

Hunger Disease in Southern France Internment Camps during World War II: The Pioneering Studies of Dr. Joseph Weill

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ABSTRACT Dr. Joseph Weill was a French Jewish doctor who made significant contributions to the knowledge of hunger disease in the refugee camps in southern France during World War II. He was involved with the clandestine network of escape routes for Jewish children from Nazi-occupied France to Switzerland.

IMAJ 2022; 24: 429–432

KEY WORDS: French internment camps, Holocaust, hunger disease, Joseph Weill, World War II

HUNGER AS THE CAUSE OF MORBIDITY

The relationship between eating well and good health is known. Consuming fruits and vegetables is important for good health. Today, with the growth of the obesity epidemic, much attention is paid to quality and quantity of food consumption, namely the volume, caloric density, and fat and sugar content of the food. In addition to the emotional and behavioral problems found among people who experience famine, almost every physiological system is affected during starvation. An unimaginable number of people succumbed from hunger during World War II and the Holocaust.

In 1930, Witold Chodzko (1875–1954), a Polish expert with the League of Nations Health Committee and head of the National School of Hygiene in Warsaw, described existing fears regarding the poor nutritional conditions in the rural areas of most European countries. One month later, the League of Nations Health Committee appointed a sub-committee on Rural Health, which consisted of Spanish

Figure 1. Gurs, France. Prisoners behind a barbed wire fence. Source: Yad Vashem Digital Collection. Archival signature 6438/10



expert Gustavo Pittaluga as president, Witold Chodzko, Gerard Fitzgerald, Carl Hamel, Alberto Lutrario, Ludwik Rejchman, and Frank Boudreau [1].

STARVATION DURING WORLD WAR II AND THE HOLOCAUST

During World War II, the Nazi regime implemented the *Final Solution*, which included forcibly relocating millions of Jews and others into crowded ghettos, jails, concentration camps, and slave labor camps. In the Warsaw ghetto, for example, the Nazis 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 9

months—a simple solution for the destruction of the Jews in Nazi-occupied Poland [2]. From February 1942 until the middle of July 1942, a heroic and historical study was conducted in the Warsaw ghetto on the clinical, pathological, and laboratory aspects of starvation. The study was conducted in the ghetto under the leadership of Dr Israel Milejkowski with a group of Jewish physicians, students, nurses, and assistants [3–5]. The main interest of the physicians was to analyze the mechanisms regulating the body’s energy management during hunger as well as water, sugar, and hormone balance. The researchers aimed to obtain the most accurate clinical and biochemical sequelae of severe inanition.

Before World War II no scientific or comprehensive research on hunger disease had been performed. Prof. Ancel Keys (1904–2004) from the University of Minnesota, USA, conducted research on student volunteers in an attempt to show how the human body functions during prolonged starvation. It was published only in 1950.

A Dutch Jewish physician, J.G. Herschel [6] published his observations as a prisoner of the Sachsenhausen concentration camp. He described men with hunger edema, averaging 45 kg and women averaging 35 kg. They were dubbed *muselmann*, a term used among Jewish prisoners of Nazi concentration camps to describe those who endured starvation, extreme weakness, and exhaustion. His observations were interesting. He found that edema was difficult to treat but responded well to diuretics; however, it returned frequently for no apparent reason up to 2 months later. Renal function was found to be within normal limits and urine test showed no abnormalities. The edema was notable under the eyes. It was difficult for people to get well nourished because of their intestinal problems.

THE SITUATION IN THE GHETTOS

The harsh life in the ghettos and jails was characterized by overcrowding, shortage of supplies (e.g., food, sanitation, medications), poor personal hygiene, exhaustion, and bad weather conditions. Under these conditions, morbidity was mainly due to infectious diseases, both endemic and epidemic outbreaks, with a high mortality rate. The dominant feature was hunger. Daily caloric allowance was 300–800, and in extreme cases (i.e., Warsaw Ghetto) it was only 200 calories. The food was lacking important nutrients (e.g., vitamins, trace elements), which led to versatile clinical expression, starvation, and death. The clinical manifestations of starvation were referred to as *Hunger Disease* [7].

The first victims of hunger were children. In the beginning, they failed to

Figure 2. Rivesaltes, France. Interior of a barrack in the camp. Source: Yad Vashem Digital collection. Archival signature 6160



thrive physically and later mental growth was affected. Like their elders, they lost weight, and later physical growth stopped. Developmental milestones were delayed due to the loss of curiosity and motivation to play. The mortality rate among babies and infants was 100%, as was described by the ghetto doctors, "When the older children got sick, the small ones were already dead." In the last weeks of the ghettos there were no children seen in the streets.

