

# Hunger Disease: Studies by the Jewish Physicians in the Warsaw Ghetto, Their Historical Importance and Their Relevance Today

Myron Winick, Williams Professor Emeritus of Nutrition

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## I. Introduction

At its peak the Warsaw ghetto had 500,000 people—about 40 percent of the population of Warsaw—crowded into a space comprising less than 5 percent of the area of the city.

A meeting was held in Germany by top Gestapo officials, including Adolph Eichmann. This meeting was attended by some of the leading Nazi physicians. They had calculated that if the inhabitants of the ghetto received no more than 800 calories of low-protein food per day, the entire population would be dead in nine months—a simple solution for the destruction of the Jews in Nazi-occupied Poland. Thus hunger and starvation were universal throughout the ghetto.

However, the Nazis had not counted on the ingenuity of the inhabitants. Smuggling was rampant by organized groups, often containing children. Although many things were smuggled in, including arms, the most important was food. Finally, the Nazis gave up the idea of starving the population to death. It would take too long! Instead they instituted the Final Solution and deported most of the population to the death camps. At the end an uprising broke out and, to the surprise of the world, lasted many weeks. In the end the Nazis destroyed the ghetto, leveling the buildings to the ground and killing the few survivors.

At a dinner party at the home of Alan and Valerie Hyman (Alan is a member of EPIC and on the board of Hillel), Valerie mentioned that she had heard of the existence of a manuscript documenting a study of starvation by the Jewish physicians in the Warsaw ghetto. She was going to Poland and wondered if it was worth exploring and bringing back a copy if possible. I told her I had never heard of the study but certainly felt it would be worth having a copy.

Shortly afterward I met the late Morris Laub, who was then president of YIVO, the archives of Eastern European Jewish writings. I asked him about the manuscript and he told me YIVO had a copy. We met with Alexander Gonik, who had been chief medical officer for the Joint Distribution Committee, which had reprinted the original manuscript. He thought the manuscript should be translated into English. I asked a close friend, Dr. Michael Katz, then chairman of the Department of Pediatrics at Columbia College of Physicians and Surgeons and now a member of EPIC, who spoke fluent Polish, to look at the manuscript and tell me whether he thought it was worth translating into English. He agreed to read it and soon informed me that, although it was out of his field of expertise, he thought that it was worth translating.

We were very lucky that the late Martha Osnos, who had escaped from Warsaw just before the war and who was working in one of the laboratories at the Institute of Human Nutrition at P&S, volunteered for this assignment. Martha was of course fluent in Polish, but also knew most of the medical and technical terms. Working together with my wife, Elaine, who had been science editor at Stanford University Press, Martha produced an accurate translation after several months of hard work. To me, the results were mind-boggling! It was hard to believe that a study of such sophistication could be carried out by a group of physician-scientists, themselves suffering from various degrees of semi-starvation and malnutrition, in five months—from the time the first patient was studied until the deportations to the death camps began and the two hospitals were closed. I decided to include after each chapter some interpretation of the findings and what, if anything, new had been found since. The entire manuscript was published in 1979 by John Wiley and Sons under the title *Hunger Disease: Studies by the Jewish Physicians in the Warsaw Ghetto*.

## II. The Study

The work actually consisted of two separate studies. The first was careful clinical examination of every patient who was admitted to the adult or children's hospital with a primary diagnosis of "hunger disease." The diagnosis was made if the patient consumed less than 800 calories per day and had no obvious evidence of any other disease. In children the number of calories consumed was much lower, the exact amount depending on the child's age.

While such studies had been done before (for example, during the First World War), none had been as complete and carefully done as this one. For example, a team of ophthalmologists examined these patients and determined that the intraocular pressure was reduced, presumably to prevent the eyes from exploding under the condition of the very low blood pressure present in all of these patients. In addition, many of the patients, even the younger ones, had cataracts. These clinicians were the first to note these changes in the eyes. Many of the other specialist results were lost, and for the most part the rest of these clinical observations confirmed and extended previous observations. Blood pressure was very low, heartbeat was very slow, temperature was very low—the patients were always cold. The very young children were emaciated while some of the older ones were swollen because of water retention. One new observation was that even in patients with overt tuberculosis the standard tuberculin test result was negative. As we found out much later, this was because the immune system was compromised. Since many of these patients did not survive there were extensive autopsy results in the report.

