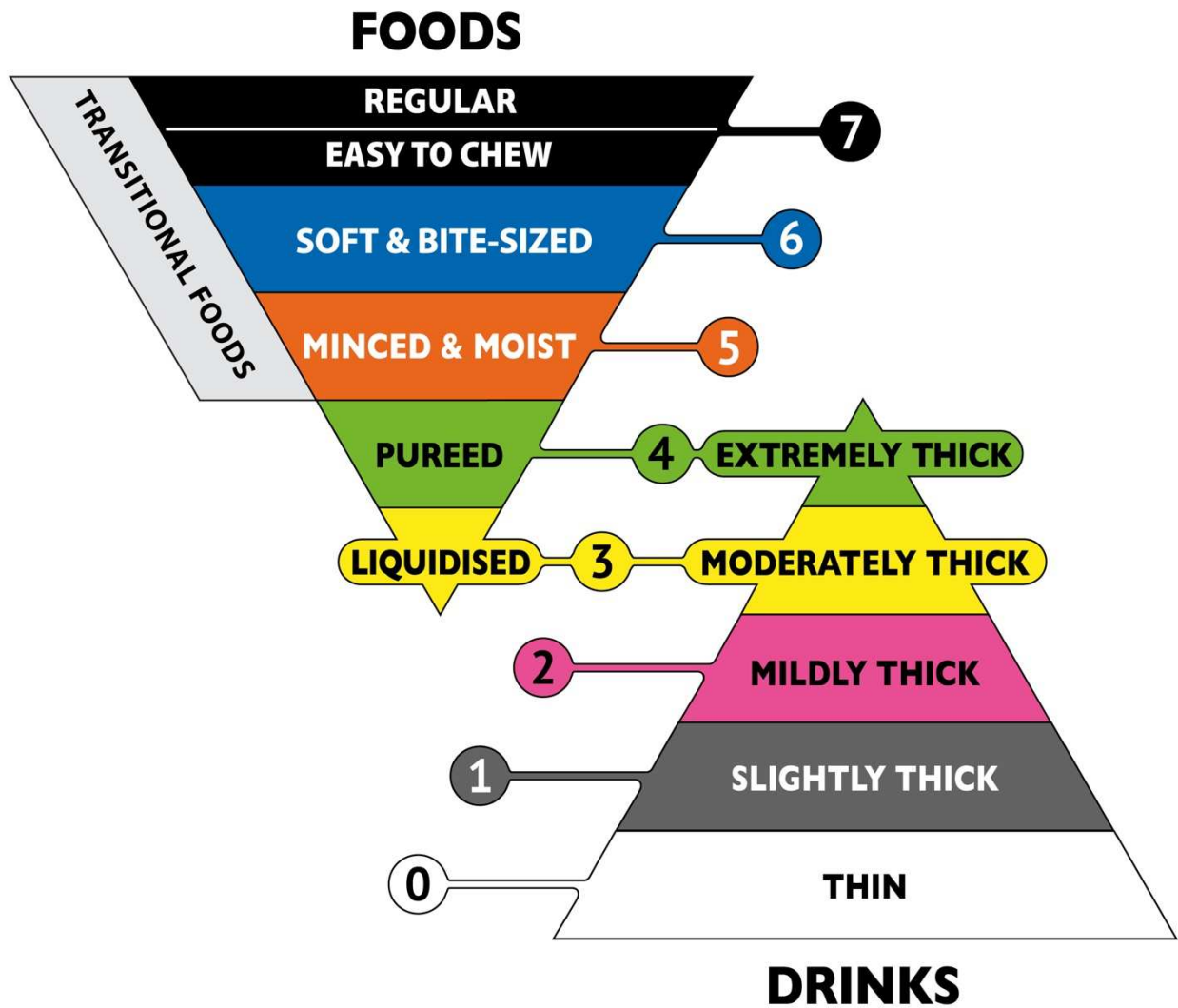




## Complete IDDSI Framework Detailed definitions 2.0 | 2019

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IDDSI 2.0 | July, 2019

## INTRODUCTION

The International Dysphagia Diet Standardisation Initiative (IDDSI) was founded in 2013 with the goal of developing new international standardised terminology and definitions to describe texture modified foods and thickened liquids used for individuals with dysphagia of all ages, in all care settings, and all cultures.

