



Unit 2 - Ergonomics

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INDEED: "Innovative tools for diets oriented to education and health improvement in dysphagia condition"

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Goals of the module

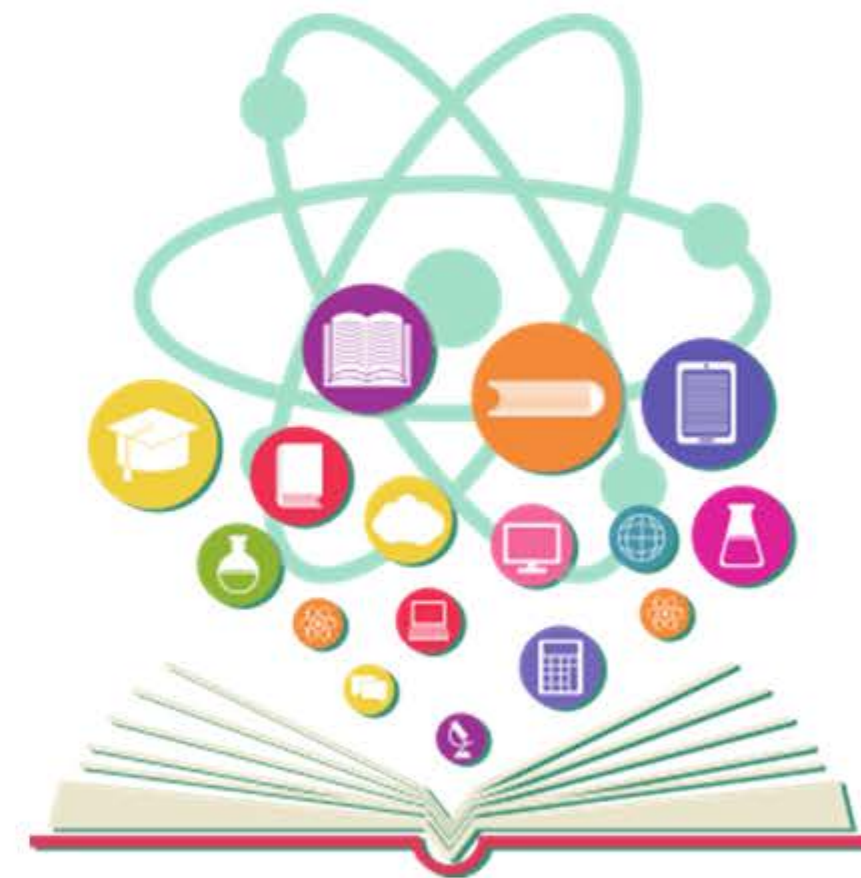
The aim of this module is to learn about main characteristics of mealtime environment, body position, Feeding caregiver techniques, feeding equipment and adapted utensils and oral care.



(Source: obtained from Canva Pro)

Learning outcomes

- To understand the importance actions during mealtime for dysphagia people.
- To recognize right and wrong body position during feeding techniques.
- To apply the right actions of the caregiver before, during and after feeding.



(Source: obtained from Canva Pro)

