DR.VEGAN®

Detox, digest and thrive

A comprehensive guide to digestion and liver health

Practitioner Toolkit • *For practitioner use only*

GUT HEALTH AND SYSTEMIC CONNECTION

The liver is the main detoxification organ in the body. It removes toxins from the blood, neutralises them and excretes them through bile or urine. This process involves three phases.

Phase 1 activation:

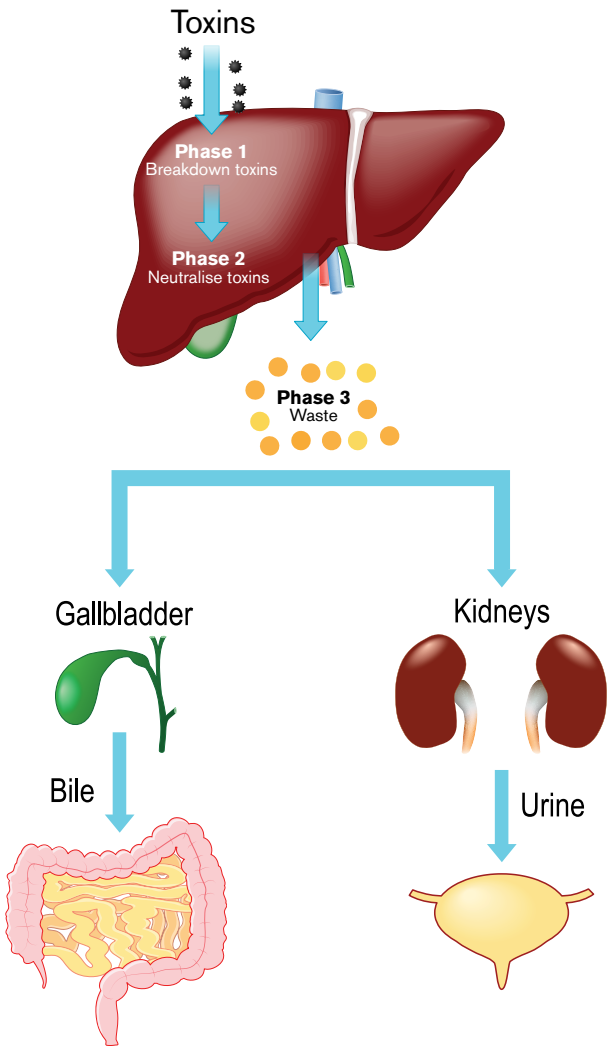
In this phase, the liver converts fat soluble toxins into intermediate metabolites (temporary by-products formed during chemical reactions in the body), which are often more reactive and potentially more harmful. This is achieved through enzymatic reactions mainly catalysed by the cytochrome P450 enzyme system.

Key reactions include:

- Oxidation
- Reduction
- Hydrolysis

An overactive liver detoxification pathway (phase 1), in the absence of an adequate detoxification pathway (phase 2), can cause a build-up of reactive intermediates, increasing oxidative stress on the liver and the body.

DETOXIFICATION



Phase 2 conjugation:

Phase 2 neutralises the reactive intermediates produced in phase 1 by conjugating them with water-soluble molecules. This renders the toxins less harmful and easier to excrete.

Key reactions include:

- Glutathione conjugation
- Methylation
- Sulfation
- Glucuronidation
- Acetylation
- Amino acid conjugation

A deficiency in phase 2 nutrients can result in an inability to safely process intermediates, increasing the risk of toxicity.

Phase 3 transport and elimination:

This phase involves the excretion of conjugated toxins via bile (into the faeces) or through the kidneys (into the urine).

Key reactions include:

- Transport proteins like multidrug resistance proteins (MRPs).
- Proper bile flow is essential for toxin removal via the gastrointestinal tract.

Multidrug resistance proteins (MRPs) are specialised transport proteins that play an essential role in the elimination of toxins, drugs, and metabolic waste products from cells, particularly in liver detoxification. These proteins are part of the ATP-binding cassette (ABC) transporter family, which use energy from ATP to actively pump substances out of cells. In liver detoxification, MRPs are involved in phase 3, which ensures the excretion of processed toxins. After phase 1 and phase 2 detoxification processes have rendered toxins water-soluble, MRPs transport these conjugated toxins across cell membranes for elimination via the bile and urine.

DIET AND LIFESTYLE TIPS FOR CLIENTS

Eat slowly and mindfully

Chew food thoroughly and eat slowly to reduce air swallowing and improve digestion. Eating in a calm environment can also support gut function.

