



# Understanding and managing dysphagia





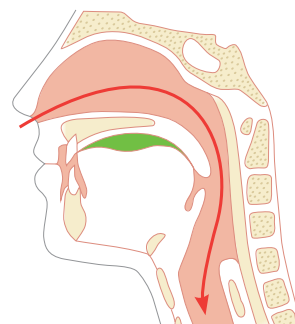
# Swallowing

A normal swallow has several stages that allow food and/or liquid to go safely from the mouth to the stomach.<sup>1</sup>

When we swallow, the airway is closed to prevent food, liquid and saliva from entering the lungs.

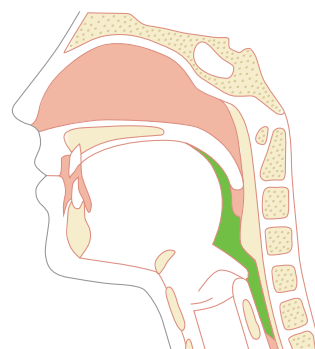
## STAGE 1 – Oral Prep/Oral Phase

Bolus of food or liquid is held inside the mouth by the tongue while the airway is open.<sup>1</sup>



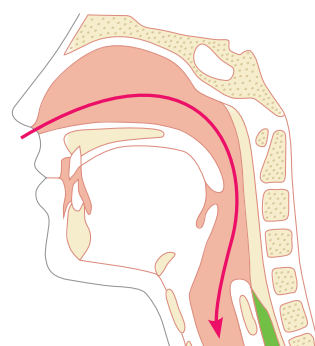
## STAGE 2 – Pharyngeal Phase

When the food or liquid is propelled by the tongue towards the back of the throat, the airway closes. The bolus can then pass through into the esophagus and not go into the lungs.<sup>1</sup>



## STAGE 3 – Esophageal Phase

Once the bolus goes into the esophagus, the airway 're-opens' to allow for breathing again, and the bolus is propelled towards the stomach.<sup>1</sup>



Air →  
Bolus →

# Dysphagia

## What is dysphagia?

It is a “difficulty in swallowing”, which means that there is a problem at one or more of the stages of swallowing. As a result, food and/or liquid do not move normally from the mouth to the stomach.<sup>2</sup>

## Who does dysphagia affect?

Dysphagia affects nearly 3 million Canadians, and one in 17 people will develop dysphagia in their lifetime.<sup>3-4</sup> The number of cases is particularly high in older people, those who have had a stroke, people in long-term care homes, and those with Alzheimer’s or Parkinson’s disease.<sup>5-8</sup>

Many people may not know they have dysphagia, as it is a vastly underreported condition and is not well understood by the general public.<sup>4</sup>

## What causes dysphagia?<sup>2,9</sup>

### Age

- Control and coordination of the swallowing muscles can become weaker<sup>9,10</sup>

### Neurological problems, such as:

- Damage to the nervous system (e.g., stroke)
- Diseases that affect the nerves: Parkinson’s disease, multiple sclerosis, cerebral palsy, amyotrophic lateral sclerosis (ALS) and dementia<sup>9</sup>

### Inflammation/obstruction of the mouth, throat or esophagus, due to:

- Cancer (affecting mouth, throat, larynx or esophagus)<sup>9</sup>
- Chemo/radiation therapy<sup>9</sup>
- Gastro-esophageal reflux disease (GERD)<sup>9</sup>
- Infections causing inflammation of the mouth, throat and/or esophagus<sup>9</sup>

### Muscular conditions, such as:

- Scleroderma (hardening of the skin and connective tissues)<sup>9,11</sup>
- Achalasia (esophageal disorder)<sup>9</sup>

### Certain medications

- These may include antipsychotics (e.g., haloperidol, olanzapine) and anticholinergics (e.g., nitrazepam, lorazepam)<sup>12</sup>



# Dysphagia (cont'd)

## Symptoms of dysphagia

Signs and symptoms associated with dysphagia may include:<sup>2,13,14</sup>

### While eating:

- Difficulty controlling food or liquid in the mouth
- Coughing, gagging and/or choking while eating or drinking
- Accumulation of food in the cheeks, mouth or throat after swallowing
- Inability to swallow
- Food or liquids come back up through the throat, mouth, or nose after swallowing
- Pain while swallowing
- Tendency to cut food into smaller pieces or avoiding certain foods or liquids because of chewing problems or fear of choking
- Multiple swallows are needed for each mouthful of food or liquid
- Increased difficulty with breathing
- Drooling or loss of food or liquid from the mouth
- Hoarse or gurgly voice after swallowing