Structure to consider

Slide 6: Mealtime environment

Slide 11: Body position

Slide 14: Feeding caregiver techniques

Slide 16: Management of oropharyngeal dysphagia

Slide 21: Oral care

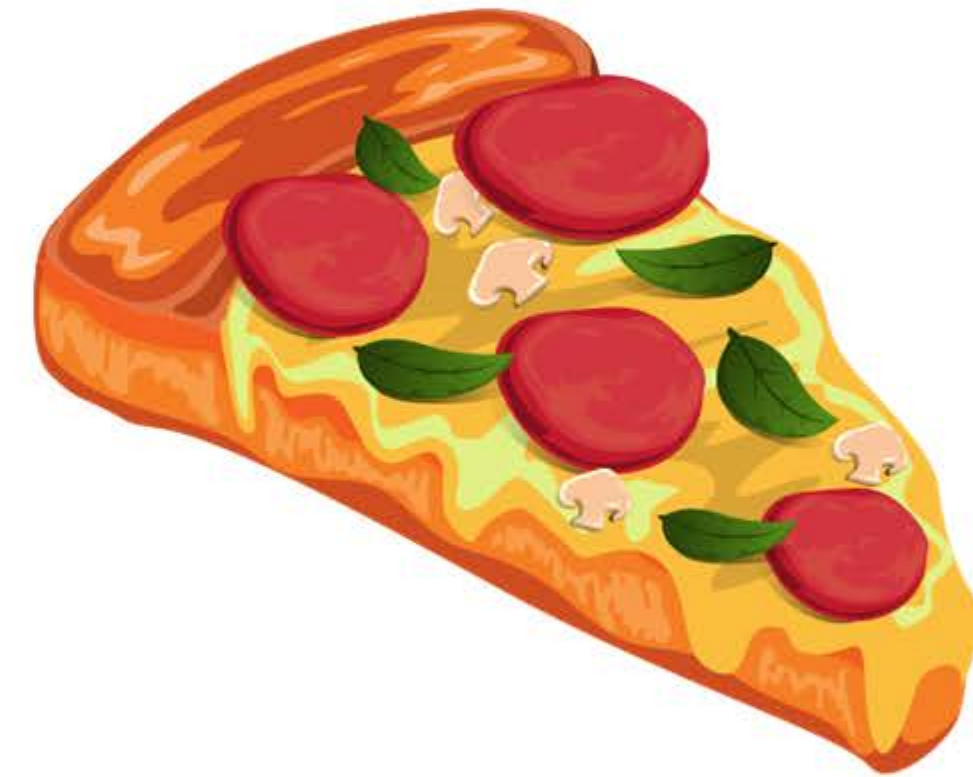
Slide 36: Questions

Slide 37: Review

Slide 38: Feedback

Ice breaker

***Do you think the characteristics
of the place where you eat are
adequate?***



(Source: obtained from Canva Pro)

Mealtime environment

■ Characteristics of the place and process

It is important to stay in a safe mealtime environment. An uninviting environment can put people off their meals and result in inadequate nutrition and hydration, while a distracting environment can reduce focus on following the strategies for safe swallowing and lead to safety concerns. The following tips can help you create an appropriate mealtime environment. Because people with swallowing problems should also enjoy a safe and nutritious environment and food.

- **Reduce potential distractions.**
- **Create an inviting atmosphere.**
- **Meal time and food presentation.**

Mealtime environment

Reduce potential distractions

- Minimize the number of people walking around the meal area.
- Turn off or turn down the volume on the TV, radio, mobile or tablet.
- Avoid loud noises such as microwave or oven timers going off.



(Source: obtained from Canva Pro)

Create an inviting atmosphere

- Decorating the meal area with tablecloths.
- Plants.
- Pictures and curtains can create a warm atmosphere that can help facilitate enjoyment at mealtimes.

Mealtime environment

Meal time and food presentation

- The smell and appealing appearance of food can help to increase appetite
- Do not use feeding syringes or straws during oral feeding.
- Maximum duration of the shots between 40-45 minutes.
- Maintain a comfortable posture.


Practical exercise to apply the theory

Place: Room where meals are usually taken.

In this exercise you must observe the food room and identify the elements of it that are recommended and not recommended according to the previous section. Think about the changes that should be made to make it a suitable place for feeding people with dysphagia.

Infographic of mealtime environment

Infographics available for download on the training platform (<https://indeed-project.org/>) .



indeed Innovative tools for Diets oriented to Education and Health improvement in Dysphagia condition. Co-funded by the Erasmus Programme of the European Union.

MEALTIME ENVIRONMENT

It is important to maintain a safe environment at mealtimes. An unwelcoming environment can discourage people from eating and a distracting environment can reduce attention and lead to safety issues. It is important for people with swallowing problems to have a safe and appropriate eating environment and mealtime. The following tips can help you create an appropriate mealtime environment:

REDUCE POTENTIAL DISTRACTIONS

- Bright, pleasant, quiet place and without noise or distractions.
- Minimize the number of people walking around the meal area.
- Turn off or turn down the volume on the TV, mobile or tablet.
- Avoid loud noises such as microwave or oven timers going off.
- Brake or control of compulsive behaviors during mealtime.

CREATE AN INVITING ATMOSPHERE

- Decorating the meal area with tablecloths, placemats and plants.
- Pictures and curtains can create a warm atmosphere that can help facilitate enjoyment at mealtimes.
- Room and adapted furniture (chair, table, cabinets, ramps, others).
- Adapted kitchenware (cutlery, glasses, plates, tablecloths, etc.) and placed on the table in an accessible and comfortable way for the diner.

MEAL TIME AND FOOD PRESENTATION

- The smell and appealing appearance of food can help to increase appetite.
- Not filling the cutlery with food except in medical cases prescribed.
- Do not use feeding syringes or straws during oral feeding. It is dangerous.
- Establishment of a fixed schedule for all daily meals.
- Maximum duration of the shots between 40-45 minutes.
- After feeding, maintain a comfortable posture above 45° for 30-40 minutes to avoid gastric reflux.

For more information: <https://indeed-project.org/>


Partners: 

Figure 1. Infographic of mealtime environment (Source: designed by Canva Pro)

Body position



Position of a person without problems to eat

- Back in contact with the back of the chair in a 90° position.
- Head and neck aligned with the back.
- Chin slightly inclined towards the chest.
- Feet flat on the ground or footrest.
- Forearms on the table on either side of the cutlery.