Incorporate fibre gradually

Soluble fibre can help with stool regularity without worsening bloating. Insoluble fibre should be introduced gradually to avoid excessive gas production.

Stay hydrated

Adequate water intake is essential for digestion and elimination. 2 litres of water per day is the minimum. The quantity should be adjusted for individual needs.

Identify and eliminate trigger foods

Common triggers include; FODMAPs, carbonated beverages, and artificial sweeteners (e.g., sorbitol, mannitol). Keep a food diary to identify and manage sensitivities.

Promote gut-friendly foods

Yoghurt with live cultures and other fermented foods. Prebiotic foods such as garlic, onions, bananas, and asparagus.

Balance macronutrients

Eating balanced meals with proteins, healthy fats, and complex carbohydrates can reduce blood sugar spikes and support digestive health.

Limit alcohol and caffeine

Excessive alcohol and caffeine can disrupt gut health and may burden liver detoxification processes.

Support liver function

Recommend foods rich in antioxidants and nutrients essential for detoxification, such as cruciferous vegetables, citrus fruits, turmeric, which supports liver enzymes and green tea for its polyphenol content.

Encourage regular physical activity

Exercise aids digestion and reduces bloating by stimulating intestinal motility. Recommend 30 minutes of moderate exercise (e.g., walking, yoga) on most days of the week.

Manage stress

Chronic stress negatively affects gut motility and can worsen bloating. Suggest stress management techniques such as meditation, deep breathing exercises, yoga or tai chi.

Optimise sleep

Poor sleep can disrupt digestion and hormone regulation, impacting detoxification pathways. Encourage 7–9 hours of quality sleep per night.

Promote regular bowel movements

Advise patients to establish a routine, such as sitting on the toilet after meals, and to avoid ignoring the urge to pass stool.

Debloat & Detox

Debloat & Detox is a unique formula of botanicals and amino acids for digestive-related bloating, helping to naturally remove toxins from your liver and body. Including Milk Thistle, Artichoke, Burdock and L-Glutamine.

	PER 2 CAPSULE
Milk Thistle Seed Powder	300mg
Milk Thistle Seed Extract Providing 80mg Silymarin and 1140mg Milk Thistle	114mg
Fennel Seed Extract	150mg
Dandelion Root Powder	120mg
Artichoke Leaf Extract	60mg
Schisandra Berry Powder	60mg
Burdock Root Powder	60mg
L-Glutamine	60mg

* NRV= Nutrient Reference Value
** No NRV Established

Pairs well with

Gut Works®

Fibre Complex

GastroAid

Ingredients

Milk Thistle Seed Powder (*Silybum marianum L.*), Fennel Seed 6:1 Extract (*Foeniculum vulgare*), Organic Dandelion Root Powder (*Taraxacum officinale*), Milk Thistle Seed Extract (*Silybum marianum L.*), Burdock Root Powder (*Arctium lappa L.*), Artichoke Leaf Extract (*Cynara scolymus*), L-Glutamine, Schisandra Berry Powder (*Schisandra chinensis*), Capsule Shell (Hydroxypropyl Methylcellulose).

Free from

Added Sugar, Starch, Sweeteners, Gluten, Wheat, Soya, Lactose, Dairy, Artificial Flavours, Colours and Preservatives.

Directions

- Take two capsules each day, together or separately, to help reduce bloating, digestive discomfort and excess gas and support the natural detoxification of the liver. The most common time to take Debloat & Detox is with or after main meals of the day.

What customers can look forward to

1-7 days

When taking Debloat & Detox with main meals, clients might begin to have fewer feelings of fullness, flatulence, abdominal bloating and belly spasms. This will vary from person to person.

As the body debloats and detoxes, they will begin to experience a short-term increase in gas and wind - this is very normal as Debloat & Detox gets to work. Any constipation should begin to subside, and the stomach may appear flatter.

2 weeks

Improvement in abdominal cramps and spasms. A difference in gas and wind.

3 weeks

Liver support and improvement in the body's natural liver detoxification systems.

4 weeks

Supports energy and digestion. Improvement in food intolerances and digestive issues.

DR.VEGAN® GUT HEALTH SURVEY INSIGHTS

40-49 years old
is the most reported age range that bloating starts.

80% of people
who suffered from bloating experienced a lack of energy. More than half experienced weight gain, mood swings, anxiety, poor sleep or insomnia as a result of their bloating.

70% of people
said they suffer from bloating, and more than 50% do so regularly.

67% of people
said their bloating worsens when they're anxious or stressed.

66% of people
who suffer from bloating said it restricts how they go about their daily life.

