

PHYSIOPATHOLOGICAL BASES OF FOOD ALLERGIES AND INTOLERANCES AND THEIR APPLICATION IN CATERING

- OBJECTIVES**
- To write a document in order to explain the main mechanisms and physiopathological bases of food allergies and intolerances
 - To carry out a questionnaire, as well as the rules and recommendations about allergens in catering, so as to fulfill with the suitable manufacturing practices and in that way, the adverse reactions will be prevented from being carried out at allergic people

MECHANISMS AND PHYSIOPATHOLOGICAL BASES

ALLERGY: alteration of the immune system (Figure 1) due to the contact, ingestion or inhalation of food or some components. It could be immunoglobulin E (IgE) mediated or not.

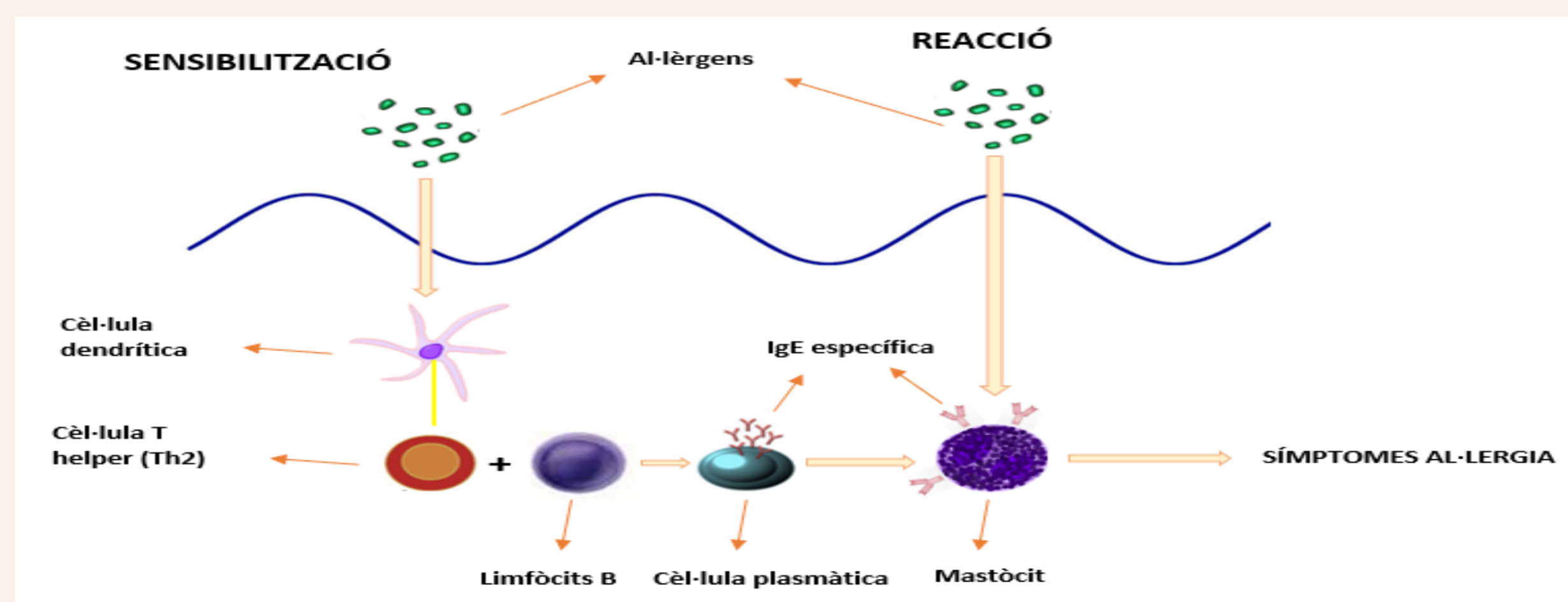


Figure 1. Physiopathological mechanism of an allergic reaction

Main allergens (Figure 2):



Figure 2. Food allergens (López, 2016)

INTOLERANCE: non-toxic adverse reaction not caused by immune mechanisms, after intake of some food or nutrient. Intolerance can be:

- Enzymatic origin: enzyme deficiency
- Pharmacological: due to products found in food, such as histamine
- Indeterminate: sensitive population and normal population (Figure 3)

