



# WEEKLY EPIDEMIOLOGICAL REPORT

A publication of the Epidemiology Unit  
Ministry of Health

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## Gastro - Oesophageal Reflux Disease

Gastro-oesophageal reflux (reflux of stomach content back up into the oesophagus and/or mouth) is a normal process that occurs in healthy infants, children and adults. Most episodes are brief and do not cause bothersome symptoms or complications. In contrast, people with gastro-oesophageal reflux disease (GORD) experience symptoms or complications as a result of the reflux.

The amount of acid reflux required to cause GORD varies. In general, damage to the oesophagus is more likely to occur when acid refluxes frequently, the reflux is very acidic or when the oesophagus is unable to clear away the acid quickly.

### Symptoms

Persons who experience heartburn at least two to three times a week may have gastro-oesophageal reflux disease. The most common symptom of GORD is heartburn. Heartburn is experienced as a burning sensation in the centre of the chest, which sometimes spreads to the throat; there also may be an acid taste in the throat. Less common symptoms include:

- \* Stomach pain (especially in the upper abdomen)
- \* Non-burning chest pain
- \* Difficulty in swallowing or food getting stuck
- \* Painful swallowing
- \* Persistent laryngitis/hoarseness
- \* Persistent sore throat
- \* Chronic cough, new onset asthma or asthma only at night
- \* Regurgitation of foods/fluids; taste of acid in the throat
- \* Sense of a lump in the throat
- \* Worsening dental disease
- \* Recurrent pneumonia
- \* Chronic sinusitis
- \* Waking up with a choking sensation

The following signs and symptoms may indicate a more serious problem and should be investigated immediately:

- \* Difficulty or pain with swallowing (feeling that food gets "stuck")
- \* Unexplained weight loss
- \* Chest pain
- \* Choking
- \* Bleeding (vomiting blood or passing dark-coloured stools)

### Causes

In many cases, the disorder cannot be attributed to any specific cause but the following conditions can contribute to the problem.

#### Hiatus hernia

Normally, strength of the lower oesophageal sphincter is increased when the diaphragm contracts. This is especially true during bending, coughing or straining. If there is a weakening in the diaphragm muscle at the hiatus, the stomach may be able to partially slip through the diaphragm into the chest, forming a sliding hiatus hernia. Presence of a hiatus hernia makes acid reflux more likely. A hiatus hernia is more common in people over age 50. Obesity and pregnancy are also contributory factors. The exact cause is unknown but may be related to the loosening of the tissues around the diaphragm that occurs with advancing age. There is no way to prevent a hiatus hernia.

#### Obesity

If the person is obese, the excessive fat in the abdominal cavity increases the pressure inside it. This causes the contents of the stomach to travel up into the oesophagus.

#### Pregnancy

Because the uterus increases in size during pregnancy, it presses on the stomach, creating higher pressure inside it, which increases the tendency to reflux. In addition, hormonal changes lead to relaxation of the oesophageal sphincter during pregnancy.

#### Foods and Beverages

The more the stomach is stretched by food, the higher the tendency to reflux. The tendency is also increased by eating fatty meals as fat delays gastric emptying. Chocolate, peppermint, coffee, fruit juices

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and alcohol prevent the oesophageal sphincter from working properly.

#### Tobacco

Saliva helps to neutralize refluxed acid, and smoking reduces the amount of saliva in the mouth and throat. Smoking also lowers the pressure in the lower oesophageal sphincter and provokes coughing, causing frequent episodes of acid reflux in the oesophagus.

#### Constipation

Constipation increases the tendency to reflux by raising pressure inside the stomach cavity.

#### Lying down immediately after meals

The tendency to reflux increases when a person is lying down. This is due to gravity.

### **Diagnosis**

Acid reflux is usually diagnosed based on symptoms and the response to treatment. In people who have symptoms of acid reflux (but no evidence of complications), a trial of treatment is often recommended, without testing. Specific testing is required when the diagnosis is unclear or if there are more serious signs or symptoms as described above.

