

Lactulose Therapy in Hepatic Encephalopathy



Patient Information Booklet
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Health
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Local Health District

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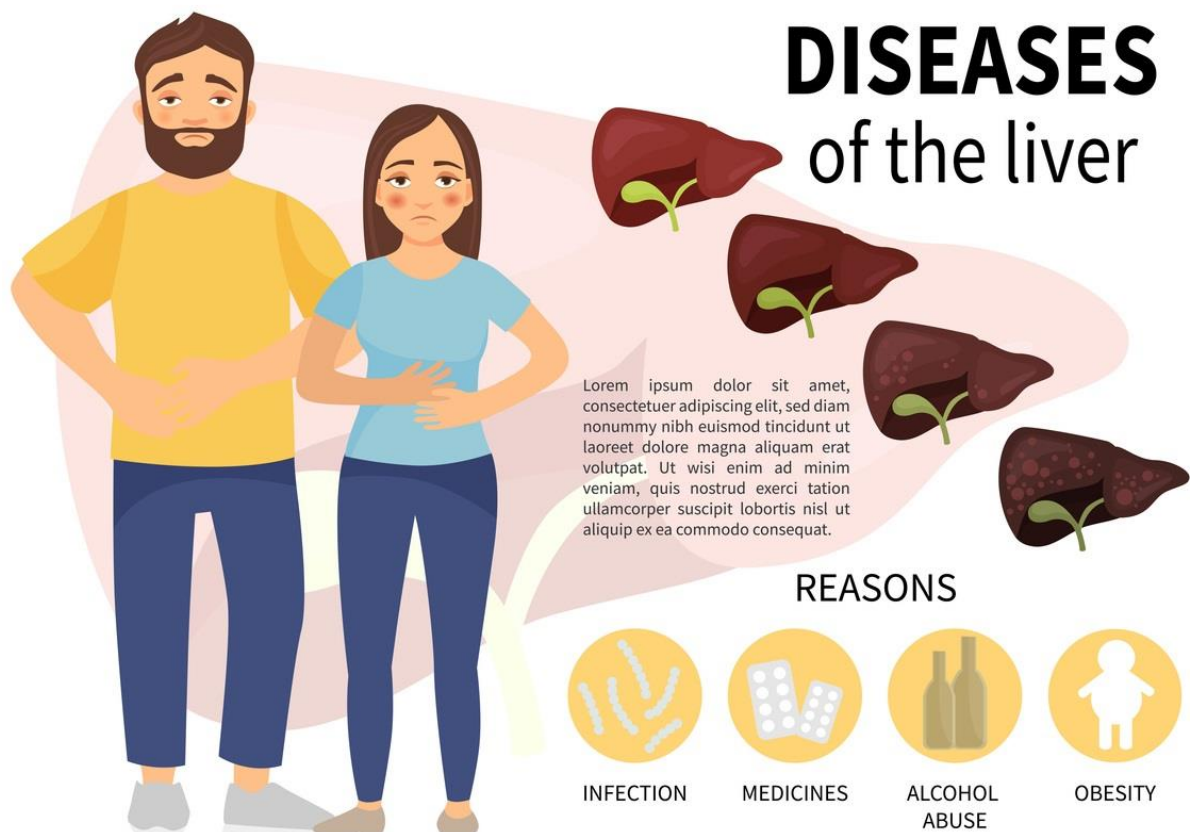
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The aim of this booklet is to provide information about the importance of lactulose therapy for patients with Advanced Liver Disease and to provide information about how to prevent/reduce Hepatic Encephalopathy.

WHAT IS HEPATIC ENCEPHALOPATHY?

Hepatic Encephalopathy is a condition that causes temporary decline in brain function when a person has liver failure. It can be either long-term (chronic) or short-term (acute). Symptoms range from mild to severe, and can be triggered by:

- Gastrointestinal bleeding or constipation
- Infection
- Dehydration
- Salt imbalance
- Excessive alcohol use
- Kidney impairment
- Some medications (e.g. sleeping tablets or certain pain-killer tablets containing opioids)



SYMPTOMS OF HEPATIC ENCEPHALOPATHY

MILD

- Mood change or mild confusion
- Poor concentration and forgetfulness
- Problems with handwriting
- Poor judgement (especially when driving and/or when at work)
- Changes in sleep patterns (wide awake at night and sleeping during the day)