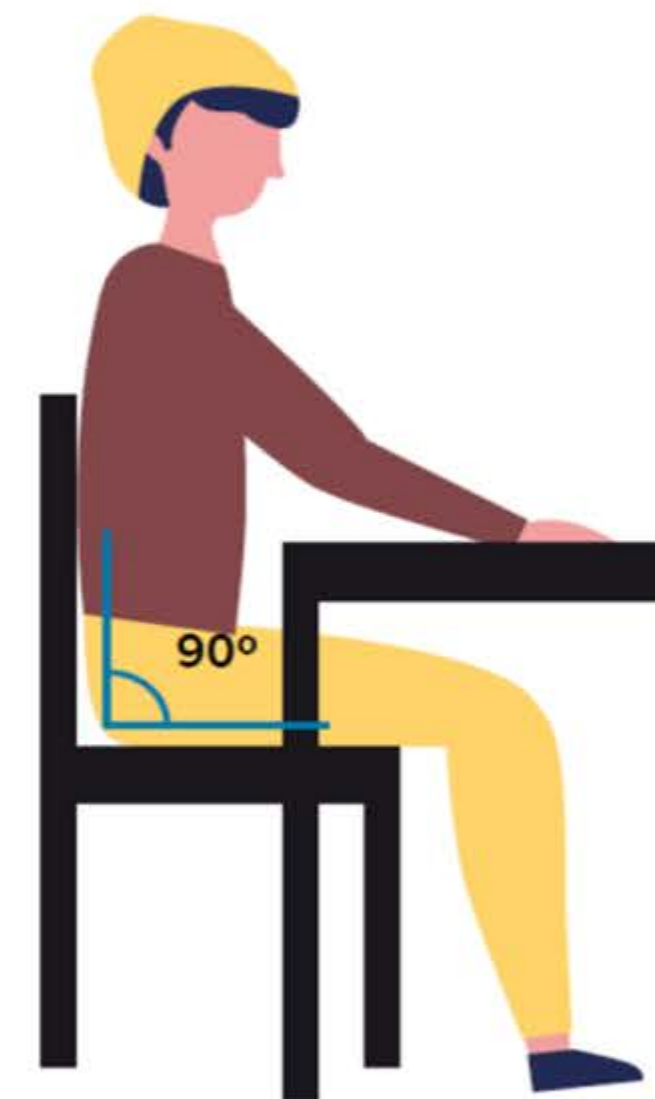


Figure 2. Position of a person without problems to eat (Source: CADIS Huesca)

Body position

■ Position of a person with mobility problems

- Always adopt an elevated position above 45° and as close to 90° as possible.
- Head slightly tilted forward, avoiding neck elongation.
- Chin slightly inclined towards the chest.
- Trunk and feet aligned with head and neck as far as possible.
- The position of the legs will depend on the situation of the person, alternating bent knees with straight knees and feet apart.
- The arms can be supported on the belly or on the armrests of the chair.
- Cushions, pillows or other tools will be used whenever necessary to maintain proper posture.
- Correction of posture will be made whenever necessary throughout the meal.



Figure 3. Position of a person with mobility problem
(Source: CADIS Huesca)

Infographic of body position

Infographics available for download on the training platform (<https://indeed-project.org/>) .

