The Carding of Diabetes: 
Ancient Musings Narrative

Teacher Page 1C
(Copy one set of cards per class)

ANCIENT MUSINGS #1

For centuries shrouded in mystery and fear, diabetes reigned as a bizarre, incurable disease. Men described it as “urination devil,” a melting away of the body, a curse of the Nile River’s “sweet waters.” Egyptians tried to solve the deadly puzzle by giving the victims potions, such as those discovered by archaeologists, who have dated such records as to be ca. (around the time of) 1500 BC. Hesy-Ra was given credit for having concocted a treatment found in the Ebers Papyrus for frequent urination: “A glass filled with Water from the Bird pond, Elderberry, Fibres of Asit plant, Fresh Milk, Beer-Swill, & Green Dates.”


ANCIENT MUSINGS #2

Egyptian medical knowledge influenced neighboring civilizations such as ancient Greece, but little knowledge was added about this disease, even by Hippocrates, “the father of medicine.” Two of his students, however, Galen and Aretaeus of Cappadokia, described symptoms of the disease. Galen stated it was “diarrhea of the urine” and “the thirsty disease.”

ANCIENT MUSINGS #3

During the second century BC, Aretaeus of Cappadokia, according to some medical historians, coined the term *diabetes*, meaning “to siphon through” in Greek. He also provided a lengthy description of the disease: “The patients never stop making water, but the flow is incessant, as if the opening of aqueducts. Life is short, disgusting...they are affected with nausea, restlessness, and a burning thirst; and at no distant term they expire.”


ANCIENT MUSINGS #4

Other European physicians noted symptoms of “tremendous thirst without a fever, overeating, emaciation, and severely dried skin.”

ANCIENT MUSINGS #5

What was happening in the Far and Middle East during the first few centuries AD? Chinese and Japanese doctors knew about the great urine output of diabetics and that such urine attracted dogs because of its sweet flavor. “They observed that diabetics had a tendency to form carbuncles, a condition with pus-filled boils formed deep within hair follicles.”


ANCIENT MUSINGS #6

During the 5th and 6th century AD, doctors from India tested urine. In their observations, urine was found to taste sweet and was sticky to touch. The Indian name for diabetes was “madhumeha” – meaning “urine of honey.” They also described symptoms “of thirst, weakness, unpleasant odor, breathing problems, and digestion difficulties (possibly referring to ketosis).”

ANCIENT MUSINGS #7

Indians during the 6th century AD noted that many diabetics were overweight and called diabetes a disease affecting the “rich – especially those who consume rice, starchy foods, and sugar.”


ANCIENT MUSINGS #8

An Arabic doctor named *Rhazes* (860-932) knew about diabetes, so much so that he prescribed a therapy to alleviate its symptoms. *Avicenna*, called an Indian, Arab, and Persian by various sources, wrote at length on diabetes. His *Canon* noted “abnormal appetite,” “sweetness of urine,” and a mention of primary and secondary diabetes.

Inspecting urine in a glass jar, always a popular medical tool, had become a celebrated art by Medieval times. Doctors frequently diagnosed ailments through urine specimens sent to them. Although incorrectly diagnosing many cases, physicians were acquainted with the diabetic’s sweet smelling urine. “Popular worldwide remedies during the middle ages were attaching leeches or cutting the skin to drain out diseased fluids. This practice often led to unconsciousness, coma, and eventually death.”


Ancient Musings Narrative Cards, continued

Ancient Musings #9

Ancient Musings #10

One Medieval person, Johannes Acturarius, a Byzantine author, was the first to scrutinize urine with a measuring glass. He marked the glass for the composition of particles in urine “scums, precipitates, and sediments” and later wrote a paper on his findings. Although early attempts to understand diabetes created interesting history, medical writers attached little importance to diabetes milestones until the sixteenth century.

ANCIENT MUSINGS #11

Heralded as the first modern doctor and chemist, Swiss born Aureolus Theophrastus Bombastus von Hohenheim added to our knowledge of diabetic urine. He evaporated diabetic urine and measured the remains, a white powder. He found 4 ounces of the white powder in one liter of urine and postulated that it caused “thirst of the kidneys” and constant urination. Although he mistakenly called the powder salt instead of sugar, his methodical observations were quite an accomplishment for his time.


ANCIENT MUSINGS #12

Interestingly enough, although diabetes research was still in its infancy, between 1500 and 1670, more than one hundred writers mentioned diabetes in their works. For example, the French playwright Moliére referred to the sweetness of urine in his 1650 comedy, “Le Médecin Volant.”

ANCIENT MUSINGS #13

In 1670 Thomas Willis noted the sweetness of diabetic urine and used a treatment of a strict diet and lime water, the first alkali used in treating diabetes. He stated a “sadness and long grief, and also a convulsion affliction….and guzzling wine” may cause diabetes, and emotional factors probably continued to aggravate it. He thought the sugar was present in high levels in the blood before being released in the urine.


ANCIENT MUSINGS #14

In the 1770’s, doctors analyzed how diabetes affected the human body. Matthew Dobson of England evaporated diabetic urine to discover its components. He isolated a substance that smelled like and had the appearance of brown sugar. He also notes that the blood is sweet. Some people with diabetes die in a few weeks, but others have it for several years.

ANCIENT MUSINGS #15

John Rollo in 1797 realized that diet played a role in diabetes. He prescribed a high fat and protein diet after he observed that starchy foods increased sugar in the urine. He has been considered by some to be the first doctor to treat diabetes successfully.


ANCIENT MUSINGS #16

Paul Langerhans (1847-1888), a German anatomist and pathologist described the “islet” cells of the pancreas (now known as the Islets of Langerhans). Microscopic structures, these cells were likened by Langerhans to “island-like groups of cells in the substance of the pancreas.”