DURING THE HOLOCAUST, IN THE GHETTOS AND DEATH CAMPS A FEW RESEARCH PROJECTS, MAINLY ON HUNGER AND INFECTIOUS DISEASES, WERE PERFORMED BY JEWISH PHYSICIANS AND SCIENTISTS

THE LEAGUE OF NATIONS AND THE CAMPS IN SOUTHERN FRANCE

During the war, the League of Nations and its Health Organization continued their work in Geneva. The latter, however, suspended the regular publication of its Chronicle in May 1940. In 1943, a special number concerning the situation of refugee camps in southern France was published, and special numbers appeared from October until December 1945 [8,9]. One chronicle published in 1943 concerned the situation of refugee camps in southern France.

Another aim of this study, in addition to describing hunger disease and its manifestations during the WWII, was to de-

scribe the condition in the refugee camps in southern France after the Spanish Civil War [10]. We also discuss the pioneer work conducted by Dr. Joseph Weill, a Jewish doctor and member of the Jewish Children's Rescue Society (Oeuvre de Secours aux Enfants [OSE]). The Spanish Civil War began 18 July 1936. Toward its end (1 April 1939), an estimated 500,000 Spaniards crossed the French border to escape from the repression of General Franco. The French government opened internment camps for them [11]. Spanish Republicans and combatants from the international brigades were

taken to camps in Argeles, Barcares, Saint Cyprien, Les Milles, Agde, Vernet, and Rivesaltes, and later Gurs. The first internment camps were improvised places on beaches surrounded by barbed wire fences without any kind of sanitation or regular food supply. Gurs and Rivesaltes were the largest ones [12]. Gurs, a camp close to the Spanish border, was the destination for 60,559 people between 1939 and 1944. Some Sinti and Roma people were also interned in Gurs, because French authorities classified them as a-socials. In 1940, 10,400 Jews, classified as enemy aliens, were deported from Germany to Gurs [13]. Between August 1942 and March 1943, 3907 Jews were deport-

ed from Gurs via Drancy, the notorious transit camp near Paris, to extermination camps such as Auschwitz. Rivesaltes was a camp for 17,500 refugees, where Spaniards, Jews, and Sinti-Roma shared a sad fate. Over 2000 Jews were sent from Rivesaltes to Auschwitz in 1942 [14].

THE HARSH CONDITIONS IN THE CAMPS AND THE HUMANITARIAN AID

The conditions in the camps were appalling. Cold, hunger, and lack of sanitation led to infectious diseases (e.g., typhus, dysentery). The camps were constantly overcrowded by new waves of refugees. After the end of the Spanish War in 1939, the internees received some humanitarian aid from outside organizations. In Gurs, starting in December 1940, aid was provided by the Basque government in exile, the Swiss Humanitarian Aid Unit, the Joint Relief Commission of the International Red Cross [15,16], French Jewish organizations, Protestant organizations, such as the Quakers [17], the American Unitarian Service Committee [18], and others. In July 1942, a report was issued by the Commission of Hygiene of the Nimes Coordination Committee for Relief Work in Internment Camps, an umbrella committee of 25 organizations tasked with coordinating aid [19-21]. It provided food, medicine, and clothing to the refugees trapped in those French-run camps. The chief police commander of the pro-Nazi Vichy government sent a letter to the commander of the Gurs camp quoting the many complaints received about the devastating situation there, including the hunger, infectious diseases, and high mortality. He ordered the Gurs commander to improve conditions immediately. The relief organizations were allowed to build huts with special kitchens adapted to famine conditions and to improve hygiene as well as the supply of fresh water, heating, medicine, food.

