

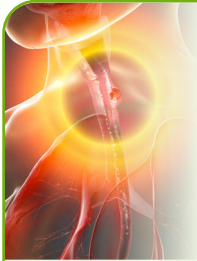


## FACT FILE



# DYSPHAGIA

This Fact File has been compiled by **NHD** with thanks to our contributors: Maia Fergus-O'Grady, RD who works at apetito and Wiltshire Farm Foods and freelance dietician, Caroline Hill, RD.



### WHAT IS DYSPHAGIA?

**Dysphagia is the medical term used to describe swallowing difficulties and eating and drinking disorders, which may occur in the oral, pharyngeal and oesophageal stages of swallowing. There are two main types of dysphagia:**

1 **Oropharyngeal dysphagia** relates to issues initiating the swallow, occurring when there is difficulty moving the food bolus from the oral cavity to the oesophagus. Various neuromuscular disorders, such as Parkinson's disease, multiple sclerosis and stroke, are associated with this type of dysphagia.<sup>1</sup>

Anatomical anomalies of the oropharynx can also cause problems with this phase of the swallowing process; individuals with this type of dysphagia may present with symptoms such as food getting stuck in the oral cavity and pulmonary aspiration.<sup>2</sup> Head and neck cancers are the most common malignancies to cause oropharyngeal dysphagia.<sup>3</sup>

2 **Oesophageal dysphagia** applies to problems moving the bolus safely from the mouth to the stomach, resulting from either abnormal motility of the oesophagus or physical impairment to passage, such as obstruction.<sup>4</sup> Common symptoms include food sticking in the throat after swallowing, painful swallowing, and chest pain.<sup>5</sup> Oesophageal dysphagia can be caused by primary or secondary motility disorders and intrinsic or extrinsic structural lesions.

### THE STAGES OF SWALLOWING

For most of us, swallowing is a reflexive subconscious process, which occurs around 600 times each day.<sup>2</sup> However, swallowing mechanisms are complex, involving over 30 nerves and muscles.<sup>7</sup> It can be broken down into the following four stages:

- 1 **Pre-oral.** Sensory processing; for example, the smell and sight of food can trigger saliva production in preparation of food entering the mouth.
- 2 **Oral (voluntary).** When food enters the mouth, the lips close to form a seal, whilst the tongue moves food onto the teeth for processing. Food particles reduce in size as mastication begins, and a bolus

(rounded mass of chewed food) is formed and softened as saliva is incorporated.

The tongue provides sensory feedback to assess whether further processing is needed. When chewing has finished, the bolus is moved to the back of the throat in preparation to swallow.

- 3 **Pharyngeal (reflexive).** The voice box is raised and the vocal folds close, as the epiglottis and soft palate seal off the trachea and nasal cavity respectively, suspending breathing momentarily. The pharynx contracts and the upper oesophageal sphincter opens, allowing the bolus to be passed through into the oesophagus.

#### REFERENCES

Please visit: [www.NHDMag.co.uk/article-references.html](http://www.NHDMag.co.uk/article-references.html)

#### ESSENTIAL RESOURCES

International Dysphagia Diet Standardisation Initiative (IDDSI). <https://iddsi.org/>

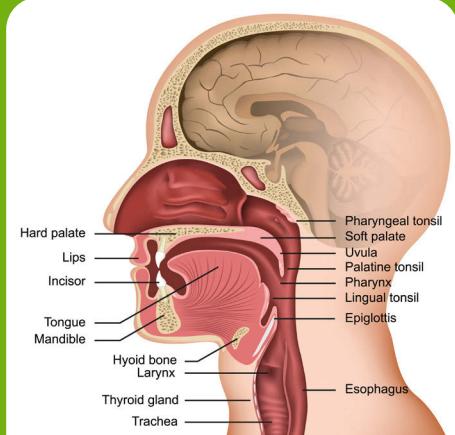
4 **Oesophageal.** Peristalsis (wave-like muscular contractions) moves the bolus down the oesophagus and the lower oesophageal sphincter opens to allow the bolus to pass into the stomach. The sphincter then closes, preventing stomach contents re-entering the oesophagus.



## DIAGNOSING DYSPHAGIA

Dysphagia diagnoses are predominantly given by speech and language therapists (SLTs), usually following bedside assessments.<sup>6</sup> The quality of a patient's swallow is assessed using foods of a varying consistency, and a physical examination identifies any physiological issues. In some cases, videofluoroscopy (moving X-ray examination) or other instrumental investigations can be used to identify swallowing issues.

