Dysphagia, Oral Care and Nutrition/Hydration

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Nutrition Considerations

BEST PRACTICE GUIDELINES:
The swallowing, nutritional and hydration status of stroke patients should be screened as early as possible, ideally on the day of admission, using validated screening tools (Evidence Level B).

Abnormal results from the initial or ongoing swallowing screens should prompt referral to a speech language pathologist, occupational therapist and/or dietitian for more detailed assessment and management of swallowing, nutritional and hydration status (Evidence Level C).

(Casaubon LK, Boulanger JM, 2015)

Nutrition Considerations

BEST PRACTICE GUIDELINES:
An individualized management plan should be developed to address therapy for dysphagia, nutrition needs and specialized nutrition plans (Evidence Level C).

Stroke patients with suspected nutritional concerns, hydration deficits, dysphagia or other comorbidities that may affect nutrition (such as diabetes) should be referred to a dietitian for recommendations:
a. to meet nutrient and fluid needs orally while supporting alterations in food texture and fluid consistency (Evidence Level R)

(Casaubon LK, Boulanger JM, 2015)
Nutrition Considerations

BEST PRACTICE GUIDELINES:

b. for enteral nutrition support (nasogastric tube feeding) in patients who cannot safely swallow or meet their nutrient and fluid needs orally.

The decision to proceed with tube feeding should be made as early as possible after admission, usually within the first three days of admission in collaboration with the patient, family (or substitute decision maker) and interprofessional team (Evidence Level B).

(Casaubon LK, Boulanger JM, 2015)

Malnutrition

• Malnutrition includes both the deficiency and excess (or imbalance) of energy, protein and other nutrients.
• Undernutrition in the focus in clinical practice and affects body tissues, functional ability and overall health.
• In hospitalized patients, undernutrition is often complicated by acute conditions (e.g. a trauma), infections and diseases that cause inflammation. Such complications worsen undernutrition and make it more challenging to correct due to extensive physiological changes and increased nutritional needs when appetite is decreased.


Malnutrition in Stroke

• Malnutrition is an independent predictor of poor outcomes after stroke (FOOD Trial, 2003).
• and an independent predictor of mortality, LOS, and hospitalization costs at 6 months post stroke (Gomes, Emery & Weekes, 2015).
• The overall odds of being malnourished are higher among subjects who were dysphagic vs not (Foley et al., 2009).
• 20% patients become more malnourished in the first weeks after a stroke (Yoo et al., 2008).
Canadian Nutrition Screening Tool (CNST) (Laporte M, Keller H, Payette H et al, 2014)

<table>
<thead>
<tr>
<th>Question</th>
<th>Yes</th>
<th>No</th>
</tr>
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<tbody>
<tr>
<td>Have you lost weight in the past 6 months <strong>WITHOUT TRYING</strong> to lose weight?</td>
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<tr>
<td>Have you been eating less than usual <strong>FOR MORE THAN A WEEK</strong></td>
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Two “YES” answers indicate nutrition risk

* If the patient is unable to answer the question a knowledgeable informant can be used to obtain the information.

Canadian Malnutrition Task Force

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Dehydration

- Assessing Dehydration?
  - monitoring of fluid intake
  - dry mouth / symptoms of thirst
  - urine colour, volume or osmolality
  - blood pressure and heart rate
  - urea: creatinine ratio
  - plasma osmolality, saliva osmolality (Hooper et al., 2015)
Dehydration and Stroke

- Dysphagia prevalent in 56% of dehydrated patients vs 30% of hydrated patients
- Associated with increased mortality (Rowat, Graham & Dennis, 2012)

Factors impacting oral intake following stroke

<table>
<thead>
<tr>
<th>Physical</th>
<th>Organisational</th>
<th>Patient</th>
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<tbody>
<tr>
<td>Can’t reach meal tray</td>
<td>Inappropriate menu choices</td>
<td>Dysphagia</td>
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<tr>
<td>Repositioning patient for meals</td>
<td>Lack of feeding assistance</td>
<td>Drowsiness</td>
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<tr>
<td>Need help at meals (set-up, feeding, etc)</td>
<td>Palatable food</td>
<td>Hemiparesis</td>
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<tr>
<td>Polypharmacy</td>
<td>Timings of meals</td>
<td>Visual impairment</td>
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<td></td>
<td>Interruptions to mealtimes</td>
<td>Cognitive impairment</td>
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<td></td>
<td>Rushed mealtimes</td>
<td>Pain</td>
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<td></td>
<td>Ward environment</td>
<td>Poor dentition</td>
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<tr>
<td></td>
<td>Staff knowledge</td>
<td>Sore or dry mouth</td>
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<tr>
<td></td>
<td></td>
<td>Oral thrush</td>
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<td></td>
<td></td>
<td>Changes in taste and smell</td>
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<td></td>
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<td>Low appetite</td>
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<td></td>
<td></td>
<td>Depression</td>
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<td></td>
<td></td>
<td>GI Issues</td>
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<td></td>
<td></td>
<td>Anxiety</td>
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</table>
**What to do?**

**Nutrition Care Plan**

1) Nutrition counselling - encouragement/education
2) Food fortification – Liberalizing diets
3) Organizing meal time assistance/protected meal times
4) Nutrition supplementation
5) Enteral Nutrition

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**4) Supplementation?**

Yes – but, only if malnourished

- Across the board supplementation was associated with a 1% to 2% absolute benefit from oral supplements. (Dennis et al, 2005a)
- Oral supplements can increase the amount of energy and protein patients consume, and prevent unintentional weight loss (Gariballa et al. 1998)
- Individualized nutritional support to older stroke patients in hospital was beneficial for maintaining an adequate body mass and body composition the first week and seemed to have a preventive effect on fat loss among women, after three months. (Ha 2010)
- Nutritional supplementation was associated with reduced pressure sores, and, by definition, increased energy intake and protein intake. (Geeganage et al, 2012)

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**5) Enteral Nutrition?**

- For patients who cannot obtain nutrient and fluid needs orally, enteral nutrition may be required. The decision to use enteral support should be made within the first seven days post stroke.
- PEG feeding was associated with an absolute increase in risk of death of 1.0% and an increased risk of death or poor outcome of 7.8% at 6 months.
- Early tube feeding was associated with non-significant absolute reductions in the risk of death or poor outcome and death at 6 months.
  
  (Dennis et al. 2005b)
In Summary...

- 1) Is patient at risk of malnutrition?
- 2) Refer to a dietitian
- 3) Implement nutrition care plan

References