DEAD

## Ein Karem, Jerusalem... The waters of the Dead Sea, for centuries a symbol of lifelessness and sterility, are bringing health to sufferers from psoriasis, a chronic skin disease causing suffering and despair to thousands of people. Six million people in the United States suffer from psoriasis.

Scientists of the Hadassah-Hebrew University Medical Center have been conducting research for fifteen years at Ein Bokek, on the Dead Sea, into the effect on skin diseases of immersion in the hot springs of Ein Bokek, as well as in the Dead Sea itself.

The results have proved to be so good that Rekreadan, a Danish rest cure association funded by the Danish National Health Insurance Authority -- there are 150,000 psoriasis sufferers in Denmark -- is sending patients in groups of 40 to two newly built luxury hotels at Ein Bokek. These hotels are fully occupied during ten months of the year, and two more luxury hotels are under construction, with the encouragement of the Israel Ministry of Tourism.

Psoriasis is a noncontagious, chronic skin disease, charaterized by an eczema which may cover the entire body, but most often affects the chest, elbows and knees. Scarlet patches appear on the skin, and these become covered by scales. Sometimes the illness is associated with a painful arthritis of the joints.

There may be sudden aggravation of the eczema, and the disease is a great mental burden to those afflicted with it. There is no known cure for the disease, and it is therefore treated symptomatically. Many of the patients need to be hospitalized for periods of a month, where hospital care consists of steroid ointments, ultraviolet radiation and superficial X-ray. Many patients develop "hospital psychosis" -- a gereralized despair following frequent hospital admissions. It is a disease that seems to become more serious whenever sufferers are under stress.

Prof. Felix Sagher, Head of the Department of Dermatology at the Hadassah-Hebrew University Medical Center, comments:

"As long as 25 years ago, our Department was consulted about the therapeutic properties of the Dead Sea and the hot springs which run into it. One of the workers in the area reported that a skin disease on his hands had been helped by bathing in the springs. Fifteen years ago Hadassah took over some huts and converted them into a small hospital. The physicians in our department took turns spending a month at a time there attending to the patients. "We ran it like a small hospital. We provided a nurse who lived at Ein Bokek, and we also gave all the necessary equipment." Dr. Sagher pointed our that "bathing in the hot springs and the Dead Sea had no effect on any skin disease except psoriasis. There was a classical case of a Belgian woman who had

classical case of a Belgian woman who had psoriasis all over her body for 14 years. We sent her to the Dead Sea. It cleared up after five weeks, but reappeared after she returned to Belgium. She came back for a month every year for four years. After the fourth year, the psoriasis had completely cleared up." He continued, "Many hundreds of patients

He continued, "Many hundreds of patients were treated. Conditions were difficult. The only telephone was a walkie-talkie. For a long time, it was really out-of-this-world pioneering in the desert. As the conditions and transport improved, people heard about the curative effects of the hot springs and the Dead Sea and thousands of Israelis game to take the cure. They stayed in Beersheba and Arad and came down to the Dead Sa Sea each day."

In 1959, Professors A. Dostrovsky and F. Sagher published a preliminary report on the therapeutic effect of the hot springs of Zohar (Ein Bokek) on some skin diseases in the Israel Medical Journal, Harefuah. In 1963, a further report on the influence of spa treatment at the hot springs of Zohar and the shores of the Dead Sea on psoriasis was published in the Journal by Doctors A. Dostrovsky and J. Shanon.

Follow-ups were carried our on ll4 psoriatic patients who had undergone balneotherapy during 1959-61: results showed that 64 patients reported definite improvement, 46 no improvement. A large number of patients whose condition had not improved during the treatment, reported that improvement began some time after leaving the spa.

Hadassah physicians carried out further research on the relative effects of Lake Tiberias and Ein Bokek on the Dead Sea. They found that Ein Bokek helped psoriasis, while at Tiberias, the spas were beneficial for arthritis. The scientists asked themselves: Why?

"We do not yet know the answer," says Prof. Sagher, "but our investigations are continuing. We know that the Ein Bokek springs contain a number of elements which could be beneficial, among them a high sulphur content and radium as a gas, not to mention many other minerals. We do not know whether these minerals have any special effects but they may help the thick scales to fall off.

help the thick scales to fall off. "Quite apart from the mineral effects, the patients spend a lot of time in the sun, and we know that this is beneficial in most cases. People staying at Ein Bokek told us that while they could only stay in the Sun at the Mediterranean Sea for 15 to 30 minutes because they became so sunburned, at the Dead Sea, which is the lowest point on the surface of the earth, they could remain in the sun for three to four hours without being burned. How was this possible?"

"After investigation, we found several contributing factors: The thicker atmosphere --the Dead Sea is 1200 feet below sea level --absorbs so many ultraviolet rays that people do not get burned, but get beautifully tanned.

 do not get burned, but get beautifully tanned. The temperature in the region is very high
- in summer it is as much as 40°C. (104°F)
or more. This means that red and infrared rays go through the atmosphere but not ultra-violet.

"We interested Professor Dov Ashbel, of the Hebrew University's Metereological Department, to make measurements of the climatic factors. It was known that the evaporation at the Dead Sea is so high that minerals can be extracted from the Dead Sea by leaving the water to evaporate in pans -- no electricity is needed. The same factor of high evaporation may be important in evaporation from the human skin."