Some of the clearer signs of dysphagia include coughing or choking when eating, nasal regurgitation and frequent chest infections. A better appreciation of the more subtle signs is perhaps more crucial in identifying undetected cases of dysphagia. Behaviour changes surrounding food and mealtimes can often be a discreet indicator of a change in swallow. This can include individuals isolating themselves at mealtimes, or hesitancy to discuss food and their dietary intake. Other less prominent signs include eye watering, throat clearing, respiration difficulty and multiple swallows for one mouthful of food.



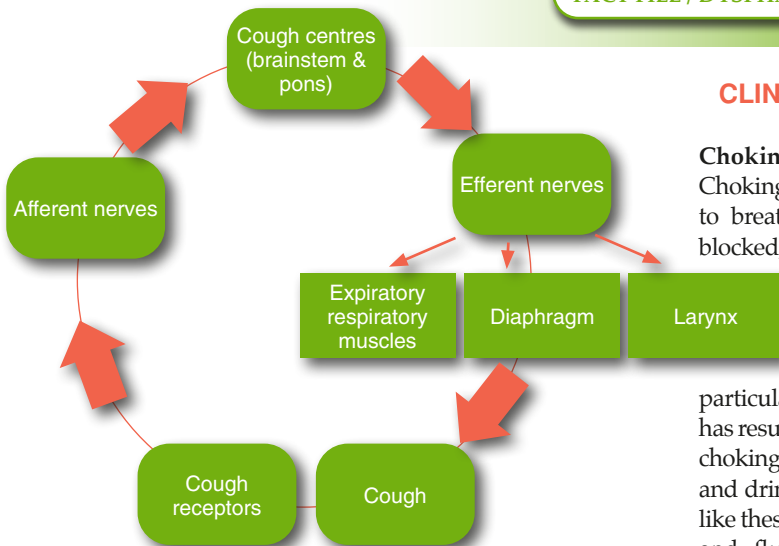
## WHAT CAUSES DYSPHAGIA?

Dysphagia can result from a wide variety of functional or structural deficits of the oral cavity, pharynx or oesophagus. Whilst a swallow can deteriorate with age, dysphagia is more often a secondary condition that occurs as a result of a primary health concern. The inability to swallow normally can be influenced by a number of factors, including coordination and strength of the musculature, posture, bolus size and texture, as well as disuse atrophy of a swallow due to pain, illness, change in taste, nausea, ageing, cognition, respiratory and cardiac problems.<sup>8</sup>

Dysphagia prevalence is also increased in those with cancer and congenital or developmental conditions.<sup>9,10</sup> Physical damage such as burns and head injuries can also impact the quality and safety of a swallow. However, the main cluster of conditions, perhaps most frequently seen in healthcare that impact a swallow, are those that cause nerve damage either acutely (eg, stroke), or chronically over time (eg, neurodegenerative diseases, including dementia, motor neurone disease and Parkinson's). Dysphagia can also result from poor posture, ill-fitting dentures and medical or surgical complications.

## COMMON SIGNS OF DYSPHAGIA

- Coughing or choking when eating or drinking
- A 'gurgly' wet sounding voice
- A sensation that food is stuck in the throat
- Reduced ability to chew
- Taking a long time to finish a meal
- Persistent drooling of saliva
- Frequent chest infections



## CLINICAL CONSEQUENCES OF DYSPHAGIA

### Choking

Choking can be defined as the inability to breathe, due to the trachea being blocked, constricted or swollen shut.<sup>11</sup>

It is a serious consequence of dysphagia that not only has a clinical impact, but also impacts quality of life – particularly if undiagnosed dysphagia has resulted in an individual repeatedly choking on unsafe consistencies of food and drink. Repeated distressing events like these can negatively impact dietary and fluid intake, increasing risk of malnutrition and dehydration.

### Aspiration

Aspiration is the inhalation of foreign material into the lungs or trachea, occurring in over half of all dysphagic individuals.<sup>12</sup> The normal response to food entering the airways is a strong reflex cough which propels the substance up and out into the pharynx. However, in some cases of dysphagia, due to nerve damage, this reflex does not occur and aspiration takes place without any visible response. This is known as silent aspiration. Research estimates 40% of aspirating patients will do so silently.<sup>13</sup>

### Aspiration pneumonia

Aspiration can introduce foreign, often bacteria-containing, substances into the lungs. These bacteria can harbour, causing a chest infection that can then progress to aspiration pneumonia. This condition is often life-threatening and requires urgent hospitalisation, with mortality rates ranging between 20% and 62%.<sup>13</sup>

