny vaccine” used all over the world. The vaccine was tested after World War I at the Paris Pasteur Institute.

Now’s it’s making medical history again at the nonprofit Faustman Lab at Massachusetts General Hospital.

She presented her breakthrough this past weekend in San Diego, Calif., at the 77th Scientific Sessions of the American Diabetes Association.

Faustman said what excites her about her finding is that BCG is easily

and inexpensively produced, even as the cost of treating Type 1 diabetes soars.

“It’s an old microorganism,” she said.

Faustman hopes her five-year trial shows that using BCG over a long period of time will help “stabilize” the progression of the disease.

She said the vaccine — which could also help with treating multiple sclerosis and Crohn’s disease, to name a few — is “a natural organism of the dirt.”

“We’re putting back in people the environment they lost,” she said, alluding to the “Hygiene Hypothesis.”

That theory links the lack of infection in early childhood to the rise in asthma and other similar diseases.

Using BCG “resets the immune system to a normal state,” Faustman explained. It doesn’t cure the disease, but it makes it manageable.

What really matters for the MGH researcher is that “the innovation was sitting before our eyes” and she found it.