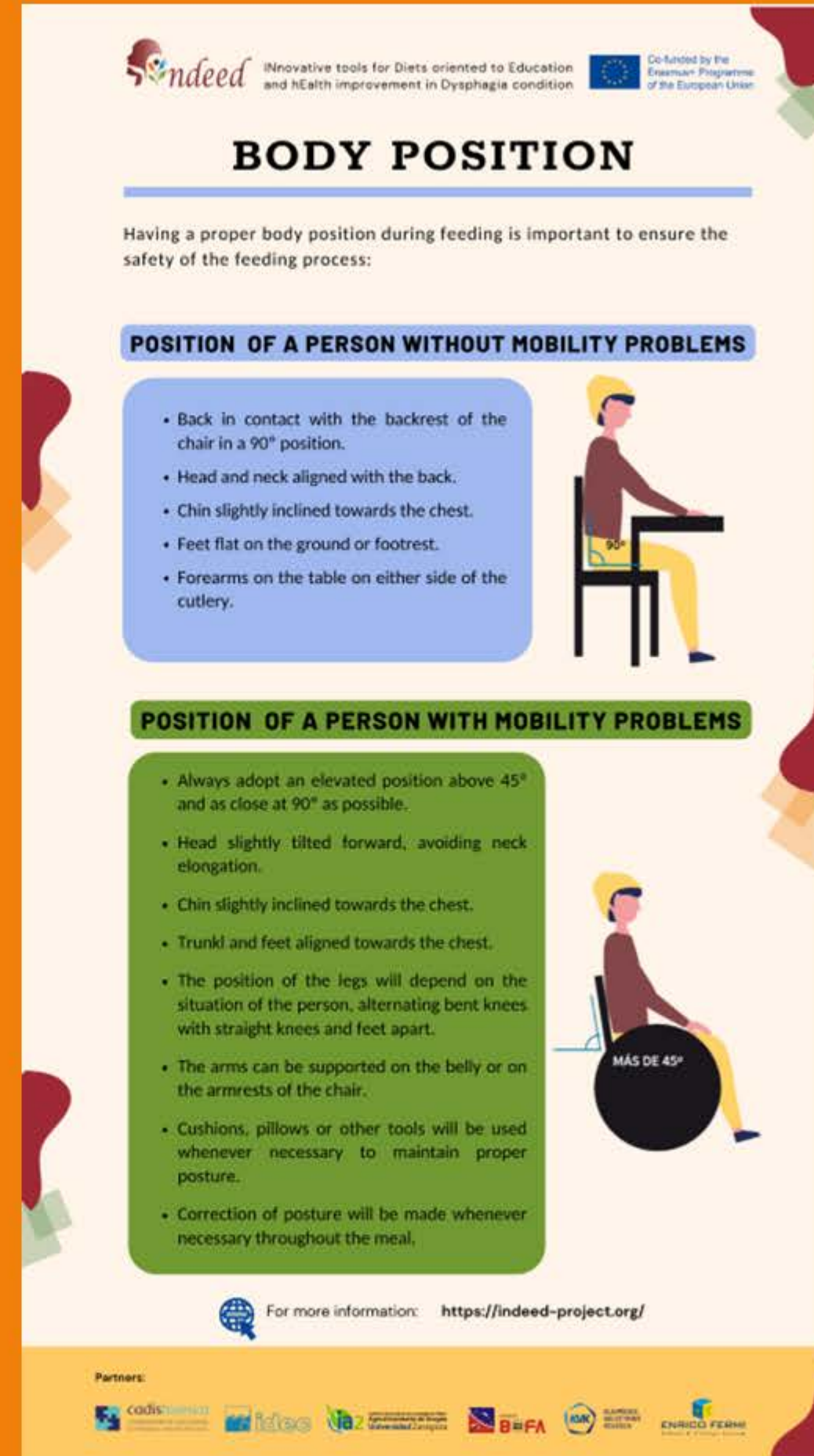


Figure 4. Infographic of body position (Source: designed by Canva Pro)

Feeding caregiver techniques

Feeding caregiver techniques may include, but are not limited, to the following:

- Feed meals when the person is alert and attentive.
- To help feed, the caregiver must position himself at the same level as the patient.
- Check the volume of the food and drink provided.
- Clear and easy-to-understand indications about the feeding process may also be needed. “open your mouth”, “chew”, “swallow”.

Infographic of feeding caregiver techniques

Infographics available for download on the training platform (<https://indeed-project.org/>) .



Figure 5. Infographic of feeding caregiver techniques (Source: designed by Canva Pro)

Feeding equipment and adapted utensils



(Source: obtained from Canva Pro)

The use of support products (instruments, equipment or technical systems that facilitate the daily activity of people with some kind of difficulty or functional limitation) during feeding to prepare, serve, eat or drink, facilitates the development of these activities but also allows the normalization of the feeding process by providing the person with greater autonomy. This has a positive impact on the establishment of social relationships, increases daily activity and improves their quality of life and therefore their self-esteem.

Feeding equipment and adapted utensils

(Sources: CADIS Huesca)

Cutlery



Figure 6

Good Grips Utensils
Built-Up Handle Utensils



Figure 7

**Angle cutlery with
moldable handle**



Figure 9

**Cutlery with soft
PVC coating**



Figure 10

Plastic cutlery



Figure 8

Special cutlery



Figure 11

**Cutlery with
handle and strap**

Feeding equipment and adapted utensils

(Sources: CADIS Huesca)

Cups



Figure 12

**Nose Cut-Out
Beaker “Nosey cup”**



Figure 15

**Transparent cup with
nozzle lid or without lid**



Figure 13

**Two Handled
Mug**



Figure 14

**Double-handled
tumbler with spout**



Figure 16

Medela cup

Feeding equipment and adapted utensils

(Sources: CADIS Huesca)



Plates



Figure 17

**Plates made from durable
polycarbonate plastic**



Figure 18

Partitioned Plate



Figure 19

Manoy sloped plate



Non-slip mat



Figure 20

Non-slip mat



Other feed adapted utensils

There are hundreds of technical aids available on the market to facilitate any of the processes performed during feeding. Those described above are those commonly used in associations or other entities that serve people with disabilities and / or dependence.

Oral care

■ Oral care its implication in dysphagia

Maintaining optimum oral health is pivotal to reaching good general health and well-being. Deterioration in oral health affects general health by causing considerable pain and suffering and by changing what people eat, their speech and their quality of life. Besides, oral diseases are associated with a number of other non-communicable diseases, such as diabetes, cardiovascular disease, respiratory disease, and gastrointestinal and pancreatic cancers. In patients suffering from dysphagia, poor oral health can make their condition even worse.



