GESA
Gastroenterological Society of Australia

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facts about...

REFLUX IN CHILDREN

THE INFANT WITH GASTRO-OESOPHAGEAL REFLUX

What is reflux?

Gastro-oesophageal reflux, or "reflux" occurs when fluid in the stomach spills back or regurgitates into the oesophagus (gullet) or mouth. The valve (sphincter) at the lower end of the oesophagus prevents reflux when it is closed. However, this sphincter does open to allow swallowed food or saliva to enter the stomach. It also opens briefly at other times, especially after meals. It is during these openings that gastro-oesophageal reflux commonly occurs. Most episodes of reflux are not recognised as fluid rarely enters the mouth.

Reflux in infants

Infants normally have more episodes of reflux than adults, but the number decreases through their first and second years. Gastro-oesophageal reflux is more obvious in infants because they are more likely to regurgitate fluid into the mouth ("posseting"). This is especially common after feeds when the stomach is full. It usually occurs less and less frequently as infants grow older. Frequent posseting rarely results in any harm, although it can result in smelly, soiled clothing and is a nuisance. It should be regarded as a normal part of development and does not require medical treatment.

Regurgitation of small quantities of feed is normal in infants.

Can reflux cause harm?

Very occasionally, reflux may cause complications:

Growth

Excessive loss of food through regurgitation may interfere with normal growth. This is one of a number of causes of poor weight gain. Infants in the first year of life should be seen and weighed regularly by their maternal and child health nurse.

Oesophagitis

Prolonged or repeated reflux irritates the inner lining of the oesophagus and may cause inflammation (oesophagitis). Adults with this problem complain of heartburn. Infants may develop bloodstained vomiting, and occasionally difficulty in swallowing. Rarely, the oesophagus may become scarred and narrow.

Breathing problems

Refluxed gastric fluids may be inhaled into the lungs resulting in chest infections, symptoms of asthma (eg wheezing), or an interruption

to breathing (apnoea). Although rare, these are important complications of gastro-oesophageal reflux.

Crying and irritability

Infants may become distressed for a number of reasons. Some of these are obvious, but it is occasionally very difficult to understand why an infant is irritable. It is unusual for gastro-oesophageal reflux to be the cause of irritability. So called "silent" gastro-oesophageal reflux, where there is little or no regurgitation into the mouth is very unlikely to be a cause of crying and irritability.

Some other causes of vomiting

Simple gastro-oesophageal reflux is not the only cause of vomiting in infancy. Infections such as

gastroenteritis or a urine infection may also cause a child to vomit. Medical attention should be sought urgently if a child has bile-stained (green) vomit, as this may be the first sign of a bowel obstruction.

What can be done to treat reflux?

Most infants, who are regurgitating, even frequently, do not need medical treatment. Gastro-oesophageal reflux usually improves by the age of 12 to 18 months. Simple measures such as careful handling and dietary thickeners will help mild to moderate reflux without the need for any medications.

Treatment of reflux in the infant who is otherwise well

INFANTS NORMALLY have more episodes of reflux than adults, but the number decreases through their first and second years.

1) Posture and Handling:

Be gentle when handling and winding the baby after feeds: vigorous patting or rocking is not needed.

It is a good idea to have play times and change the nappy before feeds.

Aim to put the baby down for a sleep after feeds.

The head of the cot should be slightly elevated (about 30°) and the baby placed on his or her side.

2) Diet:

Thickened feeds help to reduce vomiting. This can be achieved by adding thickeners to milk feeds, such as cornflour or proprietary food thickeners. These are all available in most supermarkets or chemists. There is little evidence that food allergy has a major role in gastro-oesophageal reflux in children. Smaller, more frequent feeds may be better tolerated than larger volumes. "Anti-reflux" infant formulas are available and may be considered, although it is not possible to alter the thickness of the formula.

When should I seek medical help?

Occasional regurgitation in a child who is otherwise well and is gaining weight is not a cause to worry. You should be concerned if your child has any blood in the vomit, difficulty in swallowing, or is not gaining weight normally. Less commonly, gastro-oesophageal reflux may also cause episodes of coughing, wheezing, breath-holding or chest infections. Irritability may be due to heartburn, but is more commonly due to other factors. If in doubt, you should consult your medical practitioner.

Complicated reflux

1) Medications: medications should only be used on medical advice and if gastro-oesophageal reflux has resulted in significant problems, such as oesophagitis, or slow weight gain.

Medicines are used to reduce the amount and frequency of reflux, or to lessen its acidity.

Ranitidine and cimetidine reduce acid production by the stomach. These are available on prescription. They should be taken before feeds.

Cisapride is a prescription medication, which is used to reduce the frequency and amount of reflux by increasing the ability of the stomach to empty food into the bowel. If your child is receiving cisapride, please inform your doctor prior to commencing any other medications such as antibiotics. Side effects are infrequent, but include cramping, discomfort and diarrhoea.

A variety of medications are available to reduce gastric acidity.

Antacids neutralise the acid produced by the stomach. Because they contain salts and minerals, which may be difficult to excrete, care should be taken when they are given to small infants. Gaviscon is not recommended for reflux due to its high sodium and aluminium content.

2) Surgery: Occasionally an anti-reflux operation may be needed. This is usually very effective, but is used only when reflux has resulted in significant problems, medicines have not worked and the problem is unlikely to improve with age.

Special tests for reflux

Infants may vomit for a variety of different reasons. Your doctor will usually be able to exclude other causes of vomiting without tests. However, special tests done at a major hospital are occasionally required to demonstrate that reflux is the problem or to see if there are any complications.

Examples of these include:

1) Oesophageal pH monitoring: An acid-sensitive probe is passed through the nose and down the oesophagus to measure the amount of acid in the oesophagus for about 24 hours, either in hospital or at home. The caregiver will usually be asked to keep a diary of any

symptoms. The information is collected electronically and analysed by computer. This test measures the amount of reflux and its connection with any symptoms.

2) *Endoscopy:* Under either sedation or full anaesthetic, a flexible telescope is passed through the mouth into the oesophagus and stomach to look for inflammation (oesophagitis).

3) *Barium swallow or meal:* The patient swallows a liquid containing barium, which shows up under x-rays. The liquid outlines the oesophagus and stomach, showing any narrowing.

4) *Oesophageal pressure testing (manometry):* This measures how the muscles of the oesophagus are squeezing.

Reflux usually improves by the age of 12 to 18 months. In any one infant, however, the timing of this improvement may be difficult to predict.

This information booklet has been designed by the Digestive Health Foundation as an aid to people who have infants with reflux or for those who wish to know more about it. This is not meant to replace personal advice from your medical practitioner.

The Digestive Health Foundation (DHF) is an educational body committed to promoting better health for all Australians by promoting education and community health programs related to the digestive system.

The DHF is the educational arm of the Gastroenterological Society of Australia, the professional body representing the Specialty of gastrointestinal and liver disease in Australia. Members of the Society are drawn from physicians, surgeons, scientists and other medical specialties with an interest in GI disorders.

Since its establishment in 1990 the DHF has been involved in the development of programs to improve community awareness and the understanding of digestive diseases.

Research and education into gastrointestinal disease are essential to contain the effects of these disorders on all Australians.

Further information on a wide variety of gastrointestinal conditions is available on our website.

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This brochure is promoted as a public service by the Digestive Health Foundation. This leaflet cannot be completely comprehensive and is intended as a guide only. The information given here is current at the time of printing, but may change in the future.

If you have further questions you should raise them with your own doctor.

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