#### Endoscopy

An upper Gastro-Intestinal endoscopy is commonly used to evaluate the oesophagus. Damage to the lining of these structures can be evaluated and a small sample of tissue (biopsy) can be taken to determine the extent of tissue damage.

#### 24-hour oesophageal pH study

A 24-hour oesophageal pH study is the most direct way to measure the frequency of acid reflux, although the study is not always helpful in diagnosing gastro-oesophageal reflux disease or reflux-associated problems. It is usually reserved for people whose diagnosis is unclear after endoscopy or a trial of treatment. It is also useful for people who continue to have symptoms despite treatment.

#### Oesophageal manometry

This can help to determine if the lower oesophageal sphincter is functioning properly. This test is usually reserved for people in whom the diagnosis is unclear after other testing or in whom surgery is being considered.

### **Complications**

Vast majority of patients with gastro-oesophageal reflux disease will not develop serious complications, particularly when reflux is adequately treated. However, a number of serious complications can arise in patients with severe gastro-oesophageal reflux disease.

#### Ulcers

Ulcers can form in the oesophagus as a result of burning from stomach acid. In some cases, bleeding occurs. Patient may not be aware of bleeding, but it may be detected in a stool sample

#### Strictures

Damage from acid can cause the oesophagus to scar and narrow, causing a stricture that can cause food or pills to get stuck in the oesophagus. The narrowing is caused by scar tissue that develops as a result of ulcers that repeatedly damage and then heal in the oesophagus.

#### Lung and throat problems

Some people reflux acid into the throat, causing inflammation of the vocal cords resulting in sore throat and/or hoarse voice. The acid can be inhaled into the lungs and cause aspiration pneumonia or asthma symptoms. Chronic acid reflux into the lungs may eventually cause permanent lung damage, leading to pulmonary fibrosis or bronchiectasis.

#### Barrett's oesophagitis

Barrett's oesophagitis occurs when the normal cells that line the lower oesophagus (squamous cells) are replaced by a different cell type (intestinal cells). This process usually results from repeated damage to the oesophageal lining and the most common cause is longstanding gastro-oesophageal reflux disease. The intestinal cells have a small risk of transforming into cancer cells. As a result, people with Barrett's oesophagitis are advised to have a periodic endoscopy to monitor for early warning signs of cancer.

#### Oesophageal cancer

There are two main types of oesophageal cancers: adenocarcinoma and squamous cell carcinoma. A major risk factor for adenocarcinoma is Barrett's oesophagitis discussed above. Squamous cell carcinoma does not appear to be related to GORD.

However, only a small percentage of people with GORD will develop Barrett's oesophagitis and an even smaller percentage will develop adenocarcinoma.

### **Treatment**

Gastro-oesophageal reflux disease is treated according to its severity. Mild symptoms are initially treated with dietary changes and non-prescription medications such as antacids.

More severe symptoms are treated with Histamine H<sub>2</sub> antagonists, proton pump inhibitors (PPI) and prokinetics.

#### Lifestyle changes

Changes to the diet or lifestyle have been recommended for many years, although their effectiveness has not been extensively evaluated in well-designed clinical trials. Thus, these recommendations may be helpful in some, but not all patients.

- \* Weight loss.
- \* Raising the head of the bed six to eight inches-Although most people only have heartburn for the two- to three-hour period after meals, some wake up at night with heartburn. People with night time heartburn can elevate the head of their bed, which raises the head and shoulders higher than the stomach, allowing gravity to prevent acid from refluxing. However, it is not helpful to use additional pillows; this can cause an unnatural bend in the body that increases pressure on the stomach, worsening acid reflux
- \* Avoid acid reflux inducing foods
- \* Cessation of smoking
- \* Avoid large and late meals-Reflux may be reduced by eating three or more hours before bedtime. In addition, eating smaller meals may prevent the stomach from becoming over distended, which can cause acid reflux
- \* Avoid tight fitting clothing-At a minimum, tight fitting clothing can increase discomfort, but it may also increase pressure in the abdomen, forcing stomach contents into the oesophagus.
- \* Using Chewing gum or lozenges-Chewing gum or lozenges can increase saliva production, which may help to clear stomach acid that has entered the esophagus.