(Source: obtained from Canva Pro)

Oral care

The most important reason for maintaining a healthy mouth in patients with dysphagia is because of its association with aspiration pneumonia.

So, several risk factors related to oral health such as the presence of caries, number of functional dental pieces, periodontal disease, dental plaque (deposit on natural teeth or on dentures), and tongue coating have been associated with the appearance, severity and mortality of aspiration pneumonia.

Therefore, it is very important to make regular visits to the dentist to treat existing oral and dental problems, to have dentures and prostheses in good condition and to perform more thorough cleanings.

Oral care

Effective oral hygiene

It should include the removal of food debris, the control of the dental plaque and the cleaning of the gums, palate and tongue. The correct technique for proper oral hygiene requires practice and, above all, routine. To do so, it is necessary to follow these steps:

Before toothbrushing:

Due to poor chewing and swallow function, there is likely to be food stagnation in the oral cavity. So, it is very important starting the oral hygiene looking inside the mouth and removing any debris

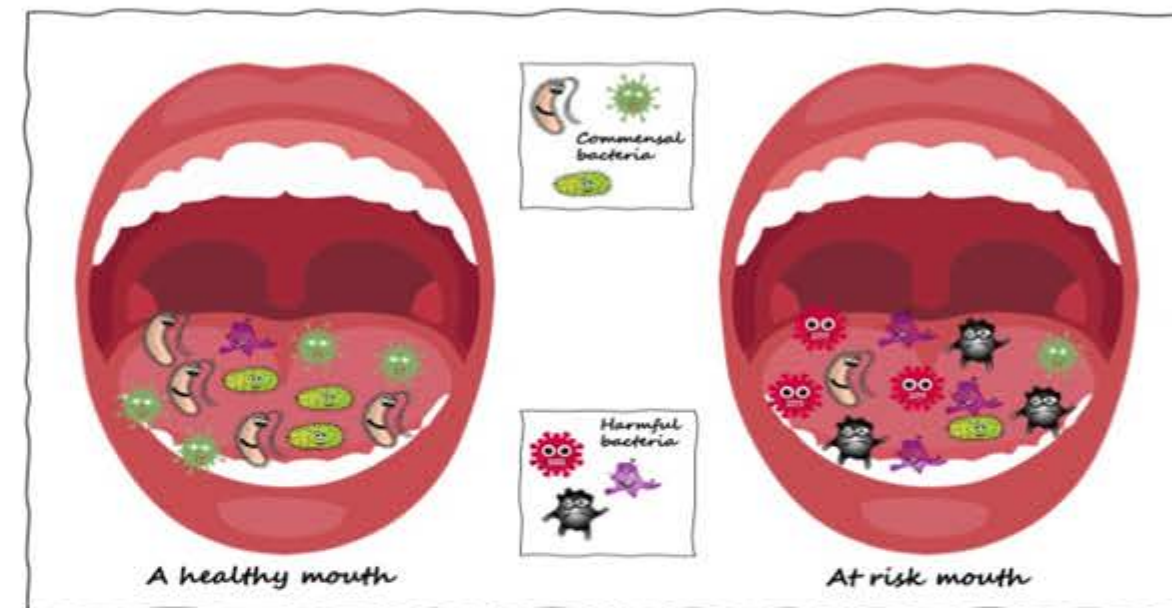


Figure 22. Most common places where residues of food left in the mouth due to dysphagia (Source: Prepared by the authors based on photo from pixabay.com)

Oral care

Toothbrushing

Ideally, brushing should be done after main meals. The duration of brushing should not be less than 2-3 minutes in order to ensure that all areas of the mouth are cleaned.

The most recommended is the modified Bass technique. Briefly, this technique consists on:

- Place your toothbrush at a 45-degree angle to your gum line
- Brush each tooth (or two to three at a time) using a gentle circular movement.
- Brush each tooth well and when finished, flick the toothbrush down the tooth, away from the gum line.

Oral care

- Don't forget to brush all of your teeth and all surfaces in this way – including the outer, inner and top surfaces of the teeth.
- It is important to control the brushing intensity as vigorous brushing can lead to gingival erosion, gingival recession and enamel wear.



Go video. Use of the manual toothbrush
(Source: Consejo General de Dentistas de España)



Figure 23. Toothbrush (Source: pixabay.com)

Oral care

Other oral cleaning tools include:

Electric toothbrush



[Go video. Use of the electric toothbrush](#)
(00:05' 2:05')

