## BASIC INFORMATION ABOUT CELIAC DISEASE FOR PAEDIATRIC PATIENTS AND THEIR FAMILY

## WHAT IS CELIAC DISEASE?

Celiac Disease (CD) is a chronic autoimmune disorder of the digestive system produced by gluten, a protein which is found in wheat and other cereals. CD develops in genetically predisposed people, and produces an inflammatory reaction in the small intestine which hinders the absorption of nutrients from food (iron, calcium, etc), producing different symptoms.

## WHAT SYMPTOMS DOES CELIAC DISEASE PRODUCE?

The most common symptoms are: weight-loss, reduced appetite, fatigue, nausea, vomiting, diarrhoea, abdominal bloating, loss of muscle mass, delayed growth, behaviour alterations (irritability, apathy, introversion, sadness), abdominal pain, tympanites (abundant intestinal gasses), iron deficiency anaemia resistant to treatment.

However symptoms may be atypical or absent, both in children as well as adults, making diagnosis difficult.

## HOW IS CELIAC DISEASE DIAGNOSED?

The suspicion of CD is made with an adequate clinical history, and carrying out a blood analysis where the CD serological markers are studied.

Clinical and analytical criterion exist which, when complied with, allow the diagnosis of CD to be made at paediatric age without the need for further tests.

In all other cases, in order to make an accurate diagnosis of celiac disease it is essential to have a biopsy of the small intestine through the means of an upper endoscopy.

It is important NOT to remove or reduce gluten in the diet until the CD diagnosis has been made.

## WHAT IS THE TREATMENT FOR CELIAC DISEASE?

Current treatment consists of adhering to a strict, life-long, gluten-free diet. Usually, after a few months following this diet strictly a normalisation of the intestinal lesions is achieved, along with an improvement and even resolution of the symptoms.

Ingesting small quantities of gluten on an ongoing basis can cause major and undesirable disorders, therefore the diet should be strict.

## HOW IS THE FOLLOW-UP FOR CELIAC DISEASE CARRIED OUT?

The doctor will advise on regular tests to monitor the regulation of CD and to rule out the development of other possible associated diseases. If the tests results are positive they will gradually become more spread out

Although celiacs most commonly present CD in an isolated way, it can sometimes be associated with other pathologies such as:

- Dermatitis Herpetiformis.
- Diabetes Mellitus Type 1
- Selective IgA Deficiency.
- Down syndrome.
- Liver disease.
- Thyroid diseases
- Lactose intolerance.


## WHAT COMPLICATIONS ARE ASSOCIATED WITH CELIAC DISEASE?

These complications occur in patients with poor tests results due to inadequate follow-up of the diet, and normally consist of the development of deficiency problems such as anaemia, iron deficiency, osteopenia and osteoporosis; the most serious complication long-term being the development of an intestinal lymphoma, albeit very rare. However, a patient with CD who adheres to the diet properly presents the same risk of developing this complication at 5 years as do non-celiac patients.

## THE GLUTEN-FREE DIET

## WHAT DOES A GLUTEN-FREE DIET CONSIST OF?

1. A gluten-free diet should not be started until the CD diagnosis has been made by a doctor.
2. Once a CD diagnosis has been made, the life-long diet must be followed strictly.
3. Any product which contains the following ingredients will be eliminated from the diet: WHEAT, BARLEY, RYE and any of its hybrid varieties (KAMUT, SPELT, TRITICALE...) and UNCERTIFIED OATS.
4. It is advisable to base the diet on natural foods which should not contain gluten by themselves: legumes, meat, fish, eggs, fruit, vegetables and gluten-free cereals like rice and corn.
5. Special care must be taken when consuming processed and/or packaged foods given that it is more difficult to guarantee the absence of gluten. The consumption of manufactured or processed products involves taking potential risks. Product labels of products that are consumed must always be consulted.
6. The list of ingredients which usually appear on food product labels and which contain or may contain gluten are:

Gluten, cereal, flour, modified starch (E-1404, E-1410, E-1412, E-1413, E-1414, E-1420, E-1422, E1440, E-1442, E-1450), starches, fibre, thickeners, semolina, protein, vegetable protein, hydrolysed protein, malt, malt extract, yeast, yeast extract, spices and aromas.
7. Products sold in bulk should not be consumed when the origin and composition are unknown.
8. Caution should be exercised with cross-contamination, at home and especially in catering establishments. It is important to know how the food has been prepared to know if it could have been contaminated with gluten. (For example, frying in oil where wheat batter has previously been fried.)
9. It is usually advised to use some gluten-free products for the whole family, such as corn or potato flakes, in order to simplify cooking on a day-to-day basis.

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## WHAT DOES CROSS CONTAMINATION CONSIST OF?

## WHAT IS THE SYMBOLOGY FOR GLUTEN-FREE PRODUCTS?

Presently we are able to find a wide variety of special "gluten-free" products which substitute those made from wheat, barley, rye and oats.

These products can be identified with different symbols:

- Controlled by FACE (Controlado por FACE)
- Crossed Grain (Espiga barrada)
- Others


## "CONTROLADO POR FACE" (The Federation of Celiac Associations of Spain)

The Guarantee Label "Controlado por FACE" (controlled by FACE) was created for those companies that produce food products suitable for celiacs (gluten-free diets) and wish to guarantee consumers of the compliance with good self-control practices and assure them of the quality of the products through the certification.

Certification with the Guarantee label "Controlado por FACE" is achieved though the verification of the manufacturer's quality system, which must guarantee a final product with gluten levels below the currently established limits.

This label can be received by both manufacturers of special products for celiac (bread, pastry, pasta) as well as those manufacturers who voluntarily assume a special commitment towards celiacs whilst making conventual products (sausage, dairy


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## Crossed Grain (Espiga Barrada)

Crossed Grain is the international gluten-free symbol. It is regulated by the AOECS (Association of European Celiac Societies) who delegates to its member associations the concession of use and control. Currently, industries wishing to use this symbol must be certified in the "European License System (ESL).

For this system to be valid, it must be accompanied by the registration number granted by the association and one of the following expressions: "XX-YY-ZZ" / "OATS XX-YY-ZZ"


If the symbol is not accompanied by any expression, it means that the product contains less than $20 \mathrm{mg} / \mathrm{kg}$ (ppm) of gluten and doesn't contain oats.

## Others

Products in which the manufacturer makes reference to the fact that it does not contain gluten