## NUTRITIONAL CONSEQUENCES OF DYSPHAGIA

- Weight loss
- Malnutrition
- Dehydration
- Altered food intake
- Reduced appetite

### Malnutrition

Dysphagia is a common condition amongst the elderly, with research suggesting approximately 35% of hospital admissions for dysphagia were for individuals aged 75 or over.<sup>14</sup> Despite its prevalence, dysphagia is a widely underdiagnosed condition for various reasons, including the assumption that dysphagia is a natural part of ageing, or fear of reaching out for support. Even when dysphagia is correctly managed, many will struggle to meet their nutrition and fluid requirements. It is thought that approximately 51% of those with dysphagia also suffer from malnutrition,<sup>15</sup> commonly due to fears of choking, loss of dignity or embarrassment, as well as fatigue or discomfort when eating. The clinical significance of malnutrition is well-documented: these individuals have an increased mortality risk, longer and more frequent hospital stays, poorer wound healing and immune function.<sup>15</sup>

### Dehydration

Around 75% of people with dysphagia suffer from dehydration.<sup>16</sup> Fluid may need to be thickened for some dysphagic individuals, ▶



posing a further challenge. Studies suggest commercial thickeners are not well tolerated, the viscosity of fluid being inversely correlated to the quantity of fluid consumed.<sup>17</sup> Alternative solutions include pre-thickened oral nutritional supplements and adherence to the 'free water protocol' (FWP), which enables eligible patients with dysphagia to drink regular water between meals. If water entering the lungs does not contain any food particles from the mouth, it is often resolved without complication, as it is not recognised as a foreign substance. If the correct mouth care is administered, the risk of aspiration pneumonia remains similar to those on thickened fluid, with those following the FWP exhibiting improved hydration status and increased quality of life.<sup>18,19</sup>

### QUALITY OF LIFE

The clinical consequences of dysphagia are well understood by healthcare professionals, but the social and psychological impacts of dysphagia are not as widely researched.

One study found that only 45% of dysphagic participants enjoyed mealtimes, with 41% instead experiencing anxiety and around a third avoiding eating with others.<sup>20</sup> Approximately 50% were eating less than before their diagnosis, further emphasising the risk of malnutrition when living with this condition.

### NUTRITION SUPPORT

Whilst TM food and drink is the main line treatment, occasionally further nutrition support is required to address malnutrition and may extend to the use of enteral feeding as a route for achieving adequate nutrition and hydration. Treatment for dysphagia occurring in people with progressive diseases, such as Parkinson's disease, may start with oral nutrition support, but is likely to progress to enteral nutrition support in the long term as their swallow deteriorates.

In oesophageal dysphagia, if the cause is due to malignancy, such as head and neck cancer, enteral feeding may be commenced early on after diagnosis. In this patient group, malnutrition is a significant problem due to the disease process, so early decision making regarding enteral tube feeding is important. In oesophageal dysphagia, a person may be limited to only managing liquids due to significant narrowing of

### IDSSI

The International Dysphagia Diet Standardisation Initiative (IDSSI) has been pivotal in implementing a global standardisation of TM food and drink, ensuring the safety and consistency of textures of meals around the world. There are eight levels, ranging from 0-7, with unique names, colours and numbers given for each texture.

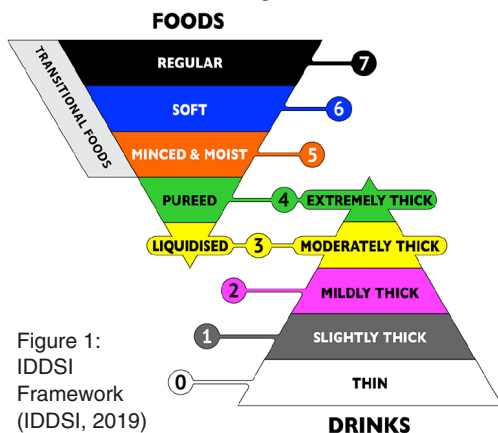


Figure 1: IDSSI Framework (IDSSI, 2019)

the oesophagus. In this case, advice would be provided about nourishing fluids and the use of prescribed oral nutritional supplements to meet nutritional needs. This dietary management may not be long term depending upon the treatment options available. Enteral tube feeding may be indicated if the narrowing of the oesophagus is too severe to allow adequate nutrition and hydration.

The decision to commence enteral tube feeding in individuals with dysphagia is dependent upon a number of factors, including the medical indication for nutritional support and the wishes of patients and their families.<sup>23</sup>