### After eating (occasionally or frequently):

- Pain or pressure in your chest
- Heartburn
- Vomiting
- Unintentional weight loss
- Frequent pneumonia and other respiratory infections

# Risks of living with dysphagia 13,15,16

## Difficulty swallowing can lead to:

- **Malnutrition, weight loss and dehydration.** Dysphagia can make it difficult to eat enough food and/or drink enough liquid.
- **Aspiration pneumonia.** Food, liquid or saliva entering the lungs when swallowing can cause aspiration pneumonia, because they can introduce bacteria to the lungs.
- **Choking** can occur if food accidentally falls into the airway and completely blocks it.
- **Social isolation** because of the embarrassment associated with coughing or choking at mealtime.





# Managing dysphagia<sup>2,17</sup>

- The healthcare professional will perform a swallowing evaluation and may order various tests to determine the cause(s) of the problem.
- Once the cause(s) has (have) been identified, the healthcare professional may recommend one or more of these procedures:
  - **Diet modification** – modify or exclude certain foods and/or liquids to make swallowing easier
  - **Exercises** to strengthen swallowing muscles or improve swallow coordination
  - **Medications** to treat chronic reflux, infection or other medical problem that may be causing the dysphagia
  - **Medical or surgical procedures**

## Choosing liquids and foods that are easier to swallow is an important part of managing dysphagia

### Liquids can provide hydration and nutrition

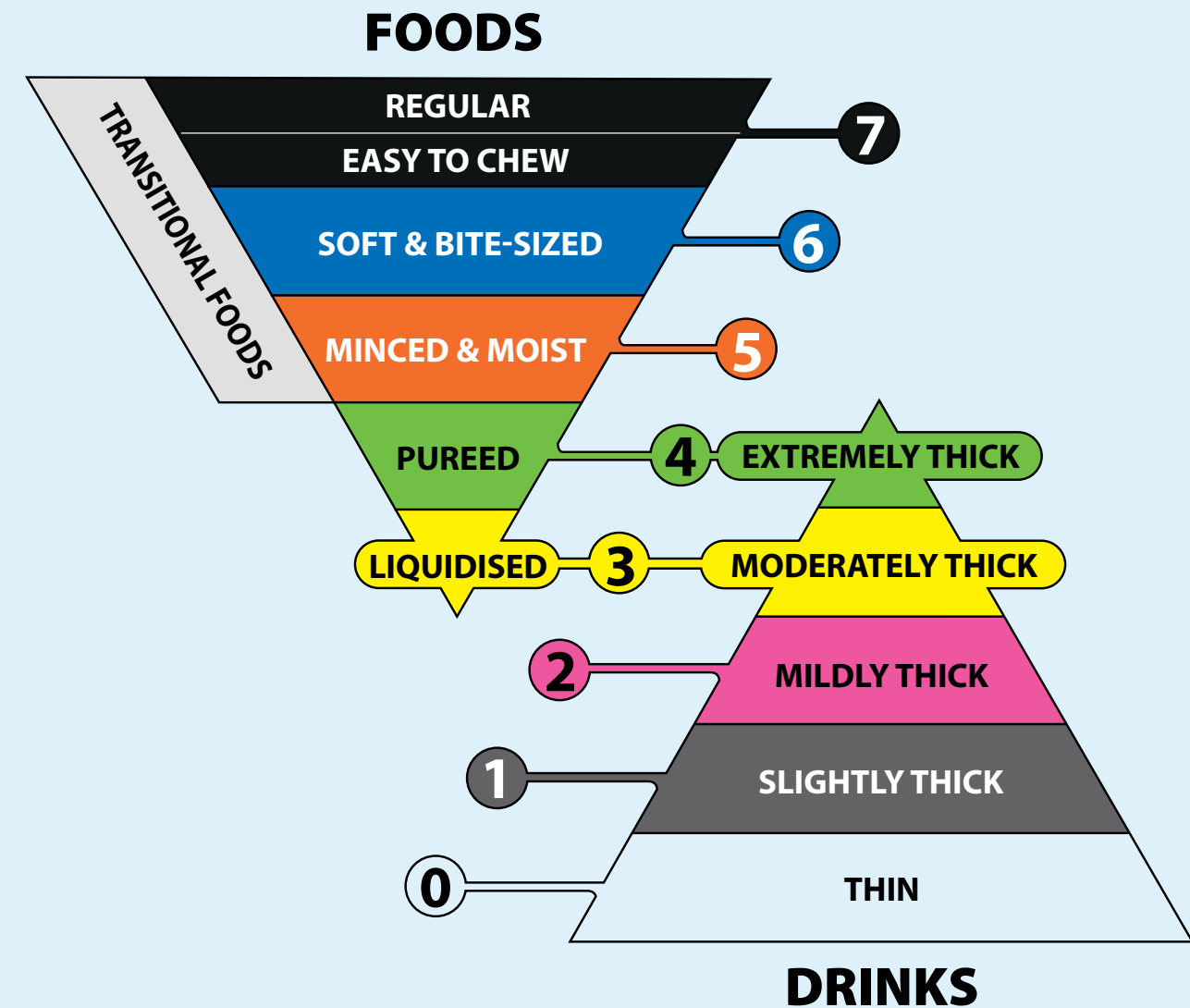
- **Adequate hydration** is essential for sustaining life and can help prevent constipation.<sup>18,19</sup>
- **Proper nutrition.** Dysphagia can lead to unintentional weight loss and malnutrition. Liquids can provide essential nutrients.<sup>2,17</sup>