#### Surgical treatment

Because of the effectiveness of medical therapy, the role of surgery has become more complex. In general, anti-reflux surgery involves repairing the hiatus hernia and strengthening the lower oesophageal sphincter. The most common surgical treatment is the laparoscopic Nissen fundoplication.

*Source* - Acid reflux in adults,

Available from <http://www.uptodate.com/contents/acid-reflux-gastroesophageal-reflux-disease-in-adults-beyond-the-basics>

Compiled by Dr. Madhava Gunasekera of the Epidemiology Unit

**Table 1: Vaccine-preventable Diseases & AFP**

16<sup>th</sup> – 22<sup>nd</sup> March 2013 (12<sup>th</sup> Week)

Disease	No. of Cases by Province									Number of cases during current week in 2013	Number of cases during same week in 2012	Total number of cases to date in 2013	Total number of cases to date in 2012	Difference between the number of cases to date in 2013 & 2012
	W	C	S	N	E	NW	NC	U	Sab					
Acute Flaccid Paralysis	00	01	00	00	00	00	00	00	00	01	02	14	22	- 36.4 %
Diphtheria	00	00	00	00	00	00	00	00	00	-	-	-	-	-
Measles	11	01	01	01	00	00	02	02	00	18	00	110	17	+ 547.0 %
Tetanus	00	00	00	00	00	00	00	00	00	00	00	06	02	+ 200.0 %
Whooping Cough	00	00	00	00	00	00	00	00	00	00	00	18	21	- 14.3 %
Tuberculosis	108	18	43	00	08	19	02	01	16	215	236	2124	2118	+ 0.3 %

**Table 2: Newly Introduced Notifiable Disease**

16<sup>th</sup> – 22<sup>nd</sup> March 2013 (12<sup>th</sup> Week)

Disease	No. of Cases by Province									Number of cases during current week in 2013	Number of cases during same week in 2012	Total number of cases to date in 2013	Total number of cases to date in 2012	Difference between the number of cases to date in 2013 & 2012
	W	C	S	N	E	NW	NC	U	Sab					
Chickenpox	05	04	10	04	00	17	03	00	05	48	75	1016	1313	- 22.6 %
Meningitis	04 CB=2 KL=1 GM=1	03 MT=2 NE=1	02 GL=1 MT=1	00	00	02 KG=1 PU=1	03 AP=3	00	00	14	09	226	166	+ 36.1 %
Mumps	04	00	03	11	01	01	02	04	02	28	69	357	1122	- 68.2 %
Leishmaniasis	00	00	03 HB=1 MT=2	00	00	00	04 AP=4	00	00	07	00	273	187	+ 46.0 %

**Key to Table 1 & 2**

**Provinces:** W: Western, C: Central, S: Southern, N: North, E: East, NC: North Central, NW: North Western, U: Uva, Sab: Sabaragamuwa.  
**DPDHS Divisions:** CB: Colombo, GM: Gampaha, KL: Kalutara, KD: Kandy, ML: Matale, NE: Nuwara Eliya, GL: Galle, HB: Hambantota, MT: Matara, JF: Jaffna, KN: Killinochchi, MN: Mannar, VA: Vavuniya, MU: Mullaitivu, BT: Batticaloa, AM: Ampara, TR: Trincomalee, KM: Kalmunai, KR: Kurunegala, PU: Puttalam, AP: Anuradhapura, PO: Polonnaruwa, BD: Badulla, MO: Moneragala, RP: Ratnapura, KG: Kegalle.

**Data Sources:**

**Weekly Return of Communicable Diseases:** Diphtheria, Measles, Tetanus, Whooping Cough, Chickenpox, Meningitis, Mumps.

**Special Surveillance:** Acute Flaccid Paralysis.

Leishmaniasis is notifiable only after the General Circular No: 02/102/2008 issued on 23 September 2008. .

