

by this time his physicians thought he had stood enough. With undaunted valor the young captain insisted that they go on. At his request three more operations were performed. At the fifth the surgeons searched the upper left neck region and at the sixth the upper right neck region.

Finally, at the seventh operation, the surgeons explored the upper middle part of the chest in front, known medically as the anterior mediastinum. There they found the tumor and removed it. So far as known, this is the first parathyroid tumor found in this location and successfully removed.

In describing this last operation, Dr. Bauer said:

"At this point we all felt that the Captain had had a sufficient number of operations, that his general condition was anything but good and that we were not justified in proceeding further. However, the Captain insisted that his mediastinum should be operated to see whether or not the tumor was present. He said that if it was not done at the Massachusetts General Hospital, he would have it done elsewhere. His requesting this operation meant that the first anterior mediastinotomy was done in searching for a parathyroid tumor and that the search was successful."

Too Late to Save Him

It was too late to save the brave captain. He lost his last fight, dying at the age of 36. But the knowledge gained through his rare courage has already enabled the physicians to find a similar tumor in a similar location in another patient. This patient had previously undergone two unsuccessful operations.

"Had it not been for our experience with Captain Charles Martell," Dr. Bauer commented, "this patient might have gone along for some years longer without the tumor being removed."

From their study of Captain Martell, the physicians have learned as much about this disease as they ordinarily would have from a dozen cases of the same disease, Dr. Bauer added. They now have complete knowledge of the symptoms and signs and chemical findings. As a result, he hopes that physicians throughout the world will realize that hyperparathyroidism is a distinct disease and that it is not even such a rare malady as has been supposed.

This article was edited from manuscript prepared by Science Service for use in illustrated newspaper magazines. Copyright, 1934, by EveryWeek Magazine and Science Service.

Science News Letter, July 28, 1934

BACTERIOLOGY

Bacteriophage Is On Border Between Chemical and Life

BACTERIOPHAGE, strange substance that preys on disease "germs" and destroys them, has become fairly well-known since the days when the French-Canadian scientist, Dr. F. d'Herelle, described it. Hopes ran high in the early days that the "germ-eater" would prove a true panacea for most if not all of the infectious diseases that plague mankind.

Popular accounts stressed this phase of the new substance. Less well-known is the hope held by scientists that study of the nature of bacteriophage may contribute to an understanding of the great mystery of life.

How knowledge of bacteriophage might answer or partially answer the question, What is life? is explained by Alice C. Evans of the U. S. National Institute of Health in Washington. Reporting some of her own investigations of bacteriophage to the journal, *Science*, Miss Evans takes occasion to point out the following:

"The study of bacteriophage promises to enlighten the philosophical consideration because it stands at the border line between catalytic chemical substances, on the one hand, and living matter, on the other.

"If bacteriophage be regarded as an enzyme it must be conceded that it is endowed with at least one of the attributes of living matter—a limited ability for adaptation to its environment.

"On the other hand, the minute size of the individual particles offers an ob-

stacle to the acceptance of the idea that they may be living organisms. It has been shown that they may be no larger than certain protein molecules. They are so small that ten or even a hundred billion individuals may exist in a cubic centimeter of broth which nevertheless remains as clear as crystal."

A cubic centimeter is about twenty drops of fluid.

Miss Evans' investigations were of a bacteriological nature and were concerned with bacteriophage that could destroy various kinds of streptococci, the organisms that cause such ailments as septic sore throat and scarlet fever. She found that sensitivity or resistance to several races of bacteriophage might be a means of identifying certain kinds of streptococci. Her studies also showed that, contrary to common belief, streptococcus bacteriophage is widely distributed, at least during the season when streptococcus infections are prevalent.

Science News Letter, July 28, 1934

PHYSIOLOGY

Overweight Men Healthier Than Are Underweights

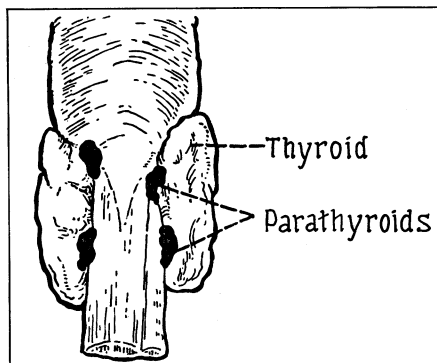
OVERWEIGHT young men have more physical endurance, greater resistance to infectious diseases, and are less likely to develop nervous or mental disorders than young men who are underweight.

These conclusions are drawn from a study of accepted entrants to the Royal Air Force and are reported by Dr. H. A. Treadgold, Group Captain, Royal Air Force, to *The Lancet*, British medical journal.

Dr. Treadgold compared the men's weights when they entered the Royal Air Force with their accomplishments in athletic competition and records of sick leave and invaliding from the Service.

"There is a definite relationship between varying degrees of body-build and functional efficiency, whether viewed from the points of capacity to endure severe or prolonged physical or mental stress or resistance to disease generally," he found.

"Capacity to endure severe or pro-



POWERFUL GLANDS

The tiny parathyroid glands, about the size of peas and located in the neck, have a tremendous influence on the body, particularly the bones.