

# PATIENT INFORMATION BROCHURE

## COW'S MILK ALLERGY

*Cow's milk allergy affects 2-7.5% of infants and children, and is common in the first 3 years of life.*

### WHAT CAUSES COW'S MILK ALLERGY?

- Milk contains many different proteins that can cause allergic reactions.
- The main proteins are casein and whey.
- Casein is the curd on top of milk that forms when milk is left to go sour. Casein accounts for about 80% of protein in milk and is relatively heat stable
- Whey is the watery part. Whey makes up the other 20% and can be broken down by heating (whey allergic patient may be able to tolerate boiled or long-life milk).

### WHAT IS LACTOSE INTOLERANCE?

- Lactose is the sugar found in milk. Lactase is an enzyme that breaks down lactose in order that it can be absorbed by the gut.
- If lactase levels are low, milk sugars cannot be digested, and accumulate in the gut causing bloating, diarrhoea, gas, nausea and abdominal pain.
- Lactose intolerance is very rare in babies becoming more common in older children and adults.
- People with lactose intolerance have varying degrees of deficient enzyme. Those with absolutely no lactase cannot tolerate even small amounts of milk products, while those with low levels may still be able to eat or drink a small amount without getting symptoms.
- There are many dairy products with lower lactose levels than milk. Yoghurt and cheese for example may be well tolerated. There are also low lactose and lactose-free milks available as well as lactase enzyme replacements that can be added to milk products or eaten by the individual prior to consuming a milk product.

- A person with a milk allergy will continue to have allergic symptoms while consuming lactose-free dairy products.

## **MILK ALLERGY REACTIONS**

- About 40% of reactions to cow's milk are known as IgE-mediated or "immediate" reactions, which occur within minutes to up to 2 hours after exposure.
- Reactions may be mild or life-threatening and include hives, flushing, swelling, itching, nausea, vomiting, wheezing, difficulty breathing and collapse (anaphylaxis).
- Delayed reactions may start several hours to days after intake and symptoms include vomiting, diarrhoea, abdominal pain, poor growth and eczema.

## **HOW IS THE DIAGNOSIS MADE?**

- Immediate allergic milk reactions can be tested for, even in young babies, by doing blood tests and/or skin prick tests. If these test results be equivocal (uncertain) an "oral food challenge" may be performed where a doctor or nurse gives increasing amounts of milk to the individual, usually in hospital, in order to be able to treat severe reactions should they occur.
- The other types of milk allergy cannot be tested for with these types of tests. In this case an elimination-challenge test is performed. This should demonstrate the relief of symptoms on removal of milk from the diet as well as the recurrence of symptoms when milk is reintroduced. This should be supervised by a doctor and dietician.

## **MANAGEMENT**

- Children and adults with cow's milk allergy should be managed in collaboration with a dietician. The dietician should provide advice, recipes and education on how to achieve a nutritious and complete diet.
- Calcium supplements should be prescribed for those on milk-free diets.
- Parents should be educated to read food labels and recognize terms that may indicate the presence of cow's milk protein. These include terms such as whey, lactose, casein, casenate, lactalbumin and lactoglobulin.
- A detailed "action plan" should be provided in case of reactions. This should clearly describe the difference between mild and severe reactions as well as the actions that need

to take place in each case. This plan should also be provided to the child's school/care givers.

## **TREATMENT**

- It is often not necessary for a breastfeeding mother to avoid all milk in her own diet, as infants will often tolerate these trace amounts. If, however symptoms do occur, the mother will have to eliminate all traces while supplementing her own diet with calcium.
- The mainstay of treatment remains avoidance of cow's milk protein. Whether the individual avoids all traces of milk, or tolerates small amounts of extensively heated milk (biscuits or cupcakes,) depends on the nature of that particular person's allergy.

## **MILK SUBSTITUTES**

- Where severe and life-threatening reactions to milk occur, an infant should be put on amino-acid based formula such as Neocate.
- Milder reactions: use extensively hydrolysed formula such as Alfare, Alimentum, Allernova or Pepticate
- Soy- based milk may be considered. (Test to exclude soy allergy)
- Goat and other milks (ewe, mare, donkey) share 90% of the proteins with cow's milk, as well as having potential nutritional complications and are **not** recommended.

## **WILL MY CHILD OUTGROW THE MILK ALLERGY?**

- Most children develop tolerance in early childhood, dependent on the type of allergy, the time of diagnosis, antibody level at the time of diagnosis and the protein to which the child is allergic.
- Children who are allergic to casein are less likely to outgrow their allergy.
- Children with cow's milk allergy should be seen at regular intervals to assess growth and nutrition and to reinforce avoidance and emergency management plans. Blood and skin prick tests are repeated annually to assess ongoing allergy, and to decide on a suitable time to perform an oral food challenge.

For additional reading visit: <http://en.wikipedia.org/wiki/Milk.allergy>

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