**Dengue Prevention and Control Health Messages**

**Look for plants such as bamboo, bohemia, rampe and banana in your surroundings and maintain them free of water collection.**

**Table 4: Selected notifiable diseases reported by Medical Officers of Health**  
16<sup>th</sup> - 22<sup>nd</sup> March 2013 (12<sup>th</sup> Week)

DPDHS Division	Dengue Fever / DHF*		Dysentery		Encephalitis		Enteric Fever		Food Poisoning		Leptospirosis		Typhus Fever		Viral Hepatitis		Human Rabies		Returns Received
	A	B	A	B	A	B	A	B	A	B	A	B	A	B	A	B	A	B	%
Colombo	100	2009	1	34	0	7	0	35	0	9	2	59	0	2	1	25	0	0	46
Gampaha	33	932	1	24	0	6	0	12	0	1	3	71	0	6	4	64	0	0	67
Kalutara	20	416	0	39	0	8	0	23	0	7	9	114	0	1	0	5	0	0	31
Kandy	10	494	0	21	0	4	0	5	0	1	1	19	0	33		33	0	0	39
Matale	0	113	0	26	0	0	0	1	0	0	2	12	0	1	0	11	0	0	38
NuwaraEliya	4	62	2	21	0	2	0	2	0	2	2	8	3	20	0	1	0	0	46
Galle	15	184	2	25	0	7	0	1	2	4	6	42	4	15	1	4	0	0	68
Hambantota	2	93	0	15	0	2	0	5	0	8	4	83	1	25	2	49	0	0	42
Matara	10	165	1	16	0	7	0	4	0	4	9	59	1	26	2	71	0	1	94
Jaffna	10	231	4	52	0	3	6	127	0	5	0	0	18	188	0	6	0	0	92
Kilinochchi	0	14	0	10	0	0	0	4	0	1	0	3	0	8	0	0	0	0	50
Mannar	2	40	1	14	0	1	3	38	0	11	0	5	0	7	0	0	0	0	60
Vavuniya	1	28	0	17	0	8	0	4	0	4	0	17	0	1	0	0	0	0	100
Mullaitivu	3	29	0	2	0	1	0	3	0	0	0	6	0	2	0	0	0	0	40
Batticaloa	13	194	2	34	0	2	0	0	0	2	0	6	0	1	0	4	0	0	64
Ampara	0	39	0	32	0	0	0	1	0	0	0	4	0	0	0	1	0	0	0
Trincomalee	1	78	0	14	0	1	0	0	0	0	4	35	0	3	0	2	1	1	58
Kurunegala	26	1397	3	54	0	14	0	17	0	3	6	79	0	11	0	17	0	1	50
Puttalam	3	387	0	16	0	3	0	5	0	1	0	6	0	6	0	1	0	0	17
Anuradhapu	19	203	2	21	1	10	1	1	0	1	12	98	1	7	2	7	0	0	58
Polonnaruw	3	108	0	30	0	0	0	5	0	0	0	67	0	1	1	14	0	0	43
Badulla	3	124	4	35	0	0	0	4	0	0	1	10	4	16	0	12	0	0	53
Monaragala	4	70	1	27	0	3	0	6	0	17	4	54	1	18	0	20	0	0	64
Ratnapura	13	419	3	114	0	67	0	11	0	12	3	88	0	13	2	84	0	1	50
Kegalle	5	306	1	15	0	10	0	5	0	3	3	29	1	22	3	72	0	0	64
Kalmune	1	321	0	24	0	1	0	0	2	9	0	4	0	1	0	4	0	0	23
<b>SRI LANKA</b>	<b>301</b>	<b>8456</b>	<b>28</b>	<b>732</b>	<b>01</b>	<b>167</b>	<b>10</b>	<b>319</b>	<b>04</b>	<b>105</b>	<b>71</b>	<b>978</b>	<b>34</b>	<b>434</b>	<b>18</b>	<b>507</b>	<b>01</b>	<b>04</b>	<b>53</b>

Source: Weekly Returns of Communicable Diseases WRCD).

\*Dengue Fever / DHF refers to Dengue Fever / Dengue Haemorrhagic Fever.

\*\*Timely refers to returns received on or before 22<sup>nd</sup> March, 2013 Total number of reporting units 336. Number of reporting units data provided for the current week: 176

A = Cases reported during the current week. B = Cumulative cases for the year.

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