80% of Debloat & Detox customers
surveyed said they felt the difference when taking Debloat & Detox daily.*

**Based on a UK survey conducted by DR.VEGAN® of 800 men and women including 251 customers, nationally representative, during August & September 2022. All customer survey findings reflect our own efforts and have not been influenced or verified by any external organisations or third-party entities.*

KEY INGREDIENTS IN DEBLOAT & DETOX

Milk Thistle

Milk Thistle's active compound is Silymarin. It plays an essential role in both liver detoxification and gut health, particularly in cases where bloating is linked to liver dysfunction or toxin buildup. The mechanisms of action in both processes are well supported in scientific literature.

Antioxidant activity: Silymarin has potent antioxidant properties that neutralise free radicals and reduce oxidative stress within liver cells. This is especially important for protecting the liver from toxins and drug-induced damage, which can impair liver function and result in digestive issues like bloating due to inefficient phase 2 detoxification. Silymarin promotes phase 2 liver detoxification enzymes, such as glutathione-S-transferase and NAD(P)H:quinone oxidoreductase (NQO1.)* These enzymes facilitate the conjugation and elimination of toxins from the liver, which is essential for the clearing of metabolic waste and maintaining digestive function. Crucial enzymes are involved in the cellular detoxification process, specifically in the reduction of quinones to less toxic hydroquinones.[1]

Anti-inflammatory properties: Inflammation in the liver (hepatitis or fatty liver disease) can lead to bloating and discomfort. By balancing inflammatory pathways, Silymarin helps reduce liver inflammation, aiding in optimal detoxification and preventing the buildup of excess fluid that contributes to bloating. Silymarin enhances hepatic glutathione levels, contributing to the liver's antioxidant defence and preventing oxidative damage to cellular membranes, including the process of lipid peroxidation.[2] A human study showed that Silymarin treatment led to a slight increase in the survival of patients with cirrhotic alcoholism compared to untreated controls, suggesting its potential therapeutic role in liver disease management.[2]

Clinical research shows it benefits patients with alcoholic and non-alcoholic fatty liver disease and cirrhosis, reducing liver-related deaths and improving glycemic control in diabetic patients with alcoholic cirrhosis.[3]

Fennel Seed

Fennel Seeds are well-known for their use in digestive health, particularly for their carminative effects, which help in relieving bloating and gas. They also have a role in enhancing liver detoxification processes.

Smooth muscle relaxation: Fennel contains flavonoids and volatile oils (such as anethole) that have been shown to relax smooth muscles in the gastrointestinal (GI) tract, reducing bloating and cramping associated with indigestion and bloating.[4]

Antioxidant activity: Fennel also has antioxidant properties. Fennel's antioxidant properties reduce inflammation within the gut, helping to maintain normal gut function and preventing toxin buildup that can lead to bloating.

Mild diuretic action: Fennel has a mild diuretic effect, helping the body flush out excess water and reduce the fluid retention often associated with bloating. Fennel's diuretic effect supports detoxification through the renal system and prevents fluid buildup in the tissues.[5]

Dandelion

Dandelion promotes liver health, aids in digestive discomfort, and reduces bloating. Dandelion is a diuretic cholagogue and has antioxidant properties.

Increased bile production: Dandelion root stimulates the production of bile, helping with the digestion of fats and the elimination of toxins from the liver. Many toxins are excreted in bile, and increased bile production is one way in which practitioners can support the detoxification functions of clients. Dandelion contains sesquiterpenelactones, which give it a bitter taste and increase bile production.[6]

Diuretic effect: Dandelions' diuretic function helps in reducing fluid retention, a common cause of bloating. Increasing urination helps the body flush out excess fluid and supports renal detoxification.[7]

Antioxidant protection: Dandelion has potent antioxidant effects, which aid in reducing inflammation in the liver and support a more comfortable digestion.

Artichoke Leaf Extract

Artichoke Leaf Extract contains the active compound cynarin, which plays a role in supporting the detoxification pathways of the liver and reducing bloating.

Bile stimulation: Artichoke Leaf Extract increases bile production, which aids in the digestion of fats and enhances liver detoxification.

Antioxidant properties: Artichoke contains flavonoids that act as antioxidants, protecting liver cells from oxidative damage and supporting the detoxification of harmful substances.