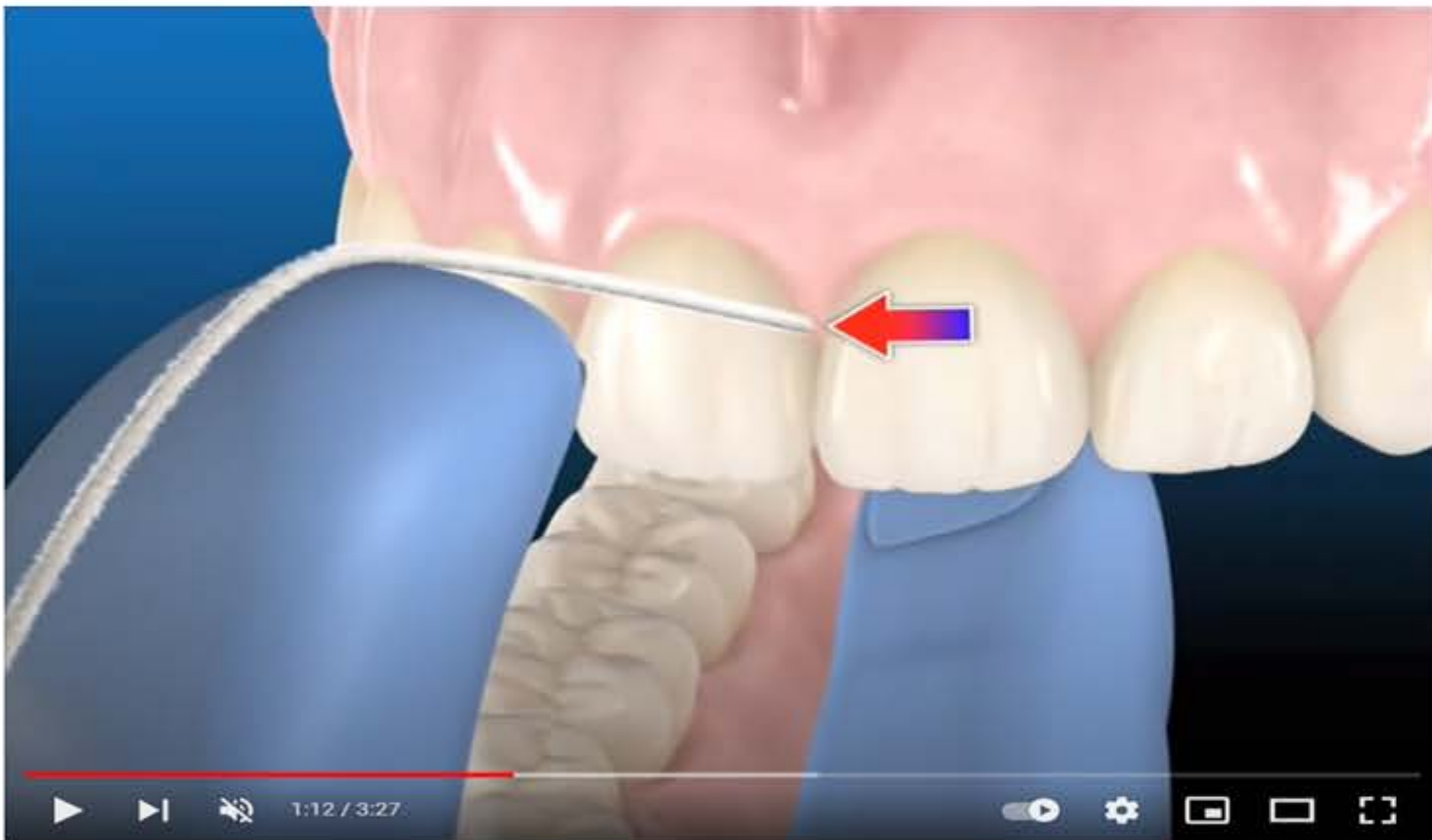
(Source: Consejo General de Dentistas de España)



Figure 24. Electric toothbrush (Source: pixabay.com)

Oral care

Flossing



[Go video. Correct flossing \(00:05' 2:05'\)](#)

(Source: Consejo General de Dentistas de España)



[Figure 25. Floss \(Source: pixabay.com\)](#)

Oral care

Interdental brush



[Go video. Using interdental brush \(2:05' 3:03'\)](#)

(Source: Consejo General de Dentistas de España)



Figure 26. Interdental brush
(Source: <https://www.dentalgooddeal.es>)

Oral care

Tongue scraper



[Go video. Using tongue scraper \(3:03' 2:24'\)](#)

(Source: Consejo General de Dentistas de España)

Oral care

■ Safe oral hygiene

When brushing is done by the individual him/herself, it is always important to look for safe postural strategies.



Figure 27. Example of oral hygiene toothbrush with suction instrument
(Source: <https://www.alimed.com>)



Figure 28. Example of finger toothbrush
(Source: <https://neuroekin.com>)



Figure 29. Gauze pad and depressor
(Source: <https://neuroekin.com>)

Practical exercise to apply the theory.

Materials: Toothbrush and water for rinsing.

This activity consists of applying the BASS brushing method explained in one of the previous sections.

Attached is a video so that you can follow the method by imitating it and experience the sensations of the process.