JEWISH AND NON-JEWISH PRISONERS WERE INCARCERATED WITHIN THE NOTORIOUS SYSTEM OF INTERNMENT CAMPS IN SOUTHERN FRANCE

A commission of three doctors entered Gurs to report on the nutritional situation and on ways to improve it. Dr. Rene

Zimmer was from the Unitarian Service Committee (USA). Dr. Maurice Dubois was from the Swiss Red Cross and Swiss Children's Aid. Dr. Joseph Weill was the

Figure 3. Dr. Joseph Weill [Available from <http://judaisme.sdv.fr/perso/dirige/joweill/index.htm>]



DR. JOSEPH WEILL (1902–1988), A FRENCH JEWISH PHYSICIAN AND A DISTINGUISHED MEMBER OF THE RÉSISTANCE, MANAGED TO ENTER THE INTERNMENT CAMPS AND MEDICALLY ASSIST THE INMATES IN ADDITION TO PERFORMING SYSTEMATIC RESEARCH AND FOLLOW-UP OF THOSE WHO PRESENTED WITH HUNGER DISEASE

JOSEPH WEILL

Joseph Weill (1902–1988) was a French Jewish physician from Strasbourg and an important member of the Resistance movement during WWII. He studied in

his hometown, where his mentor was the famous diabetologist Leon Blum (not to be confused with the French Prime Minister Leon Blum).

Weill also became a prominent diabetologist in Strasbourg. With

the outbreak of WWII, he and his family moved to Terrasson in the southwest area of the country. The German invasion of France and the subsequent anti-Jewish laws stopped his medical career, but he then became a physician at the Gurs and Rivesaltes camps. In 1941, in Marseille he and Dr. Zimmer worked at the public clinic opened by the American Unitarian Service Committee, which provided medical care to Spanish and Jewish refugees. Weill then worked for the OSE as medical director. By 1942, he realized that groups of Jewish children who were living in orphanages were an easy target for deportation by the Germans and the French police. With the help of French Jewish engineer Georges Garel, he organized a secret network to scatter and hide these children with French families, and to devise escape routes out of Nazi-occupied France [26,27]. From September 1940 to January 1941, while working at Gurs and Rivesaltes, he reviewed the cases of 9000 prisoners, documenting clinical examinations and nutritional status. He classified the inmates into three groups based on severity. Weill's detailed report, later published in Switzerland, described the increase in morbidity and mortality during the winter. He used terms like *extreme physiological destitution* and *deficiency syndromes*.

The parameters monitored included weight, blood count, blood pressure, skin condition, muscle tone, cardiovascular function, edema, pleural effusion, anemia, and urine analysis. It was noted that there were patients with neurological and psychiatric complications such as ataxia (with positive Romberg sign), polyneuritic pain, paresthesia, hy-

perreflexia, Parkinson-like symptoms, apathy, confusion, monosyllabic speech, amnesia, bouts of laughing and crying, and meningeal irritation. In comatose patients, lumbar puncture showed normal analysis. Weill classified people affected by famine as follows: cachectic, pre-cachectic, and threatened cases. Treatment proved beneficial and death rates decreased. Other observed concomitant diseases included pulmonary tuberculosis, cardiovascular problems, osteoporosis, Raynaud's phenomenon, endocrine disturbances, diarrhea, purpura, fatigue, muscle atrophy, and avitaminosis. Weill mentioned the 1936 recommendations of the Technical Commission on Nutrition from the Health Committee of the League of Nations, and compared them to the nutritional condition at the French camps. Results showed that the internees received 40–50% less supplies. Therefore, calcium, iron, glucose, Coramine, vitamins, and insulin were then provided [22-24]. Conditions of hygiene and space improved.

AFTER THE WAR

In 1943, threatened by imminent Gestapo arrest, Weill managed to cross the Swiss border and remained in Geneva until the end of the war. He then returned to France and to his medical practice in Strasbourg as well as to his leading role in Jewish life there. Weill published his memoirs [23,28,29], which were cited by other authors [30-32]. His most outstanding published work was *Contribution à l'histoire des camps d'internement de l'Anti-France*. In this book, Weill explicitly condemned the Vichy government collaboration with the Nazis and the terrible conditions endured by foreigners, refugees, and Jews in the notorious internment camps in southern France as well as in Morocco and Algeria.

CONCLUSIONS

The study of the hunger disease in the Warsaw Ghetto is well known, while the facts we describe are less so. Dr. Joseph Weill, a French Jewish doctor,

made significant contributions to the knowledge of hunger disease in the camps in southern France during World War II. He was also instrumental in saving Jewish children from deportation in Nazi occupied France.

ACKNOWLEDGEMENTS

The authors express their most sincere thanks to Ms. Karin Ohry MA for editing this article, and to Prof. Jean-Jacques Vatine MD for his translations of Weill's books from French as well as to Ms. Astrid Ley for her collaboration and Mr. Sven Tuytens for his translation from Dutch.

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