

## Ashford, Bananas, and Celiac Disease

To the Editor: This letter is an offshoot of an article published in PRHSJ (1) featuring Bailey Ashford's dietary treatment of tropical sprue (which ultimately proved unsuccessful):

**A** causative factor in celiac disease is now known to be gluten, found in grains such as wheat, barley and rye. In the early part of the 20<sup>th</sup> century the etiology of celiac disease was a mystery. There was no effective treatment and in those afflicted, death could occur, especially if they were children (2).

Then, in 1924 a breakthrough for treatment was reported in a paper by a New York physician, Sydney Haas (3). Using a diet of protein milk, a few vegetables, limited portions of meat and gelatin plus six bananas, he recorded out of ten children treated, eight had dramatic symptom remission and increased height and weight. The diet emphasized low fat and carbohydrate, except sucrose from ripe bananas. The diet was 25% protein and contained 1,300 kcal/day. Most of the children were less than 2 years of age so calories were close to the recommended range (4). In his concluding statement Haas wrote: "Carbohydrate in the form of ripe bananas appears to be tolerated perfectly, making it possible to bring about a clinical cure in practically all cases. Whether there is a factor other than carbohydrate in the banana which results in the cure is unknown" (3).

Haas was correct about his "factor" which had nothing to do with bananas but the **absence** of a dietary ingredient. By chance, his diet contained albumin along with the bananas, and fortuitously **no gluten**. The banana diet remained a common treatment for celiac disease until the early 1950s. However, things changed when Dutch pediatrician, Willem Karel Dickey, and his colleagues (5) identified gluten as the trigger for celiac disease. Bananas were finally discredited as a celiac disease treatment, and the gluten-free diet was born. Even after this discovery, Haas maintained that only the banana diet could achieve a permanent cure.

This narrative invites one compelling question. Why, among the multitude of dietary constituents were **bananas** chosen as a treatment? One theory has been postulated by Alan Levinovitz in his book "The Gluten Lie and other myths about what you eat" (6). He states: "At the turn of the 20<sup>th</sup> century, the United Fruit Co. mounted an aggressive advertising campaign to complement its increased capacity to grow and import bananas. With the fruit no longer an exotic luxury, United Fruit took advantage of testimonials by doctors and nutritionists to reimagine bananas as a superfood" (6).

Dr. Haas most probably was aware of this campaign, but I suggest that this was not the source of his motivation to use bananas. I point to a quote in his landmark paper of 1924 which states: "Of interest in connection to the present paper is the statement that in Porto Rico the town dwellers who eat much bread suffer from sprue, the farmers who live largely on bananas, never" (7). This statement was taken from a study by Ashford who compared health status in two villages. Furthermore, Ashford had published a milk and banana-based diet in 1916 for the treatment of sprue which was essentially identical to the Haas diet of 1924 (8). Throughout his studies, Ashford maintained that bananas provided superior nutritional benefits.

To sum up, the diet formulated by Ashford for tropical sprue was ineffective as a treatment however his emphasis on the curative properties of bananas was a probable influence on the formulation of a similar diet in the successful treatment of celiac disease. Hence, Ashford was indirectly involved in the saving of countless lives. As far as I am aware, this is the first report of Ashford's connection with the development of the banana diet breakthrough for celiac disease.

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### References

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