

Chapter 3

Consistency Altered Diets

Indication

- People diagnosed with dysphagia.
- Such patients have difficulty in:
 - Chewing.
 - Managing food in the mouth.
 - Swallowing.
- Problems in chewing and swallowing can lead to:
 - Aspiration (inhalation of food into the airway (bronchi) and lungs).
 - Respiratory infections.
 - Pneumonia.

Dysphagia may occur due to:

- Aging: [elderly are more affected by these difficulties]
- Or due to disease conditions such as:
 - Stroke.
 - Cerebral palsy.
 - Dementia: a chronic or persistent mental disorder caused by brain disease or injury and marked by memory disorders, personality changes, and impaired reasoning.
 - Head or neck injury.
 - Cancer.
 - Other illnesses.

Treatment

- Treatment plan is individualized.
- Formulated by a health care team including:
 - Radiologist (X-ray specialist).
 - Swallowing therapist (occupational therapist).
 - Dietitian.
 - Nurse.
- Patients should be carefully assessed and evaluated.

Treatment involves

- Changing the consistency of food and beverage.
- Oral-motor exercise.
- Changes in eating techniques (use of specially designed utensils + proper positioning during eating).
- Food Intake should be monitored (supervised).
- Periodically re-evaluated.
- Progress to regular food and more independence is essential.

Goals of consistency alterations

- To reduce the risk of:
 - Choking, and
 - Aspiration.

Allowed foods

- Should be based on regular diet recommendations if no other modifications are required.
- Should be appetizing.
- Should be nutritious: provides enough nutrients.
- Should provide enough fluids.
- Should come with the least possible restrictions and modification.
- ❖ Food is preferred to supplements whenever possible, unless there is severe dysphagia which may impose limitations in food that can be offered.

National Dysphagia Diets

NDDs

☐ FOOD CONSISTENCY

- Dysphagia diets come in 3 levels of texture modification:
 - ✓ How food feels in the mouth such as dry, soft, smooth, rough, lumpy.
- 1. NDD Level I.
- 2. NDD Level II.
- 3. NDD Level III.

NDD Level I

Dysphagia Pureed Diet

- ❑ Prescribed for those who have severe to moderate dysphagia:
 - Cannot chew.
 - Cannot control manipulation of food in their mouth.
 - Cannot protect their airway.
- ❖ This texture can be given to any diet portion size or therapeutic diet.

NDD Level I

Dysphagia Pureed Diet Cont'd.

☐ Food should be:

- Pureed.
- Homogenous.
- Cohesive.
- Pudding like.
- No Coarse Textures are allowed: foods like raw fruits, vegetables and nuts.

NDD Level II

Mechanically Altered

- Prescribed for those who have moderate to mild dysphagia:
 - Those who can chew a little [chewing ability is required for this diet].
- This diet is a transition from pureed to more solid texture.
- This diet is intended to minimize the chewing and to ease swallowing.
- This texture can be given to any diet portion size or therapeutic diet.

NDD Level II

Mechanically Altered Cont'd.

Foods should be:

- Finely ground; foods that are fork mash-able are included.
- Moistened.
- Soft textured.
- Easily formed into bolus.
- Example: Meat should be either ground or minced or cut into very small pieces not bigger than $\frac{1}{4}$ inch or a little more than $\frac{1}{2}$ cm.

Level III

Dysphagia Advanced Diet

Soft Diet (alternative name)

- Prescribed for mild dysphagia:
 - Mild chewing difficulty.
 - Transition to Regular diet.
 - Adequate dentures and mastication.

- Food should be:
 - Soft in texture, almost regular texture.
 - Foods are diced, chopped or cut into bite size pieces, shredded, mashed, moistened.

- Avoid: very hard, sticky and crunchy foods, very dry foods, and tough crusts.

- ❖ This texture can be given to any diet portion size or therapeutic diet.

How can one prepare foods?

- To moisten foods and add flavor, serve food with gravies or sauces.
- Pour sauce or gravy over bread slices or syrup over pancakes, allow the food to soften.
- Cook vegetables until tender.
- ❖ Prepared foods can be frozen in small portions and reheated at a later time.