Three years of work by the International Dysphagia Diet Standardisation Committee culminated in the 2016 release and 2017 publication of the IDDSI Framework consisting of a continuum of 8 levels (0-7). Levels are identified by numbers, text labels and colour codes. [Reference: Cichero JAY, Lam P, Steele CM, Hanson B, Chen J, Dantas RO, Duivestein J, Kayashita J, Lecko C, Murray J, Pillay M, Riquelme L, Stanschus S. (2017) Development of international terminology and definitions for texture-modified foods and thickened fluids used in dysphagia management: The IDDSI Framework. *Dysphagia*, 32:293-314. <https://link.springer.com/article/10.1007/s00455-016-9758-y>]

The Complete IDDSI Framework Detailed Definitions 2019 is an update to the 2016 document. The Complete IDDSI Framework Detailed Definitions document provides detailed descriptors for all levels of the IDDSI Framework. Descriptors are supported by simple measurement methods that can be used by people with dysphagia or by caregivers, clinicians, food service professionals or industry to confirm the level a food or drink fits into.

This document is to be read in conjunction with IDDSI Testing Methods 2019, IDDSI Evidence 2016 and IDDSI Frequently Asked Questions (FAQs) documents ( <https://iddsi.org/framework/>).

The IDDSI Framework provides a common terminology to describe food textures and drink thickness. IDDSI tests are intended to confirm the flow or textural characteristics of a particular product at the time of testing. Testing should be done on foods and drinks under the *intended serving conditions* (especially temperature). The clinician has the responsibility to make recommendations for foods or drinks for a particular patient based on their comprehensive clinical assessment.

IDDSI would like to acknowledge the interest and participation of the global community including patients, caregivers, health professionals, industry, professional associations and researchers. We would also like to thank our sponsors for their generous support.

Please visit <https://iddsi.org/> for further information.

### The IDDSI Board:

**The IDDSI Board are a group of volunteers who do not draw a salary from IDDSI. They offer their knowledge, expertise and time for the benefit of the international community.**

Co-Chairs: Peter Lam (CAN) & Julie Cichero (AUS);

Board Members: Jianshe Chen (CHN), Roberto Dantas (BRA), Janice Duivestein (CAN), Ben Hanson (UK), Jun Kayashita (JPN), Mershen Pillay (ZAF), Luis Riquelme (USA), Catriona Steele (CAN), Jan Vanderwegen (BE).

Past Board Members: Joseph Murray (USA), Caroline Lecko (UK), Soenke Stanschus (GER)

The International Dysphagia Diet Standardisation Initiative Inc. (IDDSI) is independent and operates as a not-for-profit entity. IDDSI is grateful to a large number of agencies, organizations and industry partners for financial and other support. Sponsors have not been involved with the design or development of the IDDSI framework.

Implementation of the IDDSI framework is in progress. IDDSI is extremely grateful to all sponsors supporting implementation <https://iddsi.org/about-us/sponsors/>

|                                                            |                                                                                                                                                                                                                     |
|------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Description/<br/>Characteristics</b>                    | <ul style="list-style-type: none"> <li>• <b>Flows like water</b></li> <li>• <b>Fast flow</b></li> <li>• <b>Can drink through any type of teat/nipple, cup or straw as appropriate for age and skills</b></li> </ul> |
| <b>Physiological rationale for this level of thickness</b> | <ul style="list-style-type: none"> <li>• Functional ability to safely manage liquids of all types</li> </ul>                                                                                                        |

Although descriptions are provided, use IDDSI Testing methods to decide if the liquid meets IDDSI Level 0.