The second study was a careful research study of the metabolism and circulatory dynamics in patients suffering from hunger disease alone, with no accompanying other disease. Twenty patients were studied before the facilities were shut down

when the Nazis closed the hospitals. These twenty patients provided medical science with an insight into the dynamic changes that the body undergoes during severe calorie restriction. Metabolic output is very low, with even resting metabolism well below normal. The patients hardly moved. Most of the clinical changes—the slow heartbeat (around 40 beats per minute), the low temperature (sometimes under 95 degrees Fahrenheit), the lack of movement, the shallow, slow breathing—were to conserve energy. The body itself began to provide fuel. First the limited amount of carbohydrate stored in the liver and muscles, glycogen, was used up. Then fat became the primary fuel. This could last from weeks to months depending on how much fat the person started with and the exact number of calories in the diet. Finally, protein was broken down and muscle tissue began to waste away.

The state-of-the-art measurements in these studies were made using equipment smuggled into the ghetto from hospitals on the outside. The studies of the circulatory system were even more sophisticated. Arterial and venous pressures were measured. The time it took for the blood to circulate through the body was measured. The volume of blood forced out of the heart with each stroke was calculated. Again, some of the equipment had to be smuggled into the ghetto.

The results of these studies showed that the body made a series of complex circulatory and metabolic changes during semi-starvation. These changes were similar to, but not the same as, the changes that occur when a bear or some other mammal hibernates.

After these measurements were made, refeeding was begun and something was learned that, if known at the end of the war, might have saved many lives. When the concentration camps were liberated, the Allied soldiers, eager to provide aid as rapidly as possible, provided abundant food. In the first 24 to 72 hours, many of these emaciated people died. In the study it was found that the adaptation to starvation did not reverse evenly when abundant food became available. The metabolic changes reversed quickly. The circulatory changes took much longer. This situation put an extra strain on an already weak heart, and the person went into heart failure.

Thus, this study was not only the first to document the complex metabolic and circulatory changes that occur during semi-starvation but also the first to indicate the proper way to treat this condition. Refeed these people slowly!

Who were the physicians who carried out the study? How was the equipment smuggled into the ghetto? How was the manuscript smuggled out and how was it recovered after the war?

### III. The Doctors

Twenty-eight physicians participated in the study. An abbreviated account of their lives as well as a short description of the study can be found in a book called *The Uses of Adversity: Studies of Starvation in the Warsaw Ghetto* by Leonard Tushnet, published in 1966 by Thomas Yoseloff Limited, New York and London. Given the number of physicians plus the other medical personnel necessary to carry out this study, it is remarkable that the Nazis did not find out about it. For if they had, it would have amounted to a death sentence for everyone involved.

I will focus on just a few of the physicians who conceived of and led the various parts of the study. The information I have come mostly from Dr. Henryk Fenigstein who survived, went to Canada after the war, and practiced medicine in Toronto for many years. After the publication of the study Dr. Fenigstein contacted me. We met and became friends. How he survived is an amazing story that contributed to the ultimate smuggling out of the manuscript. But more about that later. I also was able to get some information from written material in the YIVO library and from the son of Dr. Apfelbaum, himself a practicing physician in Paris.

The study was conceived by Dr. Israel Milezkowski, who was the head of the health department for the *Judenrat*, the Nazi-appointed Jewish government of the ghetto. He wanted to leave a scientific record of the extent of starvation in the ghetto and a record of the extraordinary dedication of the Jewish physicians working in the ghetto. He suggested the idea to Dr. Joseph Stein, the head of the Czysta Hospital, the only adult hospital in the ghetto. Dr. Stein, a pathologist, liked the idea and said he would meet with his various department heads as well as Dr. Anna Braude-Heller, the head of the children's hospital. A series of meetings were held to discuss what might be done without endangering the lives of the patients. The clinical studies were easily worked out. It just meant doing what they were already doing in more detail and carefully writing up the studies. The studies of circulation suggested by Dr. Apfelbaum, an academic cardiologist, and those on metabolism suggested by Dr. Julian Fliederbaum, a practicing physician specializing in diseases of metabolism including diabetes, were discussed in greater detail since there was some minimal risk, they needed special equipment, and they would take the time of several doctors away from their other patients. Finally, after minor alterations, the studies were approved only in adult patients, assuming the equipment could be obtained. Dr. Fenigstein, who was a sort of house doctor, would assist on both the circulatory and the metabolic studies.

#### IV. Getting the Equipment In and the Manuscript Out of the Ghetto

By this time, I had decided that I wanted to write a nonfiction account of the entire story surrounding this unique study. I knew from Dr. Gonick that the final manuscript was recovered from Professor Orlovski, the chairman of the department of medicine at the number-one university hospital of Warsaw, by Dr. Apfelbaum, who was one of his assistants before the war and who survived. But

how did Orlovski know about the study and why did he give his consent at considerable risk to his own life if discovered? At one of our meetings I asked Henryk Fenigstein these questions. He smiled, thought for a moment, and told me a remarkable story.