LIQUID CONSISTENCY

- Liquid consistency adjustment is necessary for:
 - People with swallowing difficulty.
- Many of these patients can handle thickened foods and beverages better than normal thin foods like milk, coffee and water.
- Swallowing difficulty should be evaluated by:
 - ✓ Speech or occupational therapists who decides the level of consistency.

Level of Consistency Alteration

- Speech or occupational therapist uses the term “Centipoise [cP]”:
 - To measure or describe the level of consistency or viscosity [thickness] of fluids given to these patients.
 - ✓ Centipoise is a unit of viscosity.
 - ✓ Centipoise is abbreviated by cP.

Centipoise (cP) is a measure or unit of viscosity

Thin: water, milk, tea, coffee, juice	1-50 cP
Nectar like: Buttermilk, tomato juice, fruit nectar	51-350 cP
Honey like: as thick as honey	351-1,750 cP
Spoon-thick: as thick as puddings	Over 1,750 cP

Methods to Change Liquid Consistency

- Do not use thickeners made with gum because gum binds water and passes undigested through the small intestine; so it withdraws water with it, thus they might contribute to dehydration.
- Use starch which releases water during digestion and thus helps in hydration.
- Commercial thickeners which use starch as the thickener.
- For pureed foods and liquids: you can use:
 - Starch.
 - Flour.
 - Bread and cracker crumbs.
 - Commercial thickeners.
 - Instant pudding mixes or infant cereals or potato flakes.
- ❖ Avoid all foods that change into liquid at room temperature or body temperature such as: ice-cream and milkshakes.

To achieve the right consistency

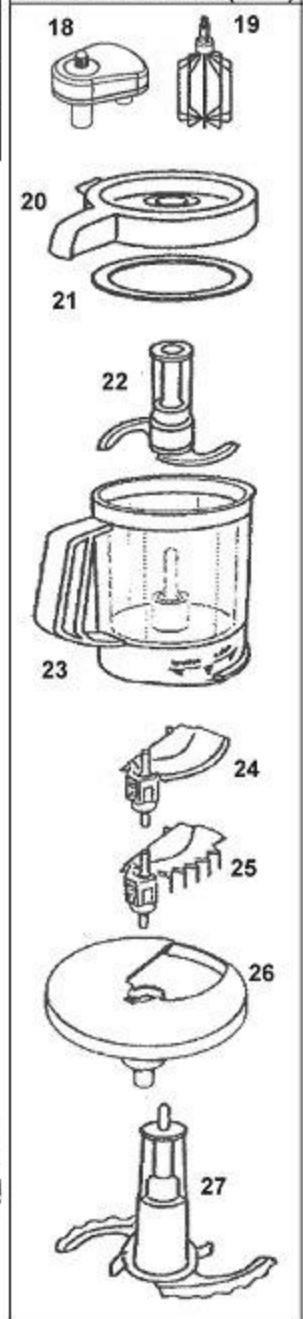
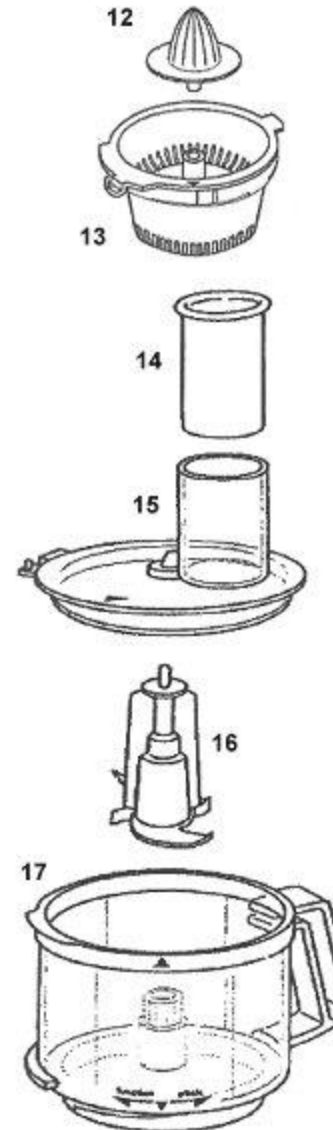
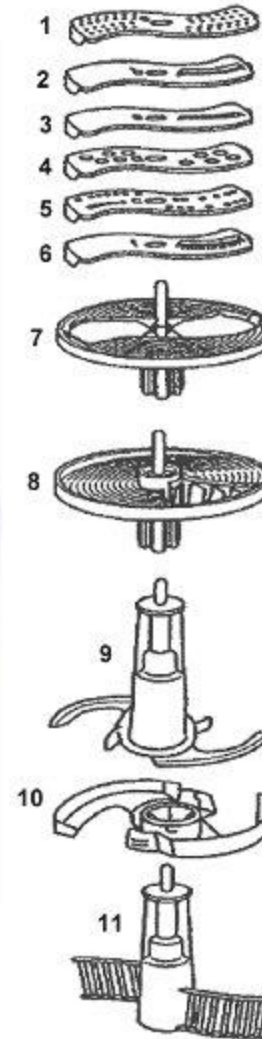
- Use the food processor for pureeing.
- Do not use the food blender because usually blender needs more liquid and thus increasing the volume of the pureed food:
 - This might contribute to less nutrient intake [stomach capacity].