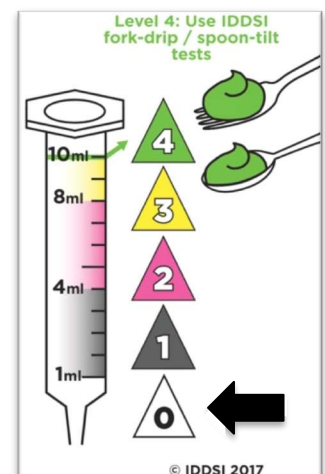
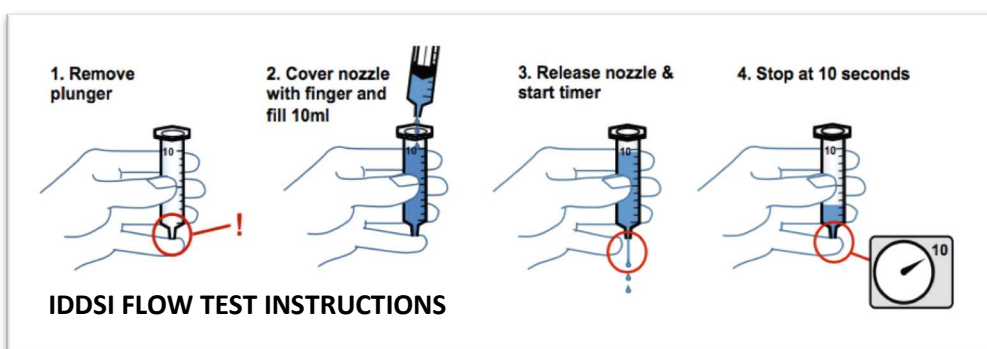
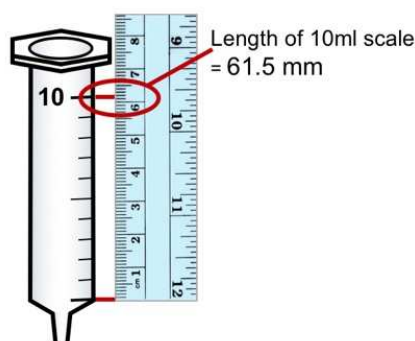
## TESTING METHOD

See also *IDDSI Testing Methods* document or <https://iddsi.org/framework/drink-testing-methods/>

|                  |                                                                                                                                                                                     |
|------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| IDDSI Flow Test* | <ul style="list-style-type: none"> <li>• Less than 1 mL remaining in the 10 mL slip tip syringe<sup>#</sup> after 10 seconds of flow (see IDDSI Flow Test instructions*)</li> </ul> |
|------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

### #Before you test...

You **must check** your syringe length because there are differences in syringe lengths. Your syringe should look like this





# SLIGHTLY THICK

|                                                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Description/<br/>Characteristics</b>                    | <ul style="list-style-type: none"> <li>• <b>Thicker than water</b></li> <li>• <b>Requires a little more effort to drink than thin liquids</b></li> <li>• <b>Flows through a straw, syringe, teat/nipple</b></li> <li>• <b>Similar to the thickness of most commercially available 'Anti-regurgitation' (AR) infant formulas</b></li> </ul>                                                                                                                          |
| <b>Physiological rationale for this level of thickness</b> | <ul style="list-style-type: none"> <li>• Often used in the paediatric population as a thickened drink that reduces speed of flow yet is still able to flow through an infant teat/nipple. Consideration to flow through a teat/nipple should be determined on a case-by-case basis.</li> <li>• Also used in adult populations where thin drinks flow too fast to be controlled safely. These slightly thick liquids will flow at a slightly slower rate.</li> </ul> |

Although descriptions are provided, use IDDSI Testing methods to decide if the liquid meets IDDSI Level 1.

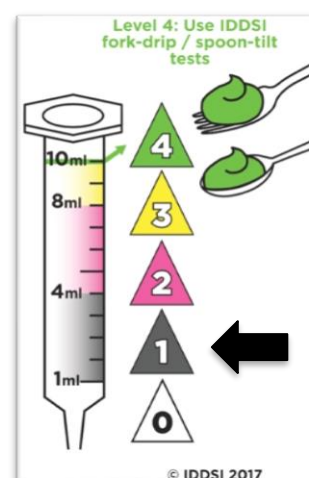
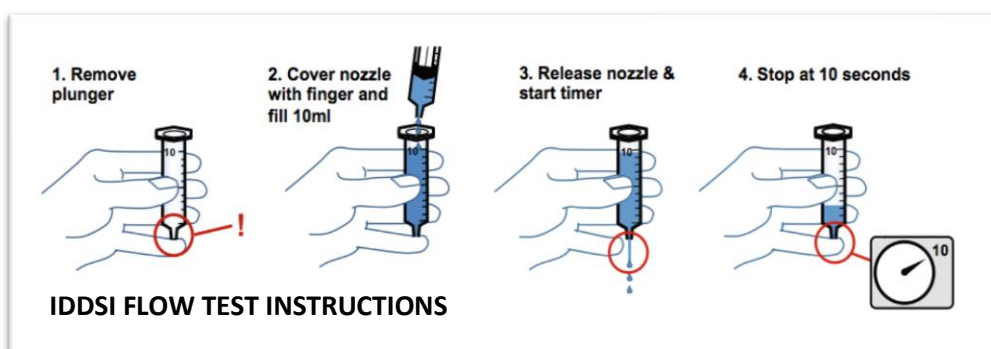
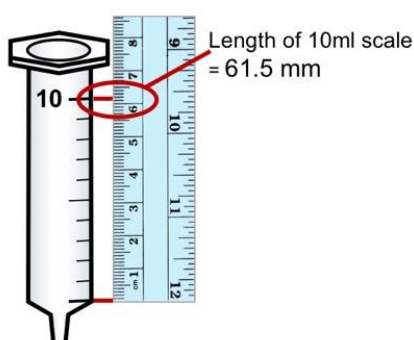
## TESTING METHOD