A **texture-modified diet** means that the texture of solid foods is adapted to an individual's swallowing ability.<sup>3</sup>

For some individuals with dysphagia, healthcare professionals may recommend **thickened liquids** for a safe swallow.<sup>20,21</sup>

### Liquid consistency levels<sup>20,22-24</sup>

International Dysphagia Diet Standardisation Initiative (IDDSI) Framework



The International Dysphagia Diet Standardisation Initiative 2016 @ <http://iddsi.org/framework/>. Attribution is NOT PERMITTED for derivative works incorporating any alterations to the IDDSI Framework that extend beyond language translation. Supplementary Notice: Modification of the diagrams or descriptors within the IDDSI Framework is DISCOURAGED and NOT RECOMMENDED. Alterations to elements of the IDDSI framework may lead to confusion and errors in diet texture or drink selection for patients with dysphagia. Such errors have previously been associated with adverse events including choking and death.



## About HYDRA+

A refreshing and delicious thickened beverage for people living with dysphagia

Hydra+ beverages have been specially formulated to meet the specific needs of people with swallowing problems. The smooth consistency ensures a safe and easy swallow.

Delicious  
taste you can  
count on!



# HYDRA+

#1 Brand beverage for dysphagia in Canada<sup>25\*</sup>

### Features and benefits

- Pre-thickened and ready to drink
- Delicious fruit beverages made with juices, available in assorted varieties:
  - 100% apple juice
  - 100% orange juice
  - Cranberry cocktail
  - Peach cocktail
- Water option – thickened water with a hint of natural lemon flavour
- Dairy option – 2% Canadian milk, thickened and fortified with vitamins A and D, available in 1L format
- No artificial sweeteners or colours
- Shelf stable (no refrigeration required before opening)
- Kosher
- Proudly Canadian

\*Thickened beverages consumption in Canada, December 2019, Direct Link.

Available in 1L cartons...



IDDSI Level 3



IDDSI Level 2

...and in 118 mL single-serve cups



IDDSI Level 3



IDDSI Level 2



## Meet Mark\*

- 59-year-old businessman recovering from esophageal cancer
- Has had problems swallowing liquids following radiation therapy
- Used to make his own thickened juices, but since his return to work, he lacks time to prepare them, which leads to a decrease in his hydration
- Often finds himself constipated

### How **HYDRA+** can help Mark

When he mentioned his swallowing difficulties to his healthcare professional, he was recommended to try Hydra+ thickened beverages and was referred to [www.lassondeservicealimentaire.ca](http://www.lassondeservicealimentaire.ca).