Food Processor

BRAUN
3202 3205
K650 - K750



Additional for 3202 (K750)



Blender



Chopper cup

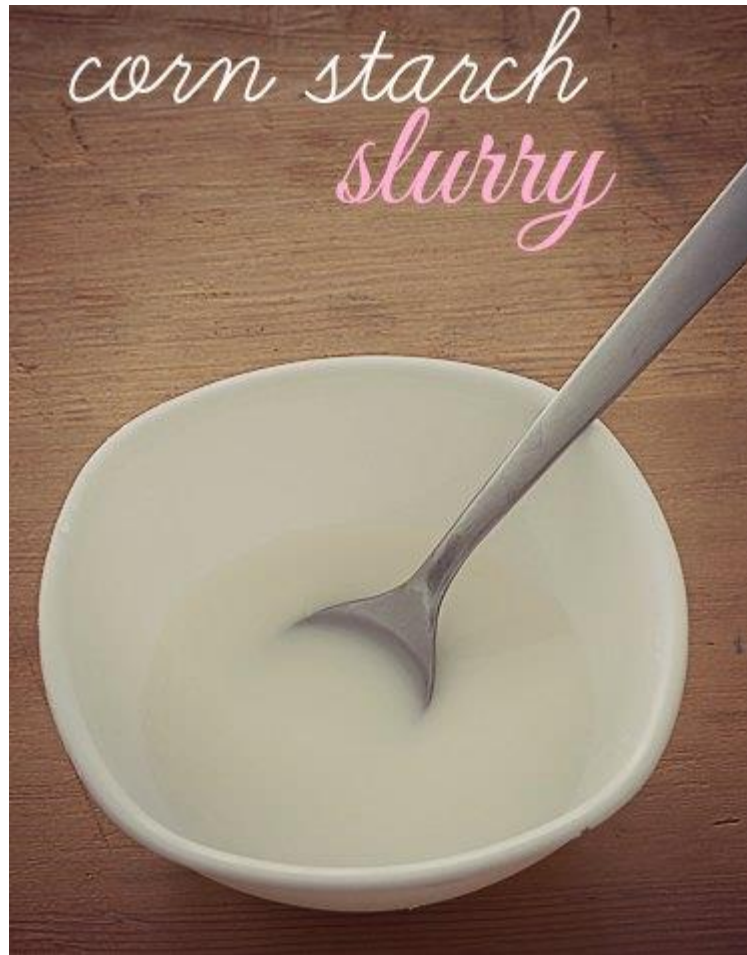


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How to adjust the consistency of food

- Adjust the consistency after pureeing by using:
 - Slurry: a combination of starch (usually cornstarch, flour, potato starch or arrowroot) and cold liquid (usually water but milk or juice or soup etc. can be used as well) which is mixed together and used to thicken a soup or sauce.
 - Slurry is made in the proportion of 1-4 Tbsp. of thickener in 2 c of liquid.
 - Slurry can be used to moisten bread, cakes, cookies, or crackers.
 - Slurry can be used to thicken liquids.
 - Syrup can be used to soak pancakes.
 - Soup can be used to thin down pureed starchy vegetables.