See also *IDDSI Testing Methods* document or <https://iddsi.org/framework/drink-testing-methods/>

|                         |                                                                                                                                                                                                       |
|-------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>IDDSI Flow Test*</b> | <ul style="list-style-type: none"> <li>• Test liquid flows through a 10 mL slip tip syringe<sup>#</sup> leaving 1-4 mL in the syringe after 10 seconds (see IDDSI Flow Test instructions*)</li> </ul> |
|-------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

### #Before you test...

You **must check** your syringe length because there are differences in syringe lengths. Your syringe should look like this





# MILDLY THICK

|                                                            |                                                                                                                                                                                                                                                                                                 |
|------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Description/<br/>Characteristics</b>                    | <ul style="list-style-type: none"> <li>• Flows off a spoon</li> <li>• Sippable, pours quickly from a spoon, but slower than thin drinks</li> <li>• Mild effort is required to drink this thickness through standard bore straw (standard bore straw = 0.209 inch or 5.3 mm diameter)</li> </ul> |
| <b>Physiological rationale for this level of thickness</b> | <ul style="list-style-type: none"> <li>• If thin drinks flow too fast to be controlled safely, these Mildly Thick liquids will flow at a slightly slower rate</li> <li>• May be suitable if tongue control is slightly reduced.</li> </ul>                                                      |

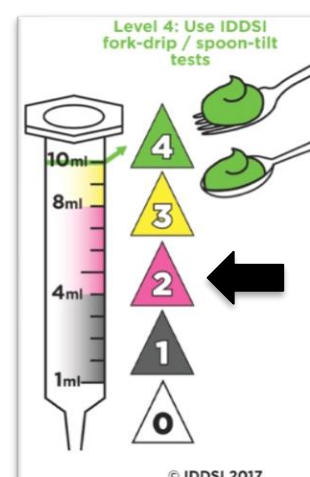
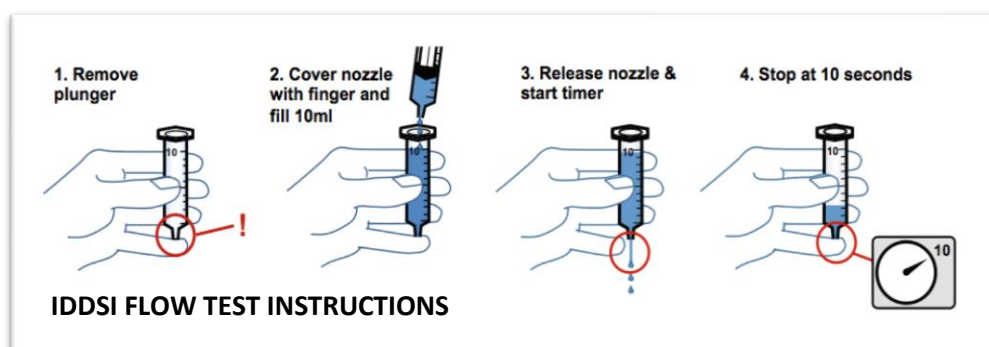
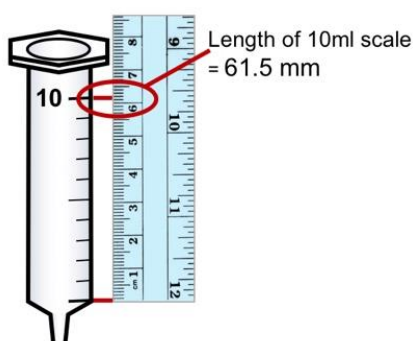
Although descriptions are provided, use IDDSI Testing methods to decide if the liquid meets IDDSI Level 2.

