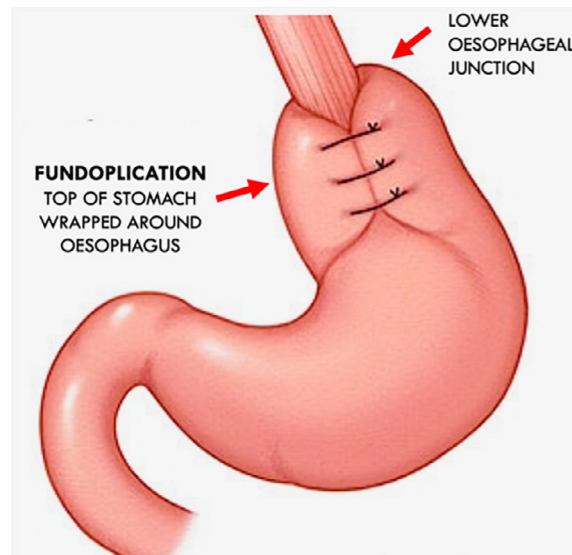


# OESOPHAGEAL REFLUX - What is the burning issue?

Dr Kan Yuk Man provides the low-down on the common condition



“10-20% in the West have at least weekly heartburn and/or acid regurgitation .....treatment (for acid reflux) is the biggest single pharmaceutical expenditure in the UK....”

We are in a society where day to day demands for time, responsibilities and stress can lead to increasing health issues. One such problem is “heartburn,” which affects the population on a regular basis and it can be regarded as a normal event. It can occur after a stressful day, a night of drinking, too much good food or the wrong food. However, in some quarters, it is so frequent that it may signify an underlying condition and it may lead to the development of cancer. The term “heartburn,” which is so commonly used, does not actually refer to a condition of the heart but it is used to describe a harsh burning sensation behind the sternum, or breastbone, in the middle of the chest or a tight sensation reaching up to the throat. The cause is acid refluxing back from the stomach (Gastro-oesophageal Reflux Disease – GERD) into the food pipe (oesophagus). This irritates and inflames the oesophagus, causing the symptom of heartburn and in time it will cause damage to the lining of the oesophagus.

At the lower end of the oesophagus there is a small ring of muscle (lower oesophageal sphincter - LES) which acts like a one-way valve. It allows food to pass through into the stomach and closes immediately after swallowing to prevent back-up of stomach juices. The mechanism leading to reflux can be broadly broken down into three most common reasons: 1) increased stomach acid production, 2) weaken LES/disruption of the anatomy or delay transit time of food leaving the stomach (SEE CHART). When the LES does not function properly or it has to contend with excess

acid, the stomach contents flow back and burns the lower oesophagus. At times, the acid reflux in the oesophagus can cause severe pain/spasm and this may be mistakenly diagnosed as a heart attack. Other symptoms may also include vomiting or regurgitation, difficulty swallowing, chronic coughing/wheezing or disturbed sleep when we lie flat as the acid flows up causing irritation of the throat with cough on a nightly basis.

The majority of us may just pop down to the local chemist or go to our local friendly family doctor to get a course of acid remedy. On the whole, this will work as the symptoms are short lived because the majority of GERD is benign with no sinister cause. If it continues to recur or persists then treatment falls into three approaches depending on the underlying cause.

It is a common problem and when it becomes troublesome and symptomatic despite medication further investigation will be necessary. The first course of action would involve the family doctor or specialist undertaking an assessment to understand the severity and duration of the symptoms. One main aim is to exclude cancer of the oesophagus or stomach when reflux fails to resolve after medication. The ever present acid reflux will lead to progressive acid damage to the lining of the oesophagus resulting in a sequence of inflammation, ulceration and changes in the type of cells lining the lower oesophagus with transformation to Barrett’s oesophagus. This is pre-cancerous and the development of Barrett’s oesophagus will lead to a 2-5 percent risk of developing cancer.

The need for further investigation starts with a gastroscopy (flexible camera used to look down into the oesophagus and stomach) which is used to identify any damage to the lining of the oesophagus (oesophagitis) or the common finding of a hiatus

INCREASE STOMACH ACID	Poor LES pressure/ disruption of LES	SLOWS STOMACH TRANSIT
Helicobacter Pylori infection	Peppermint	Spicy food (capsaicin)
Caffeine (Coffee/ chocolate)	Alcohol	Fatty foods/ cheese
Stress/Lack of sleep	Caffeine (Coffee/ chocolate)	Fried foods
Onions (raw)	Cocoa (Chocolate)	Large meals
Tomatoes	Fatty foods	
Citrus fruits and juices	Pregnancy (progesterone)	
Garlic especially if raw	HIATUS HERNIA	
Peppermint	Obesity	

hernia (a protrusion of the upper part of the stomach through the diaphragm) which disrupted the function of the LES making it unable to close properly. Another test involves the detection of acid reflux events into the oesophagus by the use of a 24-hour impedance test and manometry. This consist of passing a thin wire probe with multiple sensors into the lower part of the oesophagus at the LES. Over a 24-hour period, the sensors will detect the incidence and duration of any acid back flow into the oesophagus.

