## Chicken Soup Remedy: Seeking Truth in an "Old Jewish Wives' Tale"

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Seeking cures for illnesses today requires tremendous patience and persistence as patients navigate through the medical maze. Confronted with numerous visits to doctors, diagnostic tests, and treatments, patients' dreams and hopes of instant cures may rapidly fade. Yet, this was not always the reality. In the past, our ancestors turned to the Sefer Harefuot, or "The Book of Remedies," to seek instant cures. According to Rashi, "The Book of Remedies" contained numerous natural remedies, which the Jewish people used as a source of immediate recovery from illness. Due to their abbreviated bouts with disease, they were not humbled by their experiences with illness and failed to recognize Hashem's role as the ultimate Healer. In response, King Hezekiah hid "The Book of Remedies," an act approved by our Sages, to prevent this lack of acknowledgement of Hashem [1].

With "The Book of Remedies" lost, today we seek medical guidance from physicians, hoping that, as Hashem's messengers, they can provide the necessary cure. Of course, there is one age-old remedy that any Jewish mother or housewife will attest to and that apparently was not lost with "The Book of Remedies": homemade chicken soup. Dr. Nancy Caroline and Dr. Harold Schwartz noted that some believe that the recipe for chicken soup was part of the oral tradition relayed to Moses on Mount Sinai [2]. As they serve it to their ill family members, Jewish mothers and housewives rely on the healing powers of chicken soup. It is no wonder that chicken soup is often referred to as the "Jewish penicillin," "bohbymycetin" or "bobamycin," as mentioned by Dr. Stephen Rennard [3]. However, does chicken soup truly possess remedial properties, or is it simply a myth perpetuated by Jewish mothers and housewives?

The healing phenomenon of chicken soup has been known since as early as the twelfth century. Maimonides, a Jewish physician and philosopher in Egypt, reports chicken soup as a remedy for upper respiratory tract symptoms [4]. Although until today, chicken soup is commonly prepared and consumed for remedial purposes, its medicinal powers have not yet been corroborated with scientific evidence, as noted by Dr. Linda Vorvick [5]. Only an accumulation of anecdotal testimonies supports the usefulness of chicken soup in relieving cold symptoms, according to Dr. Rennard. He added that much about the mechanisms of chicken soup in helping minimize symptoms of upper respiratory tract infections are not yet understood [3]. Nonetheless, three important research studies were conducted in the latter half of the twentieth century, each uncovering different aspects related to chicken soup's role in treating upper respiratory tract infections.

The most recent of these studies was led by Dr. Rennard in 1993 at the University of Nebraska Medical Center. He suggested that cold symptoms from upper respiratory tract infections could be attributed to inflammation. He hypothesized that if chicken soup lessened inflammation, then it may alleviate cold symptoms. In his study, he sought to determine if chicken soup would slow or decrease the migration of neutrophils, a class of white blood cells involved in protecting against infection. Through his research, Dr. Rennard revealed that chicken soup presents anti-inflammatory properties that could minimize symptoms of upper respiratory tract infections [4].

To determine if chicken soup played a role in reducing inflammation, he performed a standard Boyden blindwell chemotaxis chamber assay, which tested chicken soup's effects on reducing neutrophil chemotaxis, or movement of the white blood cells. Results demonstrated overall that chicken soup decreased neutrophil movement. During preparation of the chicken soup, prior to the addition of vegetables, the chicken broth alone did not have any effect on neutrophil movement; however, after the addition of vegetables, the soup decreased neutrophil movement. The chicken as well as each vegetable in the chicken soup when tested separately reduced neutrophil movement. In addition, tests of different store-bought soups, used as a comparison, presented similar reductions in neutrophil movement to that of the homemade chicken soup, albeit at varying levels.

Dr. Rennard concluded, based on this study, that numerous ingredients found in chicken soup contribute to its remedial properties. Furthermore, he proposed that chicken soup could alleviate symptoms of upper respiratory tract infections by producing a moderate anti-inflammatory response through reducing neutrophil movement [3]. Nonetheless, he was unable to pinpoint an individual ingredient in the soup responsible for the reduction of neutrophil migration; rather, he suggested that the effect on neutrophil migration might be due to the mixture of the ingredients. The recipe used in the experiment consisted of the following ingredients: chicken, onions, sweet potatoes, parsnips, turnips, celery, carrots, parsley, salt and pepper. As Dr. Rennard noted, "All vegetables and the soup had activity. I think it's the concoction." Dr. Rennard mentioned that in addition to its antiinflammatory properties, other benefits of chicken soup include its ability to rehydrate and nourish, as well as the placebo effect of the consolation of being served chicken soup when ill [4]. The results of Dr. Rennard's study clearly reinforced the common belief that chicken soup displays medicinal properties.

