



## FUNDING RESEARCH TO FIGHT DISEASES OF THE GUT, LIVER AND PANCREAS

### THIS FACTSHEET IS ABOUT CONSTIPATION AND BOWEL DISORDERS RELATED TO THE USE OF MORPHINE TYPE MEDICINES

Pain control medicines often have side effects on the gut.

**Opioid pain control medicines** include **codeine, tramadol, morphine, buprenorphine, tapentadol** and **fentanyl**. They work well for relieving short-term pain (pain lasting less than 6 months). These medicines can be effective in acute pain but rarely leave the patient entirely pain-free. They can be used effectively to control cancer pain or pain related to an acute injury such as a fracture.

Opioids are not very useful to reduce pain that lasts longer than 6 months (*long-term chronic pain*). Opioids can cause significant health effects when they are used at higher doses and for a long time.

One of the commonest and most distressing side effects of opioids is **constipation**. Constipation occurs in 9 out of 10 people who are prescribed opioids for cancer. Constipation occurs in 3 out of 5 people who are prescribed opioids for other medical conditions.

Opioids can slow the whole digestive tract's **motility** (the movements inside the gut). Reduced motility is one of the causes of constipation and of other symptoms of opioid-induced **bowel dysfunction** (abnormal functioning of the gut). Bowel dysfunction symptoms are often not picked up as side effects of taking opioids, and so are not correctly treated.

Digestive symptoms can occur as easily with low dose or low strength opioid drugs as with high dose and high strength medication. How the opioid drugs are taken (eg by patch or by mouth) is irrelevant to the side effects that patients may experience.

### OPIOID INDUCED BOWEL DYSFUNCTION

The opioid class of medications affect how the digestive system moves and works. The digestive tract contains nerves that signal to the muscle layers of the gut. This helps push contents of the gut (e.g. food) through the gut. This process is a necessary part of digestion and of the removal of the body's waste. Opioids slow down this movement and pushing activity within the gut.

Opioids can also tighten up the digestive tract muscles while they are at rest. This has the effect of making the muscle less efficient at pushing and moving the gut contents through the digestive process.

Other opioid effects reduce the flow of digestive fluids into the gut and speed up their removal from the gut. The reduction in the flow of digestive fluids and the speed up of the removal of these fluids from the gut is particularly noticeable in the large bowel. These changes in the way the bowel should work can cause bowel dysfunction.

## SYMPTOMS

Symptoms of opioid induced bowel dysfunction can affect the whole digestive tract. Symptoms may be more noticeable at the start of treatment or if the dose is increased.

The following digestive conditions are common amongst patients on opioid medicines:

- **Oesophagus (gullet)** Gastroesophageal reflux disease (*GORD*); problems swallowing (*dysphagia*); and heartburn.
- **Stomach** – feeling full after eating a smaller sized meal; reflux; heartburn; bloating; nausea and vomiting; and not being able to empty the stomach in the normal way (ie *gastroparesis* – a term combining the words for stomach *gastro* and for paralysis *paresis*).
- **Gallbladder** – pain caused by *biliary sphincter disorder*.
- **Pancreas** - reduced pancreatic secretion of bicarbonate (a substance which prevents stomach acid from damaging the small bowel) plus malabsorption of fats (due to reduced digestive enzyme production) .
- **Small bowel** - slow movement and small intestinal bacterial overgrowth (*SIBO*); and bloating, distension and discomfort after eating.
- **Large bowel and anus** – constipation; pain (for some people); and straining and incomplete evacuation of stool.
- Individual people may have one or several of these symptoms.

## HOW IS OPIOID INDUCED BOWEL DYSFUNCTION DIAGNOSED?

Your doctor will ask you about the history of your symptoms and when you started taking your medications. You may be asked whether doses had to be increased because of persistent abdominal pain, for example.

Your doctor may examine your abdomen and rectum to make sure you are not severely constipated. Sometimes, they may do other tests – or request them - to ensure your symptoms are not caused by any other medical condition. Always ask the medical professionals treating you for information and advice.

## HOW CAN OPIOID INDUCED BOWEL DYSFUNCTION AFFECT YOU?

**If you are taking opioid medications to control cancer pain**, please remember that many side effects of treatment can be reduced or better managed if they become a nuisance. Ask your doctor or palliative care team for advice and help early on, when your symptoms first become troublesome.

Side effects of opioid medication can include:

- Reflux; nausea; vomiting; bloating and constipation, along with abdominal pain.
- Drowsiness; poor muscle tone; increased risk of falls and fractures.
- Itching; flushing; reduced breathing; dry mouth and feelings of euphoria.