He discovered that **Hydra+** is available in assorted varieties, including a milk beverage, lemon flavoured water and in his favourite flavours:

- Apple juice
- Orange juice
- Peach cocktail
- Cranberry cocktail

Mark found that drinking great-tasting Hydra+ helped him better swallow liquids, allowing him to stay hydrated while maintaining a good quality of life. His constipation improved, and he was generally feeling better.





# HYDRA+

## Great-tasting pre-thickened beverages

Nutritional information



### 1L cartons

Packaging: 12x1L  
Shelf life: 365 days

Kosher

Calories

Protein (g)

Carbohydrates (g)

Sugar (g)

Fibre (g)

Fat (g)

Sodium (mg)

Potassium (mg)

Vitamin C (mg)

Phosphorus (mg)

Vitamin A (µg)

Calcium (mg)

Vitamin D (µg)

#### IDDSI 3 MODERATELY THICK (per 250 mL)

	Lemon water	✓	10	-	2	-	-	-	35	30	30	-	-	40	-
	Apple	✓	110	-	28	24	-	-	50	125	30	-	-	40	-
	Orange	✓	110	1	26	22	-	-	50	410	30	-	-	40	-
	Cranberry cocktail	✓	120	-	31	27	-	-	35	400	30	-	-	40	-
	Milk beverage	✓	180	9	26	15	-	5	210	400	-	250	100	300	9

#### IDDSI 2 MILDLY THICK (per 250 mL)

	Lemon water	✓	5	-	1	-	-	-	25	30	30	-	-	30	-
	Apple	✓	110	-	27	24	-	-	35	125	30	-	-	30	-
	Orange	✓	100	1	25	22	-	-	40	410	30	-	-	30	-
	Cranberry cocktail	✓	120	-	30	27	-	-	25	500	30	-	-	30	-
	Milk Beverage	✓	180	9	25	15	-	5	210	400	-	250	100	300	9





### 118 mL single-serve cups

		Kosher	Calories	Protein (g)	Carbohydrates (g)	Sugar (g)	Fibre (g)	Fat (g)	Sodium (mg)	Potassium (mg)	Vitamin C (mg)	Phosphorus (mg)	Vitamin A (µg)	Calcium (mg)	Vitamin D (µg)
Packaging: 24x118mL Shelf life: 365 days															
IDDSI <b>3</b> MODERATELY THICK (per 118 mL)															
	Lemon water	√	3	-	1	-	-	-	15	30	50	-	-	-	-
	Apple	√	60	-	14	12	-	-	20	110	50	-	-	-	-
	Peach Cocktail	√	40	-	10	9	-	-	25	80	50	-	-	-	-
	Orange Delight	√	50	0.5	11	10	-	-	25	150	36	-	-	10	-
	Cranberry cocktail	√	60	-	14	13	-	-	20	220	50	-	-	-	-
IDDSI <b>2</b> MILDLY THICK (per 118 mL)															
	Lemon water	√	0	-	1	-	-	-	10	30	50	-	-	-	-
	Apple	√	60	-	14	12	-	-	15	110	50	-	-	-	-
	Peach Cocktail	√	40	-	10	9	-	-	15	80	50	-	-	-	-
	Orange Delight	√	50	0.5	11	10	-	-	15	150	36	-	-	10	-
	Cranberry cocktail	√	60	-	14	13	-	-	10	200	50	-	-	-	-



# Learn more about dysphagia and its management

- **Swallowing | Heart and Stroke Foundation**  
[heartandstroke.ca](http://heartandstroke.ca)
- **Difficulty Swallowing (Dysphagia) | BC HealthLink**  
[healthlinkbc.ca](http://healthlinkbc.ca)
- **Association professionnelle des nutritionnistes experts  
en dysphagie (APNED)**  
[apned.info](http://apned.info)
- **Mayo Clinic**  
[mayoclinic.org](http://mayoclinic.org)
- **International Dysphagia Diet Standardisation Initiative (IDDSI)**  
[iddsi.org](http://iddsi.org)
- **Tests Performed by Lassonde using the IDDSI Framework.**  
For more information: [iddsi.org](http://iddsi.org)

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For more information and ordering details visit:  
[www.lassondeservicealimentaire.ca](http://www.lassondeservicealimentaire.ca)