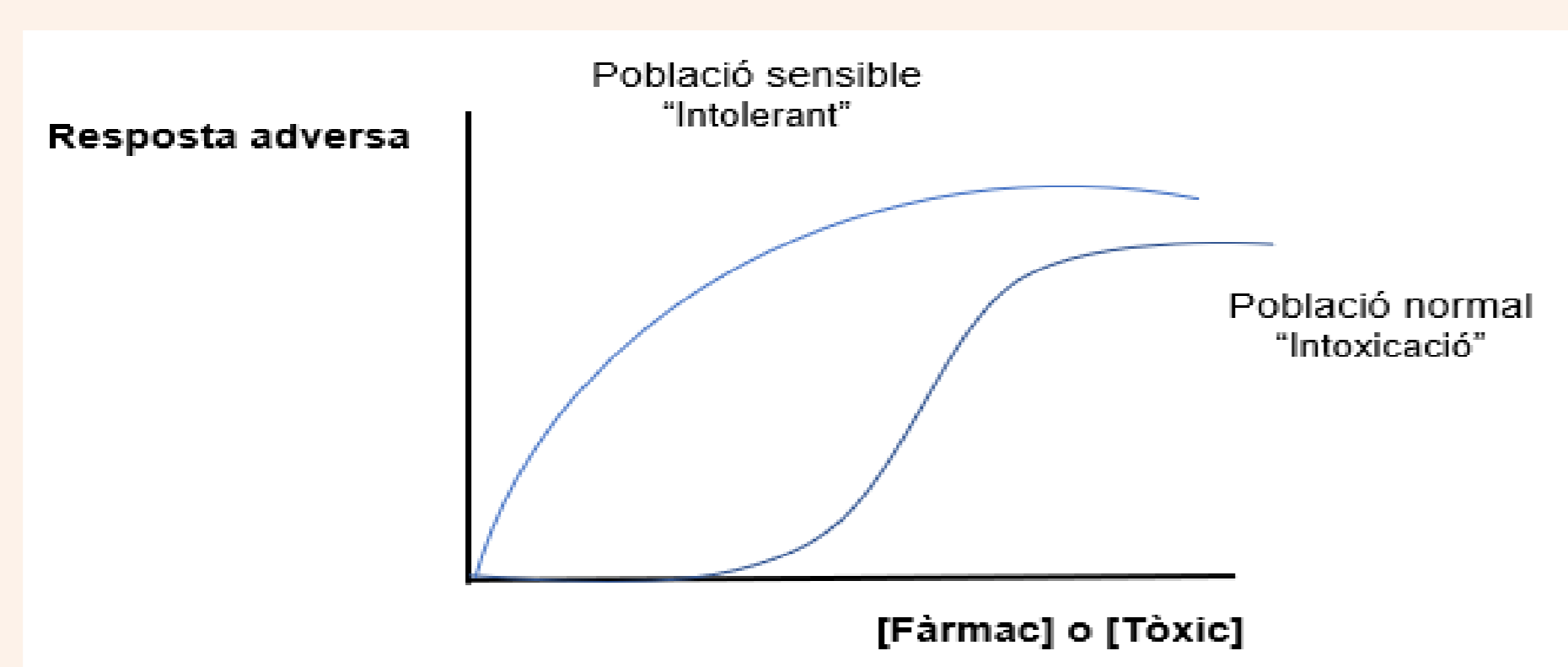


Figure 3. Comparison of the adverse response against to a fixed drug or toxic concentration, depending on the population sensitivity against it.

CELIAC DISEASE: Permanent gluten intolerance. It is due of autoimmune disorder not IgE mediated in genetically predisposed people (Figure 4).

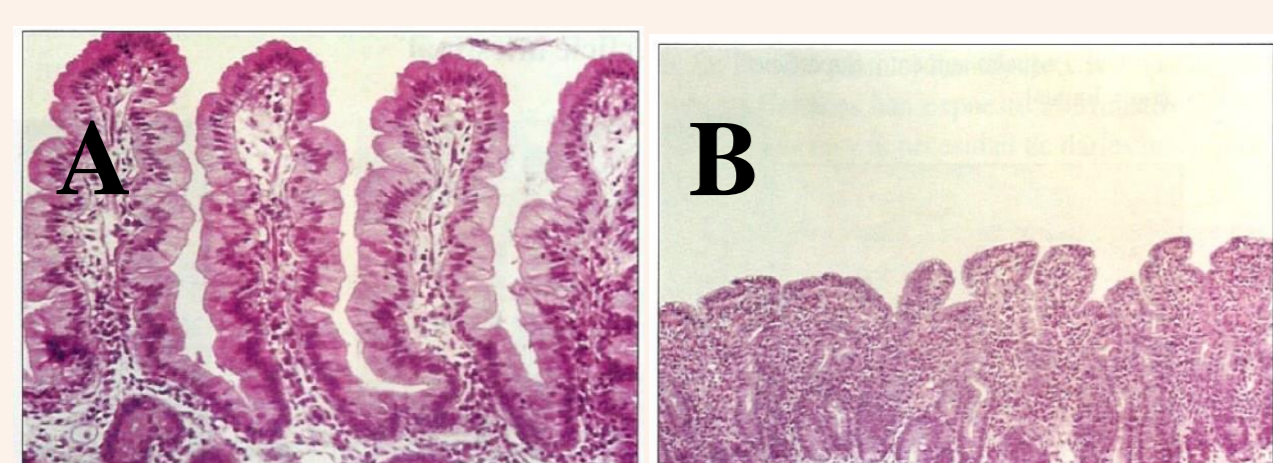


Figure 4. Normal (A) and atrophied villi (B)

(Arranz et al., 2012)

CONCLUSIONS



- The lack of catering workers training about food manipulation.
- I conclude that the full and specific training is necessary to be given to catering workers about good food preparation for allergic or intolerant people
- I propose the specific training for catering workers about food manipulation, related to physiopathology bases and mechanisms of both pathologies to let them know the importance and the gravity which a bad food manipulation could generate in the allergy and food intolerances.

CATERING

Preparation of a question list, advices and rules following the next stages:

- MENU DESIGN
- SUPPLIER
- RECEPTION OF RAW MATERIALS
- STORAGE OF RAW MATERIALS
- PREPARATION OF MENU
- TRACEABILITY FROM THE ORDER TO SERVICE
- SERVICE OF THE MEALS
- TRAINING

GOOD MANUFACTURING PRACTICES

TO AVOID ALLERGIC REACTIONS