Go video. The best way to BRUSH YOUR TEETH - Modified Bass Technique©
(Source: Dentalk!, 2021)

Oral care

Practical advice for the cleaning of dentures and storage

It is important to treat the dentures like you would treat your natural teeth. Indeed, dentures must be kept as clean as possible due to they may collect bacteria on them and can affect oral health whilst people are wearing them.

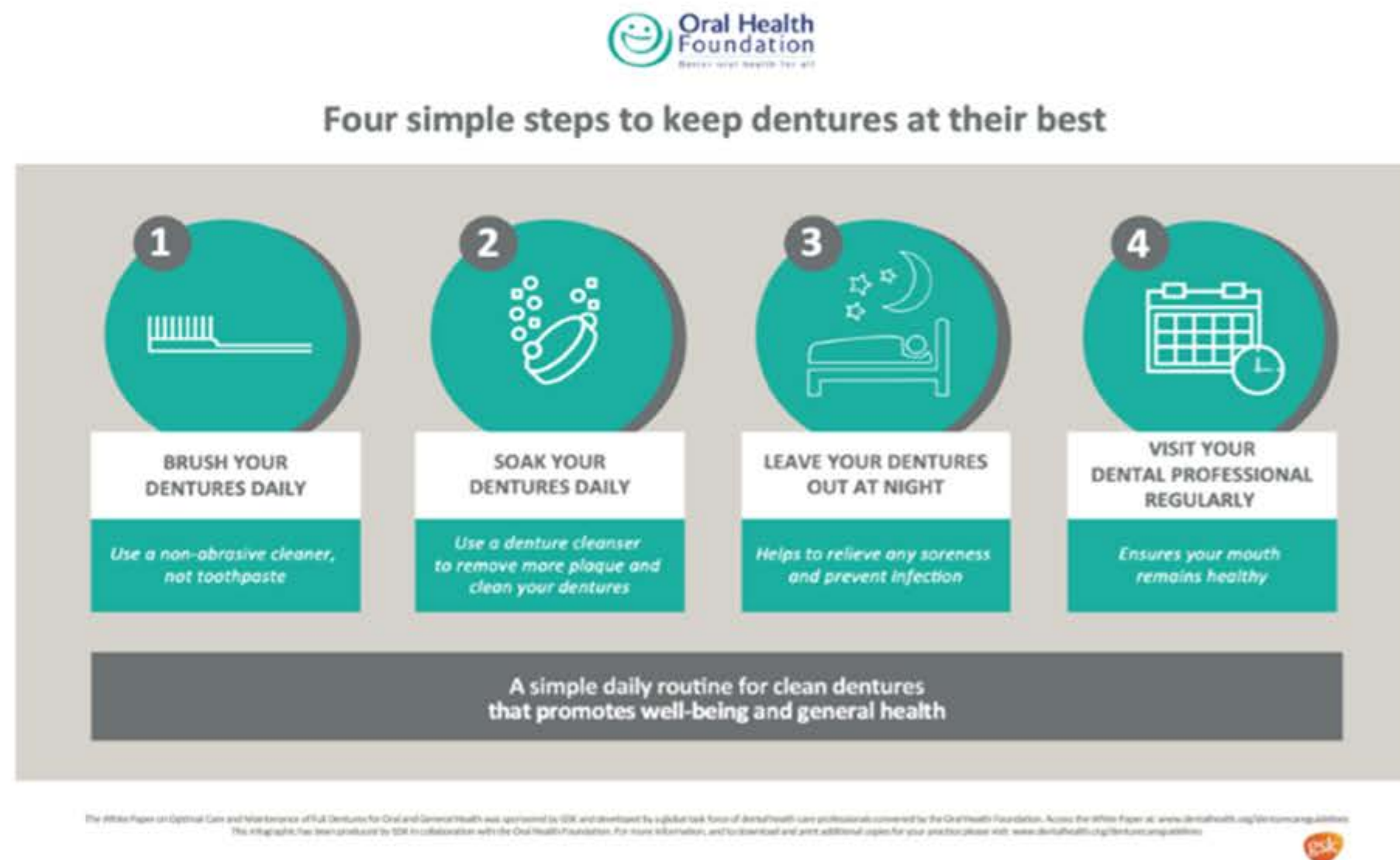


Figure 30. Steps to keep dentures at their best
(Source: <https://www.dentalhealth.org/denturecareguidelines>)

Infographic about feeding equipment and adapted utensils

Infographics available for download on the training platform (<https://indeed-project.org/>) .



