

## Nutrition and autoimmune diseases in Tunisia: Bread is the staple food and autoimmune diseases have increased frequency

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Autoimmune diseases are the result of the interplay between environmental and genetic factors. Nutrition plays an important role among environmental factors. The aim of this lecture is to explain the relationship between some nutrients and the increased frequency of autoimmune diseases. We will specially talk about two nutrients: the gluten and the yeast *Saccharomyces cerevisiae*. Bread is rich in gluten and *Saccharomyces cerevisiae* is known as the baker's yeast. As a consequence, we are now commonly exposed to yeast. Nonetheless, anti-*Saccharomyces cerevisiae* antibodies (ASCA), directed against the phosphopeptidomannan part of the cell wall of the yeast, are found in high levels not only in Crohn's disease but also in other autoimmune diseases. The pathogenic significance of ASCA is not yet fully understood, but molecular mimicry of self antigens remains a possibility. In Tunisia, the staple food is bread. So, Tunisian people are highly exposed to both gluten and *Saccharomyces cerevisiae*. We have previously demonstrated a high frequency of autoimmune diseases triggered by gluten, especially celiac disease and autoimmune diseases associated with celiac disease such as type 1 diabetes and Grave's disease. Furthermore, we demonstrated a high frequency of ASCA in the following autoimmune diseases: celiac disease, Type 1 diabetes, primary biliary cirrhosis, systemic lupus erythematosus and Grave's disease.