

## The National Dysphagia Diet

The National Dysphagia Diet (NDD) is a dietary approach used in dysphagia management to prevent aspiration during mealtimes. It consists of eight levels (0-7) that include both foods and liquids on a continuum. The levels range from thin liquids to regular, everyday foods with varying textures. Drinks/liquids are measured from Levels 0-4, while foods are measured from Levels 3-7. Each level has specific characteristics and requirements. For example, Level 0: Thin refers to unthickened beverages, while Level 4: Pureed, Extremely Thick includes foods that can be consumed with a spoon but not easily drunk from a cup. Level 7: Regular has no texture restrictions and includes a wide range of normal foods with different textures, including soft, stringy, hard, crunchy, and more. The NDD is designed to cater to individuals with dysphagia, who may have difficulty swallowing or are at risk of aspiration.



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### Drinks Levels 0 to 3

#### Level 0: Thin

##### Zero with Thin Liquid

Thin Liquids refers to unthickened beverages like watery liquids such as juice, tea, milk, soda, broth, and other liquids that are not modified in consistency. These are typically the standard consistency of liquids and do not require any modifications for individuals with swallowing difficulties. They can be drunk through a nipple, cup, or straw.

#### Level 1: Slightly Thick

##### (1) Wand with Slightly Thick Liquid

Level 1: Slightly Thick in the National Dysphagia Diet refers to liquids that are thicker than water but still flow easily through a straw or nipple. They require slightly more effort to drink compared to thin liquids. An example of a Level 1 liquid would be nectar-thick liquids such as apricot nectar or tomato juice.

#### Level 2: Mildly Thick

##### (2) Tutu with Mild-green-sauce Thick Liquid

Level 2: Mildly Thick in the National Dysphagia Diet refers to liquids that flow off a spoon more slowly than thinner drinks but can still be sipped or sucked from a straw with some effort. They are thicker than Level 1 liquids. Examples of Level 2 liquids include nectar-thickened fruit juices or mildly thickened milk or dairy alternatives.

### Food – Levels 4 to 7

#### Level 3: Moderately Thick Food

##### (3) Tree with Moderate-mustard Thick Food

Level 3 foods are characterized by their texture, which is smooth but not lumpy. These foods do not require chewing and can be easily consumed with a spoon. However, they are not suitable for eating with a fork. Unlike molded gelatin, they are not thick enough to maintain a stiff form on a plate. Instead, they have a softer consistency that allows them to be easily spooned and eaten. Examples include baby foods like runny rice cereal or runny pureed fruit.

## **Level 4: Pureed, Extremely Thick**

### **(4) Fork Pureed Food**

Level 4: Pureed, Extremely Thick is a category of food that is typically eaten with a spoon, although using a fork is also possible. It cannot be consumed by drinking from a cup or through a straw due to its thick consistency. This level does not require chewing and can be piped, layered, or molded while maintaining its shape. It exhibits slow movement under gravity but cannot be poured. When tilted, it falls off a spoon in a single spoonful but continues to hold its shape on a plate. It does not contain lumps, is not sticky, and should not separate into liquid and solid components. The physiological rationale for this level of thickness includes ease of tongue control, requiring less propulsion effort compared to higher levels, and not requiring biting or chewing. However, if the food is too sticky, it may lead to increased residue in the mouth and throat. This level is not suitable for foods that require chewing, controlled manipulation, or bolus formation. It is also recommended for individuals experiencing pain during chewing or swallowing, as well as those with missing teeth or ill-fitting dentures. An example of this level would be pureed mashed potatoes or apple sauce.

## **Level 5: Minced, Moist**

### **(5) Hand Minced Moist Food**

Level 5: Minced, Moist in the National Dysphagia Diet is characterized by foods that can be eaten with a fork or spoon. In some cases, individuals with excellent hand control may be able to use chopsticks. These foods can be scooped and shaped on a plate, resembling a ball shape. They have a soft and moist texture without any separate thin liquid. Small lumps are visible within the food, with specific size guidelines for pediatric and adult populations. The lumps are easily squashed with the tongue. The physiological rationale for this level is that biting is not required, and minimal chewing is needed. The soft small particles in this texture can be separated using tongue force alone. Tongue force is also necessary for moving the bolus. This level is suitable for individuals experiencing pain or fatigue during chewing, as well as those with missing teeth or poorly fitting dentures. Examples here would be finely minced meats or vegetables like carrots or peas.

## **Level 6: Soft, Bite-sized**

### **(6) Sax and Soft-feather Bite-sized Food**

Level 6: Soft in the National Dysphagia Diet is characterized by foods that can be eaten with a fork, spoon, or chopsticks. They can be mashed or broken down with pressure from utensils, and while a knife is not necessary to cut the food, it may be used to assist in loading the fork or spoon. The food is soft, tender, and moist throughout, without any separate thin liquid. Chewing is required before swallowing, and the food is served in appropriately sized "bite-sized" pieces. This level ensures that biting is not necessary, but chewing is required, with food piece sizes designed to minimize the risk of choking. Tongue force and control are necessary for moving the food within the mouth for chewing and oral processing, as well as for moving the bolus for swallowing. This level is beneficial for individuals experiencing pain or fatigue while chewing and those with missing teeth or poorly fitting dentures. Examples of foods at this level include meats at the size of 8mm for pediatrics and 1.5-1.5cm for adults. This can include casseroles, curries, and cereals.

## **Level 7: Regular**

### **Lucky (7) Slot-machine and Regular Food**

Level 7: Regular is a category in the National Dysphagia Diet that has no texture restrictions. It encompasses a wide range of normal, everyday foods with different textures that are suitable for individuals of various ages. At this level, individuals can use any method to eat these foods, whether they are hard and crunchy or naturally soft. The sample size of the foods is not restricted, allowing for a variety of sizes. Level 7 includes foods with characteristics such as being hard, tough, chewy, fibrous, stringy, dry, crispy, crunchy, or crumbly. It also includes foods that contain pips, seeds, piths inside the skin, husks, or bones. Dual-consistency or mixed-consistency foods and liquids are also included in this level. Physiologically, Level 7 requires the ability to bite and chew both hard and soft foods for a sufficient amount of time to form a soft cohesive bolus that is ready to swallow. It also requires the ability to remove bones or gristle from the mouth to ensure safe swallowing.