Determining portion size of consistency altered food

1. Puree the portion or portions you want to offer.
2. Then adjust consistency [either thinning (thinner should be nutritious not water) or thickening].
3. Then the new portion size is achieved.

Example:

Desired serving size is 1 c pureed vegetable.

Puree the vegetable then add the slurry.

1 c pureed vegetable + $\frac{1}{4}$ c of slurry = $1 \frac{1}{4}$ is the new serving size.

Example:

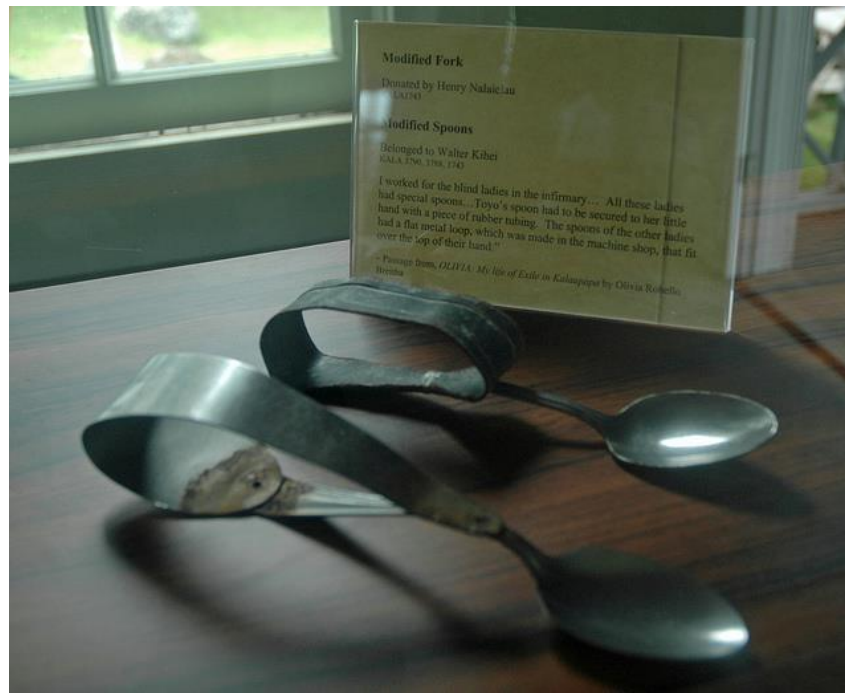
Desired serving size is $\frac{1}{2}$ c of pureed vegetable:

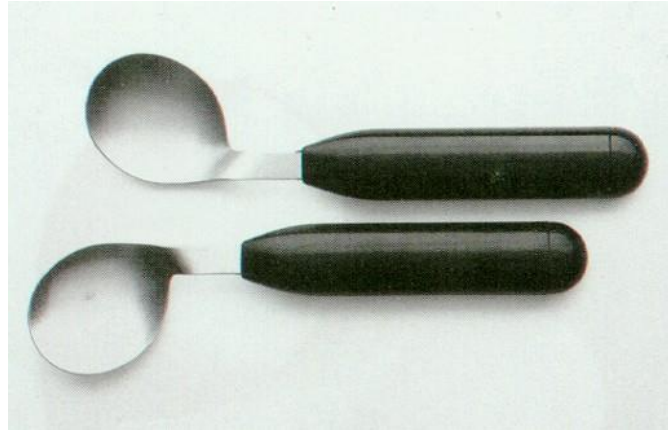
- $\frac{1}{2}$ cup pureed starchy vegetable + $\frac{1}{4}$ c of thinner
- then new portion size is $\frac{3}{4}$ c

Appealing Presentation of Pureed Food



Modified Eating Utensils











End of Chapter