### 1. Preliminary Investigation / Indirect Swallowing Test

<table>
<thead>
<tr>
<th>VIGILANCE</th>
<th>YES</th>
<th>NO</th>
</tr>
</thead>
<tbody>
<tr>
<td>The patient must be alert for at least 15 minutes</td>
<td>1</td>
<td>0</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>COUGHING and/or THROAT CLEARING</th>
<th>YES</th>
<th>NO</th>
</tr>
</thead>
<tbody>
<tr>
<td>Voluntary cough: The patient should cough or clear his/her throat twice</td>
<td>1</td>
<td>0</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>SWALLOWING SALIVA</th>
<th>YES</th>
<th>NO</th>
</tr>
</thead>
<tbody>
<tr>
<td>Swallowing successful</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>Drooling</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Voice change after swallowing</td>
<td>0</td>
<td>1</td>
</tr>
</tbody>
</table>

**SUM:** (5)

### 2. Direct Swallowing Test (Material: Water, food thickener, teaspoon, cup, syringe, bread, biscuit)

In the following order

- **SEMISOLID**
  - ½ teaspoon of thickened water (IDDSI: Level 3)
  - If there are no symptoms apply 3-5 more teaspoons
  - Stop the investigation if one of the 4 aspiration criteria is observed

- **LIQUID**
  - Offer 3, 5, 10, 20 ml of water in a cup followed by 50 ml of water. (sequential swallows)
  - Stop the investigation if one of the 4 aspiration criteria is observed

- **SOLID**
  - Offer a piece of bread without crust and/or a piece of biscuit (max. 1.5 x 1.5cm)
  - Stop the investigation if one of the 4 aspiration criteria is observed

#### DEGLUTITION

- Swallowing not possible | 0 | 0 | 0 |
- Swallowing delayed (semisolids, fluids > 2 sec. solids > 10 sec.) | 1 | 1 | 1 |
- Swallowing successful | 2 | 2 | 2 |

#### COUGHING (involuntary)

(before, during and after swallowing - until 3 minutes later)

- Yes | 0 | 0 | 0 |
- No | 1 | 1 | 1 |

#### DROOLING

- Yes | 0 | 0 | 0 |
- No | 1 | 1 | 1 |

#### VOICE CHANGE

(Listen to the voice before and after swallowing - Patient should say „Ohhh“)

- Yes | 0 | 0 | 0 |
- No | 1 | 1 | 1 |

**SUM:** (5) (5) (5)

**SUM:** (Indirect Swallowing Test AND Direct Swallowing Test) (20)
<table>
<thead>
<tr>
<th>RESULTS</th>
<th>SEVERITY CODE</th>
<th>RECOMMENDATIONS (related to IDDSI-Framework, <a href="http://www.iddsi.org">www.iddsi.org</a>)</th>
</tr>
</thead>
<tbody>
<tr>
<td>20</td>
<td>Swallowing semisolids, liquids and solid textures successful</td>
<td>Slight / No dysphagia with no or minimal risk of aspiration</td>
</tr>
</tbody>
</table>

- Normal diet (Level: 7, 7minus)
- Regular liquids (Level: 0)
- First normal meal under supervision of a SLT/SLP or dysphagia-trained nurse to evaluate the swallowing ability of mixed consistencies

| 15-19 | Swallowing semisolids successful, swallowing liquids can be deficient, solids can be deficient | Slight dysphagia with aspiration risk |

- Dysphagia diet (minced & moist or soft & bite-sized) (Level: 5 or 6)
- Liquids thickened (Level: 1 or 2)
- Water (Level: 0) should only be drunk after following the “Frazier Free Water Protocol” (Gillmann et al 2016)
- Optional: Further functional swallowing assessments (FEES, VFES)
- Optional: Refer to Speech&Language Pathologist(SLP) or Speech&Language Therapist (SLT)

*Supplementation via PEG, nasogastric tube or parenteral + supplementary food*

| 10-14 | Swallowing semisolids successful, swallowing liquids deficient | Moderate dysphagia with aspiration risk |

- Pureed textures (Level: 3-4)
- All liquids must be thickened (Level: 2-3)
- Pills should be crushed and mixed with puree (Level: 3-4)
- No liquid medication!
- Optional: Further functional swallowing assessments (FEES,VFES)
- Optional: Refer to Speech&Language Pathologist (SLP) or Speech&Language Therapist (SLT)

*Supplementation via PEG, nasogastric tube or parenteral + supplementary food*

| 0-9 | Preliminary investigation unsuccessful or swallowing semisolids unsuccessful | Severe dysphagia with high risk of aspiration |

- NPO (non per os = nothing by mouth)
- Optional: Further functional swallowing assessments (FEES,VFES)
- Optional: Refer to Speech&Language Pathologist(SLP) or Speech&Language Therapist (SLT)

*Supplementation via PEG, nasogastric tube or parenteral*

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¹ Use functional Investigations like: Fiberoptic Endoscopic Evaluation of Swallowing (FEES), Videofluoroscopic Evaluation of Swallowing (VFES) and Clinical Swallowing Examination (CSE) by Speech & Language Pathologists (SLP) or Speech & Language Therapists (SLT).

The Gugging Swallowing Screen. Stroke. 2007;38:2948 Michaela Trapl, SLT, MSc; Paul Enderle, MD, MSc; Monika Nowotny, MD; Yvonne Teuschl, PhD; Karl Matz, MD; Alexandra Dachenhausen; PhD Michael Brainin, MD