Figure 31. Infographic about oral care (Source: designed by Canva Pro)

RESOURCES

Use of a manual toothbrush video: General Council of Dentists of Spain (19 nov 2010). Use of a manual toothbrush [Video]. YouTube. <https://www.youtube.com/watch?v=XzQg3V8ZpbE&t=1s>

Use of the electric toothbrush video: General Council of Dentists of Spain (19 nov 2010). Use of the electric toothbrush [Video]. YouTube. <https://www.youtube.com/watch?v=xO3yIpGBIa4>

Video 67,68,69: General Council of Dentists of Spain (19 nov 2010). Correct use of dental floss [Video]. YouTube. <https://www.youtube.com/watch?v=jK5imyP1VQ4>

Electric Suction Toothbrush video: HIMS (7 april 2018). Oral Clean G100 - Electric Suction Toothbrush. [Video]. YouTube. <https://www.youtube.com/watch?v=3gcdQkOAqXk>

Rdh, H. V. (2022, 15 enero). 19 Ways to Modify Your Toothbrush If You Have Arthritis.

Tooth Be Told. <https://www.mytoothbetold.com/modify-toothbrush-arthritis/>

Modified toothbrush video. OraBrite Dental Products (9 feb 2018). OraBrite's GripEazy Toothbrush Aids. <https://www.youtube.com/watch?v=1U470TbqM80>

The best way to brush your teeth video: Dentalk! (21 apr 2021). The best way to BRUSH YOUR TEETH - Modified Bass Technique© [Video]. YouTube.

<https://www.youtube.com/watch?v=VdjmGxq-X7M>

Cleaning dentures video. Skills Lab (20 ago 2017). B 702 Cleaning dentures [Video]. YouTube. <https://www.youtube.com/watch?v=8bsB-h108VY>

Complete this table for each activity



The activity takes 2 hours.



The goal of this activity is to learn about feeding techniques, adapted utensils, oral care and other essential actions during mealtimes for people



with dysphagia.
This module involves basic knowns about characteristics of mealtime related to dysphagia.



We need a digital device to do this activity.



Online activity.

Time for discussion

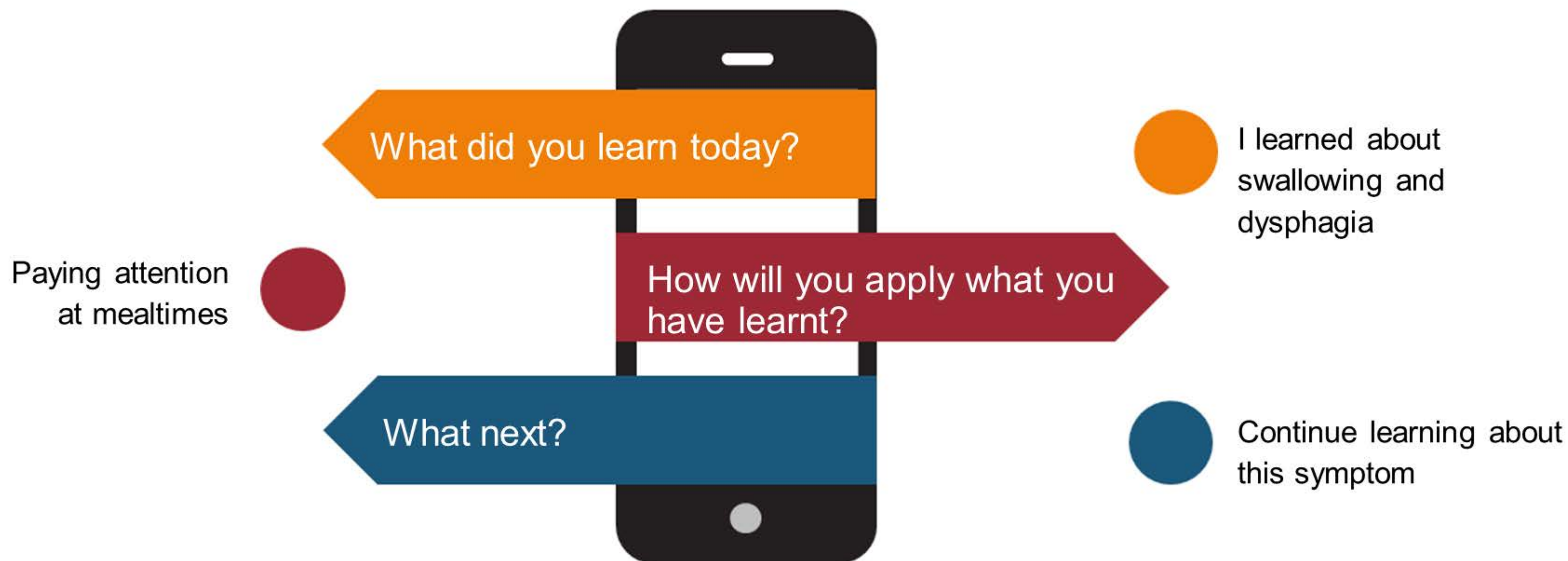
Any questions?



Review



Reflect on the session



Feedback



How many stars
would you give
this workshop?
(1 to 5)?



What reasonable
change would you
recommend?



What did you
like the
MOST?



What did you
like the
LEAST?



Indeed partners



<https://indeed-project.org/>

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