Before the war Henryk was a stamp collector. In fact, he had one of the largest collections of Polish stamps in the country. One day two SS members arrived at the hospital and told Henryk to come with them to Gestapo headquarters. Of course, he was terrified. Jews taken to Gestapo headquarters did not return. On arrival he was taken to the office of a senior officer who told him that he himself was an avid stamp collector. He took out a list and handed it to Henryk. He wondered if Henryk had these stamps and if not if he knew where to procure them. Henryk told him that he had many of the stamps, including some of the very rare ones. He told him that he thought he could procure the rest. In order to do this he would need a pass to get out of the ghetto for a few hours each week. And of course the SS officer was welcome to those that he had. The officer agreed and even gave Henryk his phone number in case he needed any help. Thus, Henryk Fenigstein, a key member of the study team, was able to leave the ghetto. When it was decided that the final manuscript would be smuggled out to Professor Orlovski, it was Henryk, on one of his outings, who met with Orlovski, told him about the study and asked him if he would hide the manuscript until Dr. Apfelbaum—who was to be gotten out of the ghetto—came for it after the war. If Apfelbaum did not come for it, then Orlovski would see that it was published. Professor Orlovski agreed. Dr. Apfelbaum survived, retrieved the manuscript, and ironically died of a heart attack shortly after giving it to the Joint Distribution Committee. Henryk survived because the Gestapo officer, after getting all the stamps he wanted, had him sent to a labor camp rather than an extermination camp. But although Henryk could leave the ghetto he could not take anything out. So how was the manuscript smuggled out? Henryk told me he heard the smuggler was a woman but did not know who or whether this was actually the case. He also did not know how the manuscript was smuggled out. I tried to find out how the equipment was smuggled in. No one I talked to nor any source material I could find gave me a clue. This must have been done by specialized smugglers, since this equipment consisted of instruments that would not be recognized by anyone without pictures or careful diagrams. And the only place such instruments could be found was in the large university hospitals. Clearly, someone involved in the study, probably Dr. Milezkowski because of his position, must have had contact with the resistance forces within the ghetto that had access to the outside. But this was pure speculation on my part. No one actually knew.

After several years and long discussions with Dr. Gonick, Dr. Fenigstein, and several people at YIVO, it was decided that an actual nonfiction account could not be written. Finally I decided, and both Dr. Fenigstein and Dr. Gonick concurred, that I would write as accurate an account as I could and fictionalize what was essential to the story but unknown. In other words, I would write a historical novel. After almost ten years and several revisions it is finally finished, and I hope

to publish it very soon. The title is *Final Stamp*, since Dr. Fenigstein and his stamp collection play a dominant role in the novel.

Incidentally, if anyone in the audience knows anyone in the movie business, I already have the main characters cast in my mind.

Finally, what was the historical importance of the study on hunger disease? From a scientific standpoint it represents a first in several ways. It was the first time that semi-starvation of this magnitude was studied in such detail. The study began to connect the dots that have led to a detailed understanding of the overall adaptation the body makes to a lack of sufficient food. But historically there is, in my mind, an even more important place for this study. As far as I can tell, it is the only study of a lethal disease carried out in detail by a group of doctors all of whom were suffering from the same disease. And finally, perhaps most important of all, I believe that the performance of these physicians, all of whom knew that they were unlikely to survive, should go down in history as one of medicine's finest hours.

What is the relevance of the study today? Scientifically it still remains the most detailed study of semi-starvation ever carried out. It has had a profound influence on the way we treat this disease.

As the deportations continued, many people felt to be essential, including Rabbi Hillel Zeitlin, were given refuge in the hospital since, at first, hospital patients were not being deported. Some of the doctors were able to admit their elderly parents to the hospital. On January 17, 1943, the hospital staff was told that the next day the hospital would be closed. All patients able to walk would be deported; the rest would be shot. At the request of their parents, 15 doctors gave their mothers or fathers a large dose of Phenobarbital, which allowed them to die peacefully overnight. At the children's hospital, some of the children who were bedridden were given a quiet peaceful death in the same way. We certainly continue to struggle with these ethical principles today.

In conclusion, this has been a long journey for me, but I hope it achieves what Dr. Milezkowski says in the last part of his introduction to *Hunger Disease*:

A last few words to honor you, the Jewish doctors. What can I tell you, my beloved colleagues and companions in misery. You are a part of all of us. Slavery, hunger, deportation, those death figures in our ghetto were also your Legacy. And you by your work could give the henchmen the answer, *non omnis moriar*. I shall not wholly die.