The benefits of Artichoke Leaf Extract have been proven through both experimental and clinical research, and extensive biomedical herbal remedy research. Research has demonstrated its ability to protect the liver, help liver cells regenerate, and promote digestive and bowel health.[8]

Other studies confirm the findings that Artichoke Leaf Extract shows promise for improving the upper gastrointestinal symptoms and improving the quality of life in individuals suffering from dyspepsia.[9]

A double-blind, randomised controlled trial with 247 patients with functional dyspepsia found that Artichoke Leaf Extract was significantly better than the placebo in alleviating symptoms of functional dyspepsia and improving the quality of life in patients with functional dyspepsia.[10]

Schisandra

Schisandra contains several lignans, including Schisandrin A, Schisandrin B, Schisandrin C, Schisandrol A, Schisandrol B, and Schisantherin A.[11] Schisandra is an adaptogen and has beneficial effects on both liver detoxification and cellular regeneration.

Phase 1 and 2 detoxification support: Schisandra enhances the detoxification enzymes involved in phase 1 and phase 2 liver detoxification. This supports the breakdown and elimination of toxins from the body, which is essential for reducing bloating and inflammation associated with toxic overload. Research has concluded that schisandra regulates the gene expression of phase 2 antioxidant / detoxifying enzymes independent of its hepatic antioxidant enzyme activity.[12]

Hepatoprotective effects: Schisandra helps regenerate liver cells. It supports the liver's ability to clear metabolic waste and toxins, both of which can contribute to bloating if not adequately detoxified. Research has found schisandra to preserve glutathione and help maintain GSH levels, protecting liver cells.[11]

Burdock Root

Burdock Root is a natural diuretic that helps remove toxins from both the liver and kidneys. This is important for reducing fluid retention and bloating, particularly in individuals with sluggish detoxification pathways. The active components in Burdock Root include chlorogenic acid, which can regulate lipid metabolism and may help protect against hepatic steatosis.[13]

Liver detoxification: Burdock supports the liver by promoting the elimination of waste products. Excessive waste buildup can trigger gastro irritation and bloating. The research concludes that Burdock Roots detoxify the liver against ethanol, carbon tetrachloride, acetaminophen, cadmium, and zinc oxide by improving the functions of liver enzymes. The liver relies on enzymes, particularly in the cytochrome P450 family, to break down toxins. Burdock Root has been shown to enhance the activity of these liver enzymes, which helps the liver metabolise and eliminate harmful substances more effectively.[14]

Anti-inflammatory action: The anti-inflammatory compound arctigenin in Burdock Root helps reduce inflammation in the gut and liver, promoting smoother digestive function and less bloating.

L-Glutamine

L-Glutamine plays a role in maintaining the function and health of the gut lining. This is particularly relevant for individuals experiencing bloating as a result of gut permeability or inflammation.

Gut barrier repair: L-Glutamine is the main fuel source for intestinal enterocytes, the cells lining the gut. It helps to repair the gut barrier, reducing intestinal permeability.[15] Health gut cells secrete digestive enzymes that help with the metabolism of foods and reduce bloating.

Anti-inflammatory: By reducing intestinal inflammation, L-Glutamine helps maintain a healthy microbiome, preventing the bacterial overgrowth which can lead to bloating.[16]

DRUG INTERACTIONS

Interaction Severity

Moderate

Antidiabetes Drugs	Milk Thistle, Artichoke and Dandelion may increase the risk of hypoglycemia when taken with this drug.
Cytochrome P450 2B6 Substrates	Milk Thistle may interfere with the way in which these drugs are metabolised.
Glucoronitated Drugs	Milk Thistle may increase blood levels of these drugs. Dandelion may decrease the blood levels of these drugs.
Ledipasvir	Milk Thistle may increase blood levels of this drug.
Morphine	Milk Thistle may reduce blood levels of this drug.
Raloxifene	Milk Thistle may increase blood levels of this drug.
Sirolimus	Milk Thistle and shisandra may increase blood levels of this drug.
Sofosbuvir	Milk Thistle may increase blood levels of this drug.
Tamoxifen	Milk Thistle may increase blood levels of this drug.
Warfarin	Milk Thistle may increase the effects of this drug. Schisandra may decrease the effect of this drug.
Anticoagulant / Antiplatelet Drugs	Fennel and Dandelion may increase the effects of these drugs. Burdock may increase the risk the bleeding when taken with these drugs.
Ciprofloxacin	Fennel may decrease the effects of this drug.
Lithium	Dandelion may increase blood levels of this drug.
Potassium Sparing Diuretics	Dandelion may increase the risk of hyperkalaemia when taken with these drugs.
Quinolone Antibiotics	Dandelion may decrease blood levels of these drugs.

