

Name _____

Unbroken-Laura Hillenbrand

Within the story of Louis Zamperini, we find a lot of science related to the human body and its ability to overcome extreme conditions.

Define the term HOMEOSTASIS, as it relates to the human body and cells and tissues.

As Louis and his fellow soldiers were floating around in the life boat, they were surrounded by water on every side and a few sharks as well. They still suffered from dehydration and starvation as they endured the days out on the open water.

What was a Ration D that the airmen had in their raft and what happened to the rations? Why was this the choice of the military to provide nourishment in emergency situations?

Research the effects of starvation on the body and brain. Make a list of the conditions below and indicate who was affected by this in the book.

Condition/Symptom	Individual affected (list the page number)

Define the following terms in relationship to human cells:

Osmosis-

Hypertonic-

Hypotonic-

Describe what drinking the salt water would have done to the cells of the airmen?

After the men were “rescued”, they ended up in a prisoner of war camp. Conditions were deplorable. Describe some of the efforts they made in order to get more food for just plain survival.

Describe the symptoms/results of the following nutritional deficiencies:

Calcium-

Vitamin D-

Potassium-

Iron-

Iodine-

Describe these nutritional deficiency diseases. Include their cause and symptoms, long term effects, and treatments.

Beriberi-

Scurvy-

Dropsy

Pellagra

Xerophthalmia