

# A RUNNER'S "QUICK" FIX: MEDICAL SPLENECTOMIES IN THE TORAH

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Competitive runners are always looking for the newest and most effective techniques to increase their speed. Be it specific foods, special training programs, or unfortunately, certain drugs, the price for speed is never too great. This need for speed is an age-old endeavor, sought after even in biblical times.

In the first *perek* of *Melachim Alef*, King David's health declines and his son, *Adonija*, senses this vulnerable moment as the opportune time to seize the throne. *Adonija* quickly gathers the Jewish nation for a coronation ceremony, riding before them in his chariot with "*chamishim ish ratzim lifanav*," "fifty men running before him" (*Melachim Alef* 1:5). The *Gemara* in *Sanhedrin* (21B) comments on this *pasuk* that these specified servants of *Adonija's* had their spleens surgically removed, enabling them to run faster. *Rashi* further elucidates that the spleen weighs a person down; thus, its removal causes increased speed.

As unusual as the *Gemara's* explanation sounds, removal of the spleen to increase speed was actually a common surgical procedure throughout ancient times. In Pliny the Elder's *The Natural History*, a Roman encyclopedic work written around 77 AD, Pliny cites an idea that the extirpation of the spleen "renders runners more efficient" [1]. In the Greek culture as well, marathon runners often removed their spleens to increase their chances of winning competitions [2]. Furthermore, there exists an old French saying, "To run as one with his spleen out," which clearly exhibits the belief that speed is accelerated with the extirpation of one's spleen [3].

The notion that the spleen plays an inhibiting role in swiftness is not just an obsolete, archaic concept. Twentieth century German physician and scholar, Julius Preuss, followed by Fred Rosner, Yeshiva College graduate and current Assistant Dean and Professor of Medicine at Albert Einstein College of Medicine, both firmly believe the *Gemara's* statement describing the spleen's adverse effect on speed. Preuss and Rosner both understand the *Gemara* literally, even within a scientific lens, that *Adonija's* physicians removed the footmen's spleens in order to increase the soldiers' speed [1, 4].

Preuss's belief that the spleen inhibits swiftness was even-

tually tested in 1922 by Jewish pharmacologist, David Macht. Macht, a professor at Johns Hopkins University, (and at Yeshiva College for a brief time), firmly believes in the synchronization of scientific discoveries with Torah and Talmudic ideas. Having read this *Gemara*, Macht decided to investigate the Talmud's claim, and devised an experiment to research the correlation between medical splenectomies and speed. He trained fifty rats to walk across a thin rope, hypothesizing that the extirpation of the spleen would increase their speed and muscle coordination. Macht then splenectomized thirty rats, leaving twenty as his controls. As hypothesized, the average time to cross the rope decreased from 6.8 seconds to 4.6 seconds, signifying a correlation between spleen removal and advanced speed and muscle integration [3].

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While Macht's experiment attests to the ancient understanding of the spleen as an impediment to one's speed, a major pragmatic question arises. How could a complicated surgery, that had a twenty-eight percent mortality rate even in the early twentieth century, have been performed so successfully with such a high survival rate before the discovery of antibiotics and modern surgical technology [2]?

One plausible resolution to this question is in *Rambam's* twelfth century medical writings, where he states that the dangerous splenectomies were never performed in King David's time. Instead, *Rambam* insists that *Adonija's* soldiers were given herbal drugs that shrunk their spleens, thereby decreasing the inhibiting weight [2].

*Rashi's* interpretation of the *Gemara* in *Sanhedrin* (21B) might be the basis of *Rambam's* herbal interpretation. *Rashi* explains that the soldiers were given certain drugs that enabled safe spleen removal. Unlike *Rambam*, however, *Rashi* maintains that the spleens were definitely removed, and not just atrophied. Thus the ques-

tion still exists, how could such a dangerous surgery have been performed in ancient times, even with herbal drugs and medicines?

To understand how surgical splenectomies could have been performed regularly with such a high success rate, one must look at the surgical conditions used during the time of the Talmud. The *Gemara* in *Kesubos* 77B discusses the standard procedure for cranial surgery performed then, describing the herbs used for anesthetics and the sterilized marble surfaces where surgery was performed. Clearly, the physicians of Talmudic times had some

understanding of certain surgical practices that only became standard medical procedure as of the late nineteenth century [5].

With this understanding of ancient Jewish surgical procedures, one might conjecture the possibility of medical splenectomies performed on *Adonija's* footmen. An understanding of the spleen's inhibitory role in speed, coupled with the advanced anachronistic knowledge of antiseptic surgical conditions, advocates the *Gemaras'* and *Rashi's* interpretation that *Adonija's* fifty footmen were specifically chosen in light of their increased running speed, a result of spleen removal. ■

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