**If you are taking opioids long term to treat chronic pain** the situation can be more complex.

Higher doses of opioids may make you more sensitive to pain. This greater sensitivity to pain is due to changes in your nervous system that happen with long-term opioid use. Greater sensitivity to abdominal pain is a known clinical feature of long-term use of opioid medicines.

Increasing the opioid dose might result in an increase in the level of abdominal pain. It is often worthwhile considering alternative treatments if abdominal pain persists or has worsened.

You might experience drowsiness - which affects the ability to think clearly (often described as '*brain fog*') and produces feelings of being more relaxed.

If feeling more relaxed is the main reason you are taking the opioid medication, please discuss possible alternative treatments with your doctor - they may be better for your overall health.

Other side effects of taking opioids can be poor muscle tone and increased risk of falls and fractures. Taking opioids long term can result in changes in mood. Long term dry mouth caused by opioid medication can result in dental problems. These medications can affect fertility.

More severe long-term side effects of opioids include increased dependence, infection risk due to effects of opioids on the immune system, risks of overdose and death (particularly when high doses are taken).

Opioids' side effects can have a major effect on patients' quality of life.

## **WHAT TREATMENT IS AVAILABLE FOR OPIOID INDUCED BOWEL DYSFUNCTION?**

The treatment options depend on your health condition.

For cancer treatment, opioid-based medications can be very useful in reducing cancer pain and in this situation troublesome symptoms can be treated with appropriate medication. Standard laxatives can be used to good effect (initially) for treating the common problem of opioid-induced constipation. *Lactulose* may make bloating and gas symptoms worse for some people

An alternative approach for treating bowel dysfunction is to use a drug that reverses the effects of the opioid medication within the gut without stopping its pain-relieving function in the brain. Pain symptoms are mainly produced in the brain (where they can be relieved by the opioid medication).

For example, *PAMORA* drugs (i.e. Peripheral  $\mu$ -Opioid Receptor Antagonists) can reduce the digestive side effects caused by opioid medication. *PAMORA* drugs do not cross over into the brain; opioid medication does.

Sometimes *PAMORA* drugs are used alongside laxatives to help patients recover from more resistant opioid induced constipation.

If you have access to a palliative care team, please consult them as necessary for help in improving the control of any bothersome symptoms.

If you have been prescribed opioids for chronic gastrointestinal pain not caused by cancer, your doctor may consider reducing the opioid medication or stopping it entirely.

It is important that you do not stop your opioid medication without taking advice from your doctor. Any plan to slowly reduce the opioid drugs should be agreed between you and your doctor. Your doctor will offer alternative ways of providing you with pain relief (which may work better and more safely than taking opioids at the previous doses).

Alternative pain control approaches may include non-opioid medications, such as drugs to calm the gut's nerve endings. Your doctor may prescribe activity programmes for which there is clinical evidence of pain reduction and improvement in mood and sense of wellbeing.

### **DOES OPIOID INDUCED BOWEL DYSFUNCTION NEED TO BE MONITORED?**

Your GP or hospital doctor will want to monitor your response to reducing your medications or to any treatment that is prescribed. Do discuss with your doctor any increase or reduction in symptoms you experience.

It will be useful to be able to describe the pain you are experiencing in a meaningful way when you have an appointment with your doctor. The Pain Society website has a downloadable pain scale that can be used. The pain scale is available in several different languages.

<https://www.britishpainsociety.org/british-pain-society-publications/pain-scales-in-multiple-languages/>.

If you are constipated you can find out more about that here [add link to constipation information] You may also want to describe any straining, incomplete evacuation ("emptying"), bloating or abdominal discomfort or pain to your doctor. If you feel embarrassed when talking about your symptoms, write them down and hand over the note to your doctor.

### **SUPPORT**

This link is to the patient help page from The British Pain Society and has information about services for people experiencing chronic pain <https://www.britishpainsociety.org/>. They also have a useful document for people with cancer about coping with pain.

### **WHAT TO ASK YOUR DOCTOR WHEN YOU SEE THEM.**

- What are the benefits of opioid based medications in my situation? What are the drawbacks?
- Are my medications having any bad effect on my digestive complaint?
- I am taking my medication to help me relax. are there better alternatives?
- would gentle Exercise – like being in a walking group – reduce my pain and help me cut back on the pain control I take? can you refer me to suitable community-based exercise groups?
- can you refer me to a physiotherapist for help in reducing my pain and the amount of pain relief I must have?