SEVERE – SECONDARY TO UNTREATED MILD SYMPTOMS

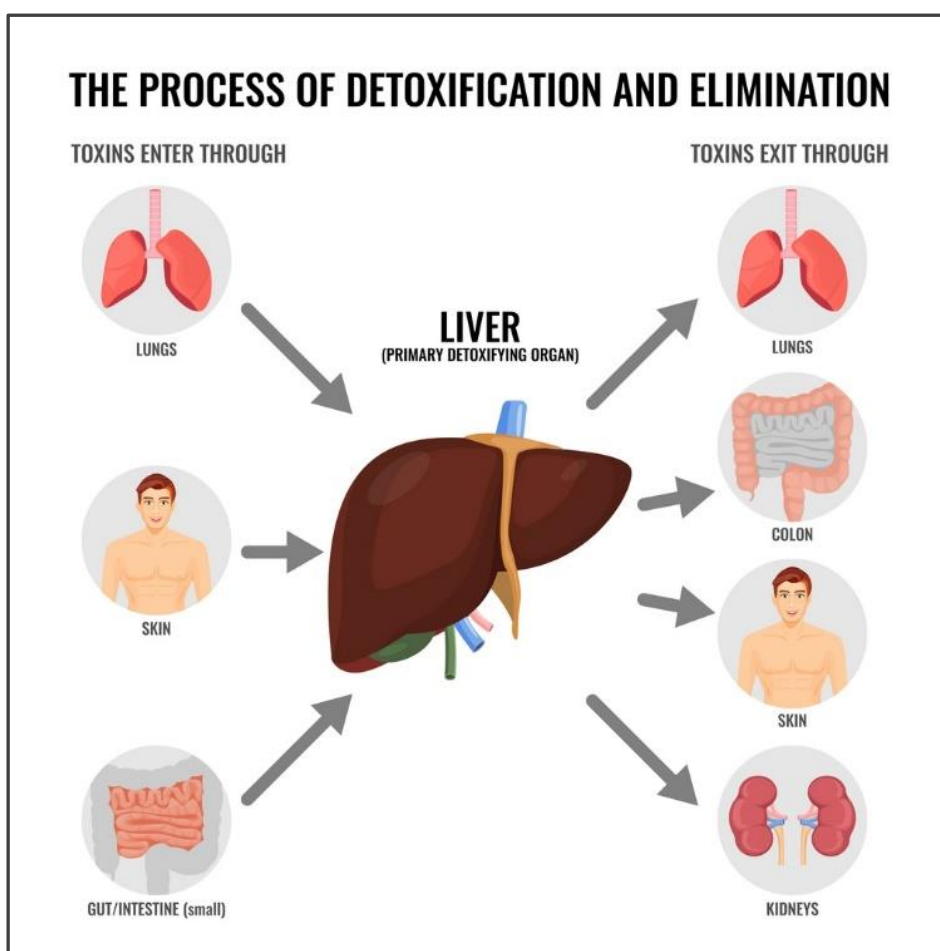
- Noticeable confusion with disorientation to place and time
- Aggression
- Drowsiness or tiredness
- Severe restlessness
- Slowed or sluggish movement
- Slurred speech
- Flapping tremor
- May develop coma or death



HOW DOES HEPATIC ENCEPHALOPATHY DEVELOP?

The exact cause of Hepatic Encephalopathy is unknown. It is usually triggered by a build-up of toxins in the blood.

The liver removes unwanted toxins such as **ammonia** from our body. If the liver cannot successfully remove toxins from the blood, these toxins will eventually build up and may lead to Advanced Liver Disease, which can also be called 'cirrhosis'. Cirrhosis can progress further into liver failure.



Hepatic Encephalopathy is a serious complication secondary to cirrhosis and a sign of liver failure.

Blood containing high concentrations of toxins reaches all areas of our body, **including our brain**. This causes brain cells to swell, resulting in Hepatic Encephalopathy and its associated symptoms.

HOW CAN HEPATIC ENCEPHALOPATHY BE TREATED?

Each patient's individual treatment may differ, with treatment depending on the severity of symptoms and their causes.

- Identify the triggering symptoms of Hepatic Encephalopathy
- Reduce toxin production and the way they are absorbed into the blood.
- The most effective initial treatment is **lactulose syrup**.

LACTULOSE THERAPY

Lactulose is a man-made non-absorbable sugar and liquid laxative. It draws water from the body into the colon which helps to soften the stool and make it more acidic, as well as increase bowel motion.

Patients on lactulose therapy are expected to take enough syrup so that you have two to three loose bowel motions per day, with a soft stool. Dosage is usually one to three tablespoons (or 15ml to 45ml), one to three times per day (15ml = 1 tablespoon). These bowel motions are essential in removing the absorbed toxins from your body.

Diabetic patients with increased blood glucose level – You should ensure that you are monitoring your blood sugar levels. You may wish to review your diabetic medications with your local doctor/GP managing your diabetes.

This brochure is about **Lactulose therapy only**. Discuss with your liver specialist if Hepatic Encephalopathy is not getting better. Other treatments may be required.

USEFUL STRATEGIES WHEN USING LACTULOSE

Problems	Management
Too Sweet	To improve taste, you can mix lactulose with juice, water, protein shake, lemon tea or a soft dessert.
Excessive diarrhoea or flatulence	After consultation with your health care provider, you may be able to adjust the dose of lactulose.
Strong stomach cramps	
Burping/Belching	
Dehydration	Be sure to keep your fluid intake up, however please check with your health care provider if you are on fluid restriction.

AVOIDING OR REDUCING HEPATIC ENCEPHALOPATHY

Take lactulose and other medications as prescribed

Discuss potential alternative treatments with your liver specialist if lactulose is ineffective

Attend all medical appointments on time

Maintain a healthy diet as advised by your local doctor/dietitian

Have you had your lactulose dose today?

ADDITIONAL RESOURCES

More information regarding Hepatic Encephalopathy and lactulose can be found on the following websites.

1. Healthline – Lactulose, Oral Solution

www.healthline.com/health/lactulose-oral-solution

2. Product Information: Lactulose Solution UK

www.mhra.gov.uk/home/groups/spcpil/documents/spcpil/con1506661039446.pdf

3. American Liver Foundation: Hepatic Encephalopathy

<https://liverfoundation.org/for-patients/about-the-liver/diseases-of-the-liver/hepatic-encephalopathy/>

4. Product Information of Lactulose

<http://www.guildlink.com.au/gc/ws/mylan/pi.cfm?product=gopdupha10317>

5. Australian Government: Department of Health Therapeutic Goods Administration

<https://search.tga.gov.au/s/search.html?collection=tga-websites-web&query=lactulose&op=Search>

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