In an earlier study, Dr. Kiumars Saketkhoo investigated how the steam from chicken soup may provide remedial benefits for upper respiratory tract symptoms. To test this, he compared the effects of drinking hot water, cold water, or hot chicken soup on nasal mucus velocity in human subjects, as the release of mucus from the nose helps protect against pathogenic bacteria and viruses. Healthy subjects were directed to drink hot water and hot chicken soup, both with and without a straw, and cold water without a straw. The subjects were then tested for any change from their normal nasal mucus velocity. Results showed that subjects who drank hot water without a straw or hot chicken soup with or without a straw experienced significantly greater increases in nasal mucus velocity than those who drank hot water with a straw or cold water without a straw. Chicken soup without a straw showed the largest increase, followed by hot water without a straw, followed by chicken soup with a straw.

Based on this study, Dr. Saketkhoo determined that drinking hot liquids temporarily speeds up nasal mucus velocity due to the inhalation of steam through the nose. Additionally, he suggested that hot chicken soup might contain an extra element relating to either taste or smell that may increase nasal mucus velocity, even more than hot water alone. He therefore proposed that hot fluids, especially hot chicken soup, are more effective than cold fluids in treating upper respiratory tract infections [6].

Clinical evidence for the remedial benefits of chicken soup was reported by Drs. Caroline and Schwartz in a case study of an otherwise healthy middle-aged male patient suffering from mild pneumococcal pneumonia. They reported that he began to recover when treated with a chicken soup regimen of 500 ml of chicken soup by mouth every 4 hours. Then, because of his improvement, the patient refused more chicken soup. Soon after the termination of the patient's chicken soup regimen, his condition began to quickly deteriorate. This time, chicken soup was not presented to him due to lack of accessibility, and he did not respond to treatment with penicillin. Thus, due to the progression of his illness and ineffectiveness of treatments, he was forced to undergo a thoracotomy.

Following these clinical observations, Drs. Caroline and Schwartz concluded that prematurely discontinuing a patient's chicken soup regimen might have severe consequences for the patient. They suggested that, although further research was needed to find the ideal length of treatment, it is best for the patient to continue with the entire suggested ten-day chicken soup regimen and to slowly decrease chicken soup consumption thereafter. If the patient subsequently relapses, he should promptly be treated with a second chicken soup regimen [2].

Based on these three research studies, chicken soup may provide cold symptom relief for two primary reasons. Chicken soup may cause an anti-inflammatory effect by reducing neutrophil movement, thereby mitigating cold symptoms. In addition, steam released by chicken soup may minimize nasal congestion by increasing the flow rate of mucus and minimizing the extent of the pathogen's contact with the lining of the nose [7]. Moreover, it seems advisable to continue eating chicken soup throughout the duration of an upper respiratory tract illness. Further studies are required to understand the mechanisms associated with chicken soup's remedial properties for upper respiratory tract infections.

Indeed, these three studies together demonstrate the veracity of the "old Jewish wives' tale." As Dr. Rennard [8] noted, "Just because it is an old wives' tale doesn't mean it's wrong." Jewish mothers and housewives have demonstrated wisdom over the centuries by insisting on the power of chicken soup to ease symptoms of the common cold virus and other similar upper respiratory tract infections. Yet, in the end, chicken soup is simply chicken soup. We must always remember that Hashem is our ultimate Healer. Otherwise, we too will be guilty of the same sin as the people in the time of King Hezekiah who relied on "The Book of Remedies" for cures without acknowledging Hashem as the ultimate Healer.

Acknowledgements:

## References:

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<sup>[4] &</sup>quot;News Release: Chicken Soup for a Cold," University of Nebraska Medical Center: Department of Public Relations, <a href="http://www.unmc.edu">http://www.unmc.edu</a> (retrieved July 8, 2013).

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<sup>[8]</sup> Parade Staff, (Sunday, October 13, 2013), "The Sneezin' Season," Parade, 14