What is diabetes?

* Diabetes is a persistent health condition characterized by its chronic nature, impacting the body's ability to convert food into energy effectively.
* Facts:
  + About 38 million US adults have diabetes, and 1 in 5 of them don’t know they have it.
  + Eighth leading cause of death in the United States.
  + No. 1 cause of kidney failure, lower-limb amputations, and adult blindness.
  + Last 20 years, the number of adults diagnosed with diabetes has more than doubled.

How does the body convert food into energy?

* The body breaks down most of the food one consumes into glucose (sugar)
* The glucose is then released into the bloodstream to provide a constant supply of energy to various tissues and organs
* *Insulin*:
  + Acts as a ‘key’ that allows the sugar into one’s body’s cells for the use of energy
* Cellular respiration:
  + series of chemical reactions that occur once inside of the cells
* Result of cellular respiration:
  + Adenosine triphosphate (ATP):
    - Considered the ‘*energy currency’* of cells
    - This is essential for cellular activities such as cell structure maintenance and muscle contraction

So what causes diabetes?

* There is a lack of insulin production, or the body’s own cells stop responding to insulin

What happens to the excess glucose?

* Loads of sugar circulating in the bloodstream with potentially harmful medical conditions/diseases such as:
  + Hear disease
  + Vision loss
  + Kidney disease

Type 1 vs Type2:

* 1:
  + Theory:
    - Caused by an autoimmune response (body attacking self)
  + Ceases the production of insulin
  + 5-10% of the diagnosed diabetes cases
  + Unknown ways on how to prevent
* 2:
  + Body unable to use insulin well
    - Results in the abnormal blood sugar levels
  + 90-95% of diabetes cases
  + Preventable or treatable:
    - diet
    - exercise

Source:

* + <https://www.cdc.gov/diabetes/basics/diabetes.html>