Interaction Severity		
Moderate	Antihypertensive Drugs	Artichoke may increase the risk of hypotension when taken with these drugs.
	Cyclophosphamide	Schisandra may increase the levels and effects of these drugs.
	Cyclosporine	Schisandra may increase the levels and effects of these drugs.
	Cytochrome P540 3A4 Substrates	Schisandra may increase the levels and effects of these drugs.
	Midazolam	Schisandra may increase the levels and effects of these drugs.
	P-Glycoprotein substrates	Schisandra may increase the levels and effects of these drugs.
	Tacrolimus	Schisandra may increase the levels and effects of these drugs.
	Talinolol	Schisandra may increase the levels and effects of these drugs.
	Voriconazole	Schisandra may increase the levels and effects of these drugs.
	Anticonvulsants	Glutamine may increase the effects of these drugs.
Minor	Oestrogens	Milk Thistle may interfere with oestrogen drugs. Advise patients to take Milk Thistle at the opposite time of day as oestrogen-containing drugs.

Drug-nutrient interactions have been taken from the Natural Medicines Database, October 2024. Please do your own due diligence before recommending this product to individuals taking medicines.

DR.VEGAN® PRACTITIONER SCHEME

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Commission

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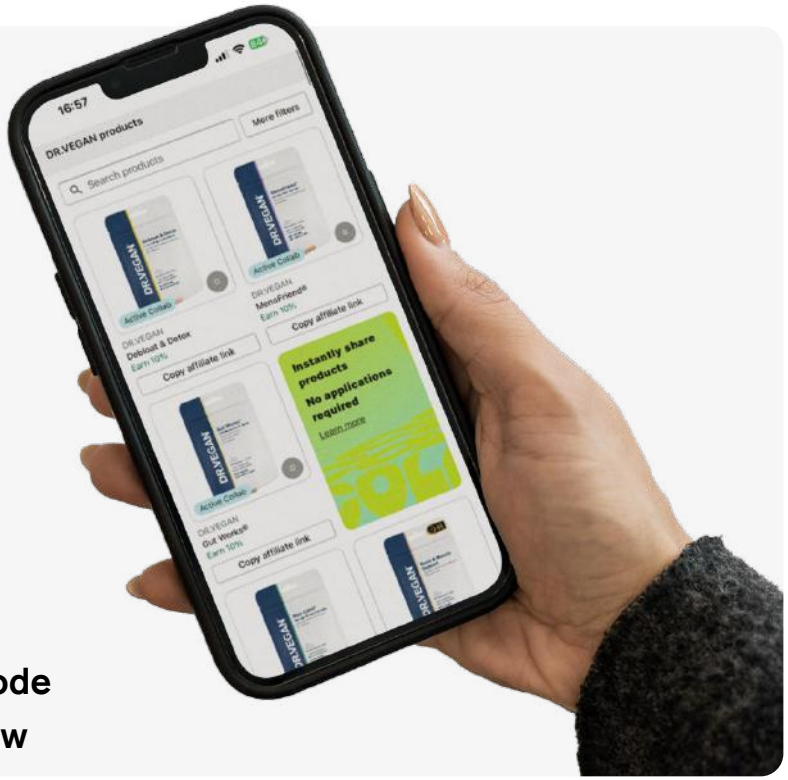

REFERENCES

1. *Clinical and Experimental pharmacology and physiology. Volume 42, Issue 9. September 2015. Pages 988-998*
2. *World J Hepatol. 2014 Mar 27;6(3):144–149.*
3. *Adv Ther 37, 1279–1301 (2020)*
4. *Iran Red Crescent Med J. 2016 Jan 31;18(4)*
5. *WORLD JOURNAL OF PHARMACY AND PHARMACEUTICAL SCIENCES Volume 8, Issue 3, 310-327*
6. *Journal of Medicinal Plants Studies 2018; 6(2): 198-202*
7. *Phytochem Rev 18, 1115–1132 (2019)*
8. *Plant Foods Hum Nutr 70, 441–453 (2015)*
9. *Phytomedicine. 2002 Dec;9(8):694-9*
10. *Aliment Pharmacol Ther. 2003 Dec;18(11-12):1099-105*
11. *Chemico-Biological Interactions. Volume 231, 25 April 2015, Pages 83-89*
12. *Nutrition Research and Practice 2014; 8(3): 272-277*
13. *NDPI. Molecules Volume 28 Issue 21*
14. *The Natural Products Journal, Volume 11, Number 5, 2021, pp. 609-616(8)*
15. *Amino Acids. Volume 47, pages 2143–2154, (2015)*
16. *Agents and Actions 11, 243–249 (1981)*


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