

The 'Best' Medical Advancement of the Era:
 Frederick Banting and Charles Best Chart a New Frontier by Discovering Insulin

"Insulin does not belong to me, it belongs to the world."
 - Frederick Banting to the University of Toronto, Toronto, Canada, January 23, 1925.

"The single event in the history of medicine had changed the lives of so many people, so suddenly."
 - Stephen Hume to Frederick Banting, Toronto, Canada, 2008, Frederick Banting World, Toronto, 2013.



The two, Dr. Frederick Banting, left, and Charles Best, right, in 1921, in the laboratory at the University of Toronto.

In 1921, Frederick Banting and Charles Best successfully kept a dog exhibiting symptoms of diabetes alive using an extract from cattle, sparking the development of insulin, an international treatment to save the lives of diabetics.

HEART OF THE STORY

On July 27, 1921, the researchers had their breakthrough. After several attempts, they were able to keep the dog Marjorie alive for several days. The only food she ate the extract, not meat.

With this new discovery, the team gained an additional member. Researcher J.B. Collip helped develop an extract for humans use.

On January 11, 1922, fourteen-year-old Leonard Thompson became the first recipient of the insulin injection. The young boy was in critical condition with dangerously high blood sugar levels.

Thompson showed swift improvements, and within a day, his blood sugar dropped to near levels. He lived for another thirteen years.

"With the relief of the symptoms of his disease, and with the increased strength and vigor resulting from the extract that the persistently, melancholy diabetic became vigorous and cheerful."
 - Fredrick B. Banting in his Medical Lecture, Glendale, Texas, September 17, 1936, The Nobel Prize

"With insulin, the storm was rising again, and diabetes became a matter of the quality of life, not the speed of death."
 - Michael Bliss in Discovery of Insulin, Toronto, Canada, 1982, University of Toronto



The insulin vial, 1921, from the University of Toronto.



Marjorie, the dog used in the insulin experiments, 1921, from the University of Toronto.



Leonard Thompson, the first recipient of insulin, 1922, from the University of Toronto.



Lab glassware used in the insulin experiments, 1921, from the University of Toronto.



United Society on Track of Diabetes Cure, 1921, from the University of Toronto.



Small box containing insulin, 1921, from the University of Toronto.



Researcher working in the laboratory, 1921, from the University of Toronto.



Insulin syringes, 1921, from the University of Toronto.



Diagram of the pancreas, 1921, from the University of Toronto.



Researcher working in the laboratory, 1921, from the University of Toronto.

July 1921: Researchers have their breakthrough.
 May 17, 1922: Insulin production begins under the supervision of Leonard Thompson.
 November 1, 1926: First collaboration of Frederick Banting and Charles Best.

December 12, 1921: Collip joins the effort to make insulin available to humans.

January 11, 1922: Leonard Thompson receives insulin injection.

October 26, 1921: Insulin is first used to treat a diabetic patient.
 January 23, 1923: Insulin is first used to treat a diabetic patient.
 1919: Synthetic insulin is produced.