Reflux is very common in pregnancy and it is caused by increasing levels of hormones combined with pressure from the growing foetus. It is usually worst during the third trimester and the symptoms almost always go away after delivery.

Fatty and spicy foods, certain types of medication, tight clothing, smoking, drinking alcohol, vigorous exercise or changes in body position (bending over or lying down) may cause the LES to relax, leading to reflux/GERD.

OTHER CONDITIONS TO EXCLUDE: Achalasia (LES fails to relax and food is held up in the oesophagus), eosinophilic oesophagitis

## MANAGEMENT OF REFLUX

### 1. LIFESTYLE MODIFICATION

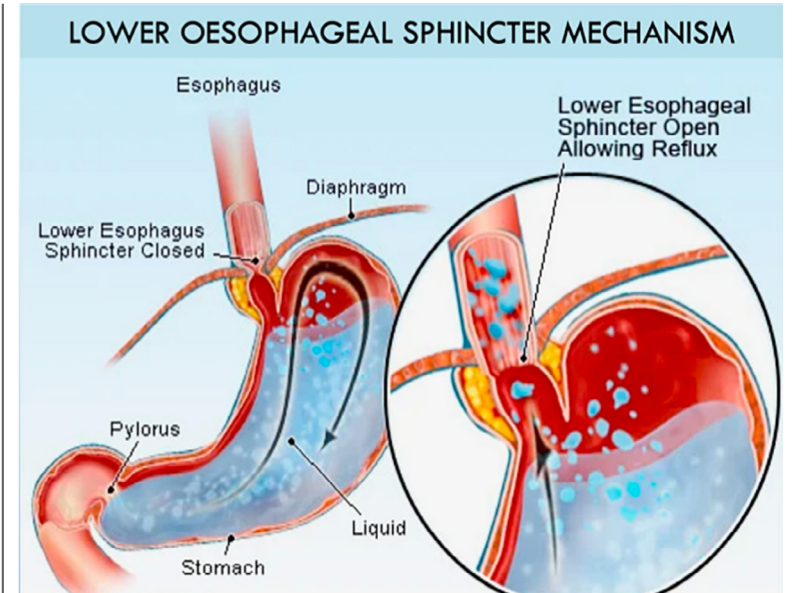
In a lot of cases, how we live and the stresses we encounter can be modified and this can reduce the incidence of GERD. In many cases, changing diet and taking over-the-counter antacids can reduce how often and how harsh the symptoms can be. Losing weight, stop smoking, reduced alcohol consumption, altering eating and sleeping patterns can also help. Avoid eating right before bedtime so that you have at least two hours to digest your food before lying down. Exercise regular and control your weight to avoid becoming overweight or obese. A large round abdomen will increase the pressure on the LES leading to back flow of stomach acid into the oesophagus.

### 2. MEDICATION

If symptoms persist after these lifestyle changes, drug therapy may be required. Antacids neutralise stomach acids and over-the-counter medications reduce the amount of stomach acid produced. Both may be effective in relieving symptoms. Prescription drugs (Proton Pump Inhibitors – omeprazole, pantoprazole, esomeprazole, vocinti, etc..) may be more effective in healing irritation of the oesophagus and relieving of symptoms. Long-term usage of these medication are thought to be generally very safe. The presence of helicobacter pylori infection in the stomach will necessitate a course of antibiotics to eradicate the infection as it causes increase in acid production.

### 3. SURGERY

Despite lifestyle changes and medication, some people will not respond and they will continue to have reflux. For such people and for those who do not wish to continue on life-long medication, surgery is an option which is very effective in treating GERD. The



most commonly performed operation is fundoplication which was first described in the late 1950’s (Nissen fundoplication). This involves fixing the hiatal hernia, if present, and wrapping the top part of the stomach around the lower end of the oesophagus. There are various technique or degree of stomach wrap (Nissen, Toupet, Dors) and they all reinforce the LES to recreate the “one-way valve” to prevent acid reflux. Once performed, medication is stopped. With technological and medical advancement, the surgery is now commonly performed by keyhole techniques using several small incisions – Laparoscopic fundoplication.

Reflux/GERD in the vast majority of people is a benign condition and it may be a reflection of the symptoms of modern life. Modification of our lifestyle, eating habits and general well-being can be enough to mitigate this problem. Medication or surgery can be used in those with more troublesome symptoms but it is very important that in these cases we do not miss the spectre of cancer.

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