

## **Lactose intolerance**

**This is not an allergy.**

**It should not be confused with CMPA (see Refhelp guidance on CMPA)**

Symptoms may include loose stools, and gassiness/ flatulence, bloating and nausea (rarely vomiting), abdominal cramps and borborygmi (stomach rumbling) within a few hours (typically 30 mins to 2 hours) of exposure to lactose.

**There are three types of lactose intolerance (lactase deficiency)**

### **1. COMMONEST PRESENTATION: Secondary lactose intolerance (hypolactasia)**

Is common and usually transient, lasting a few weeks, classically after gastroenteritis, and clearly may recover but may also be seen in **coeliac disease or immune deficiencies or other inflammatory conditions of the bowel.**

### **2. Primary lactose intolerance (hypolactasia)**

Relates to the **genetically programmed decline** that affects all humans around late childhood and into adolescence/adulthood.

Northern European populations have a prevalence of < 10%, but the diagnosis must be considered.

It is also often (self) over-diagnosed !

Some populations are more affected: In East Asian (up to 100%), Latin, Middle Eastern and Africa (and black American) populations (up to 80%), the prevalence of this problem clearly varies dependent on the expression of lactase due to the programmed post-weaning decline in enzyme levels.

### **3. RAREST PRESENTATION: Congenital lactose intolerance (alactasia)**

This is an uncommon condition for babies to present with in the UK (reported most commonly in Finland) and would present within a few days after birth (ie. after lactose exposure – lactose is present in breast milk and standard infant formula) with profuse watery stools, possible dehydration and metabolic acidosis.

Even if there is a 'family history' of lactose intolerance, or there is parental belief that it is the diagnosis other factors to consider are CMPA or an underlying precipitant (infection) or children who may be developing a condition such as coeliac disease ie another condition which may cause lactose intolerance as a **secondary** phenomenon.

## What to do!

Do not do any laboratory tests!

A trial of LFD is the quickest way to test and treat!

### Under age 6 months

A lactose free formula would be indicated and the family advised to source this from a pharmacy or supermarket provider (eg SMA lactose free). Although it can be prescribed, it is not expensive.

### Age 6 to 12 months and after

Lactose free formula or Soya is an option as part of a mixed diet, and after 12 months, soya or commercially available lactofree milk and other lactofree plant-based products (oat, coconut etc) would be an option.

### In toddlers and older children and young people

An empirical trial of lactose free diet is indicated initially for around 6 to 8 weeks before gradually re-challenging if appropriate. Make sure you choose a Calcium enriched alternative!

A guide is available via our Paediatric Dietetic Department's Homepage and linked here. [lactose free diet sheet](#)

## What not to do!

**Investigation with stool reducing substances** (and the lactose tolerance test using blood glucose monitoring) is **NOT recommended**.

Practically, delays in transportation and false positive results (due to bacterial fermentation in delayed specimens) but even with no transit delay, despite historical data, the test is not terribly useful in discriminating which type of sugar intolerance is causing a problem. We discontinued testing in the ward and laboratory over 10 years ago at RHSC.

### Other practice points

Babies around 2 or 3 months of age, with no history of infection preceding the problems, who have loose stools, gassiness and irritability / reflux are more likely to have a milk protein allergy (CMPA) than lactose intolerance.

To reiterate, for babies who are still suspected as lactose intolerant, specialised lactose free (but cow's milk protein based) formulas are available OTC (SMA Lactose free) or prescribed (Enfamil O-Lac) and in addition, soya feed should NOT be used as an exclusive feed under age 6 months due to concerns about phyto-oestrogens.

Lactase enzyme replacement is also an option to help maintain the least restricted LFD (see links) in older children.

Some **medications** have lactose as the 'excipient' – most do not have enough to cause clinical problems, but some people may be very sensitive, and if the medication is essential, trialling an enzyme supplement to allow toleration of the medication may be worthwhile if you have a problem tolerating it (see links)

### **How to test for lactose intolerance if you need to!**

Breath testing is available at RHCYP and disaccharidase activity can be measured at endoscopy, but we wouldn't do this unless there is a very good reason or we had doubts about the response to LFD.

Discuss with paediatric gastroenterology (see homepage) if you feel a patient needs tested.

### **Resources – lactose intolerance information (accessed 8.8.2019)**

[https://en.wikipedia.org/wiki/Lactose\\_intolerance](https://en.wikipedia.org/wiki/Lactose_intolerance)

<https://www.nhsinform.scot/illnesses-and-conditions/nutritional/lactose-intolerance>

<https://www.nhs.uk/conditions/lactose-intolerance/>

<https://www.gosh.nhs.uk/conditions-and-treatments/conditions-we-treat/lactose-intolerance>

[https://www.osmosis.org/learn/Lactose\\_intolerance](https://www.osmosis.org/learn/Lactose_intolerance)

### **Supplements and lactose in medications – example search (accessed 22.6.19)**

[https://www.google.com/search?rlz=1C1CHBF\\_en-GBGB777GB777&ei=P1sOXaCVA9SegQaR2JD4CA&q=lactase+enzyme+supplements&og=lactase+enzyme+supplements&gs\\_l=psy-ab.3..0j0i22i30i9.6818.10922..11936...0.0..0.305.2182.7j6j2j1.....0....1..qws-wiz.....0i71j35i39j0i67.8NNqxxG01gs](https://www.google.com/search?rlz=1C1CHBF_en-GBGB777GB777&ei=P1sOXaCVA9SegQaR2JD4CA&q=lactase+enzyme+supplements&og=lactase+enzyme+supplements&gs_l=psy-ab.3..0j0i22i30i9.6818.10922..11936...0.0..0.305.2182.7j6j2j1.....0....1..qws-wiz.....0i71j35i39j0i67.8NNqxxG01gs)

<https://onlinelibrary.wiley.com/doi/full/10.1111/j.1365-2036.2008.03889.x>

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