

## DYSPHAGIA – SWALLOWING DISORDERS

### SWALLOWING DISORDERS – HOW TO RECOGNIZE THEM

In Germany, there are about 5 million people suffering from swallowing disorders. These disorders can have severe consequences if they are not recognized and treated. As per the German institute of nutritional medicine (Deutsches Institut für Ernährungsmedizin) every year more than 50.000 stroke victims die from pneumonia due to the fact that food entered their lungs (= aspiration). In old people and nursing homes, pneumonia caused by swallowing disorders is an every day kind of complication. To recognize a swallowing disorder at an early stage is of paramount importance as regards the prevention of massively severe consequences to the patient such as food deficiency, dehydration and aspiration. A swallowing disorder shows one or more of the following symptoms:

- loss of weight
- rejection of food
- prolonged oral phase (food stays in oral cavity for too long)
- unclear causes for high temperature
- pneumonia
- bronchial infections / mucous congestion
- coughing and the desire to clear one's throat while eating

- saliva and food outflow from mouth
- gurgling sound of voice
- food rests in oral cavity
- sensation of having a lump in one's throat
- pain behind sternum
- painful swallowing
- lack of swallowing reflex

### NORMAL SWALLOWING:

The healthy adult being awake and not eating swallows about once per minute, i.e. up to 2000 times per day whereas 0,5 to 1,5 l (18 (fl) oz to 2,5 pints) saliva is swallowed. During sleep, saliva production and swallowing come almost completely to a rest. To get liquids, food and saliva from the oral cavity down into the stomach, the interaction of 50 pairs of muscles takes place. Five cerebral nerves are involved in the sensory and motor control of the swallowing. Usually, swallowing is seen as a natural process. Only when problems emerge in this capacity, it is consciously recognized. Physiological mechanisms adapt to the actually swallowed material in a finely tuned co-ordination process. Used muscle power, amplitude of movement and time-related co-ordination depend on the quantity and quality of the food to be swallowed. For instance, the width of the opening of the oesophagus' (gullet's) entry to swallow saliva has to be smaller than it has to be for swallowing a liquid.

### FOUR PHASES OF NORMAL SWALLOWING:

Oral preparation phase (oral cavity, mouth):	Food is supplied, chewed, insalivated and collected on the tongue.
Oral phase (oral cavity, mouth):	Food is being transported further into the mouth cavity whereas the tongue pushes against the hard palate until the swallowing reflex is induced.
Pharyngeal phase (pharyngeal cavity):	Food is transported through the pharynx into the oesophagus (gullet). The soft palate closes the nasal cavity so that no food can enter it. During swallowing, the epiglottis closes the deeper respiratory tracts. Only in this way it can be assured that NO food gets into the lungs. Now it is necessary that the muscles of the oesophagus are relaxing, so that the food can enter it.
Oesophageal phase (gullet):	Peristaltic waves push the food through the oesophagus (25 cm = about 10 ins) into the stomach.



## CAUSES FOR SWALLOWING DISORDERS:

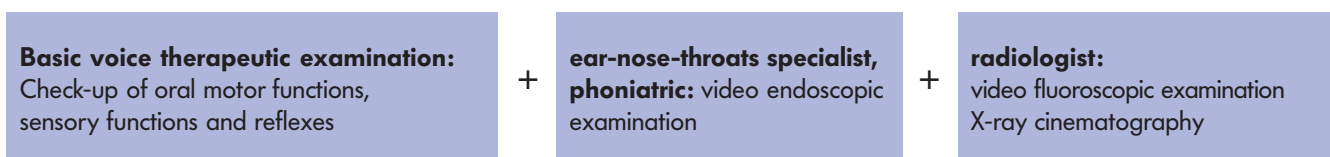
### 1. Dysphagia due to neurological problems:

- ◆ injury damage to the central nervous system (**stroke** = most common cause for dysphagia)
- ◆ diseases of cerebral nerves (tumours, meningitis)
- ◆ diseases of the neurological – muscular contact points (myasthenia gravis), muscular diseases (muscle dystrophy)
- ◆ age (reduced elasticity and flexibility, changes of the cervical vertebrae)

### 2. Swallowing disorders due to mechanical causes:

Causes here are mainly due to primarily structural diseases such as infections and due to consequences and side effects of a surgical, radiological or chemotherapeutic treatment of tumours.

**The in-to-depth ASSESSMENT is the precondition for a successful therapy.**



## OBJEKTIVES AND CONTENTS OF A SWALLOWING THERAPY

→ **The objective of the speech and language therapy is to restore physiological processes, to get the disturbed functioning of muscles and limited sensitivity back to normal (causal therapy) and to facilitate swallowing respectively, as well as to prevent aspiration (compensatory measures) or to adapt the environment of the patient to the actual capacities of the patient (aids adaptation).**

The preparation of a therapy programme that is focused on the individual needs of the patient includes various therapeutic directions. The treatment concept for a therapy that is orientated towards the functioning of the swallowing can be divided into three main areas:

- ◆ **Restitution procedure:** (Objective: complete or at least partly recovery from disturbed functions to allow for effective and aspiration-free swallowing)
- ◆ **Compensation methods:** (Objective: behavioural changes e.g. change in posture when taking in food, special swallowing techniques)
- ◆ **Adaptation measures:** (Objective: Adaptation to disturbed swallowing functions with the help of external means, e.g. dietary measures)

**Speech and Language therapy is part of successful swallowing therapy here.  
Due to the complexity of the disorder, close co-operation between medical  
and therapeutic specialists is imperative.**

Further information:

Gudrun Bartolome et al (1999), Schluckstörungen – Diagnostik und Rehabilitation, Munich, Germany

Dysphagie: Gudrun Nelde, Elke Krauser, Dr. Iris Eicher, 2003