**TESTING METHOD**

See also *IDDSI Testing Methods* document or <https://iddsi.org/framework/drink-testing-methods/>

|                         |                                                                                                                                                                                              |
|-------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>IDDSI Flow Test*</b> | <ul style="list-style-type: none"> <li>• Test liquid flows through a 10 mL slip tip syringe leaving 4 to 8 ml in the syringe after 10 seconds (see IDDSI Flow Test instructions*)</li> </ul> |
|-------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

**#Before you test...**  
 You **must check** your syringe length because there are differences in syringe lengths. Your syringe should look like this





# 3 MODERATELY THICK

|                                                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
|------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Description/characteristics</b>                         | <ul style="list-style-type: none"> <li>• Can be drunk from a cup</li> <li>• Moderate effort is required to suck through a standard bore or wide bore straw (wide bore straw = 0.275 inch or 6.9 mm)</li> <li>• Cannot be piped, layered or molded on a plate because it will not retain its shape</li> <li>• Cannot be eaten with a fork because it drips slowly in dollops through the prongs</li> <li>• Can be eaten with a spoon</li> <li>• No oral processing or chewing required – can be swallowed directly</li> <li>• Smooth texture with no ‘bits’ (lumps, fibers, bits of shell or skin, husk, particles of gristle or bone)</li> </ul> |
| <b>Physiological rationale for this level of thickness</b> | <ul style="list-style-type: none"> <li>• If tongue control is insufficient to manage Mildly Thick drinks (Level 2), this Liquidised/Moderately thick level may be suitable</li> <li>• Allows more time for oral control</li> <li>• Needs some tongue propulsion effort</li> <li>• Pain on swallowing</li> </ul>                                                                                                                                                                                                                                                                                                                                  |

Although descriptions are provided, use IDDSI Testing methods to decide if the food/liquid meets IDDSI Level 3.

## TESTING METHODS

See also *IDDSI Testing Methods* document or <https://iddsi.org/framework/drink-testing-methods/> and <https://iddsi.org/framework/food-testing-methods/>

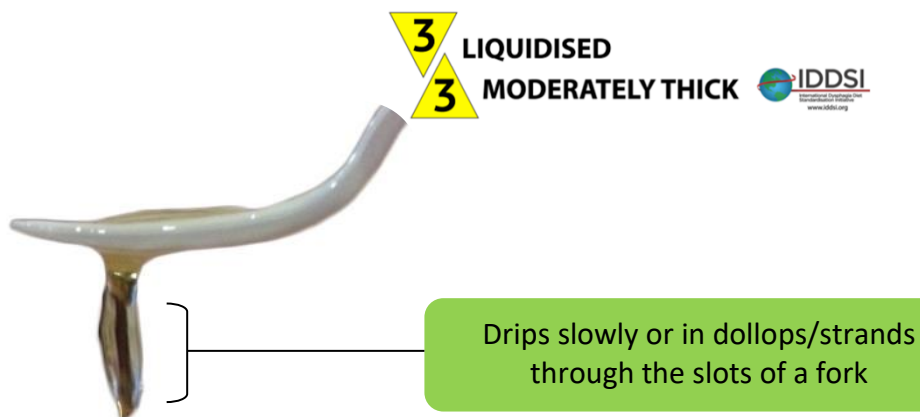
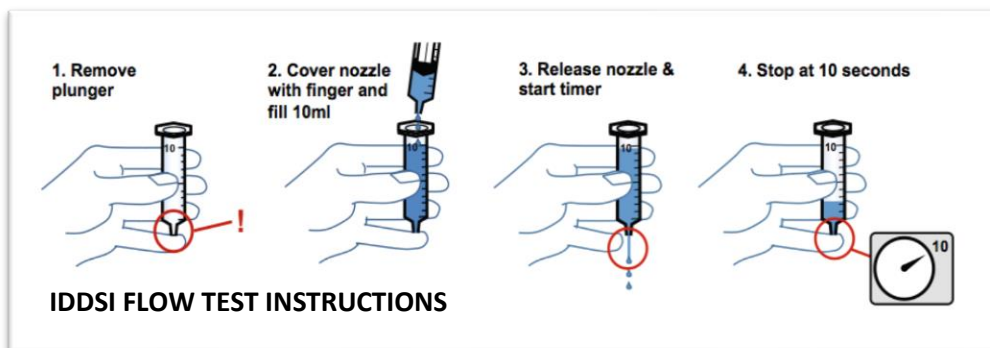
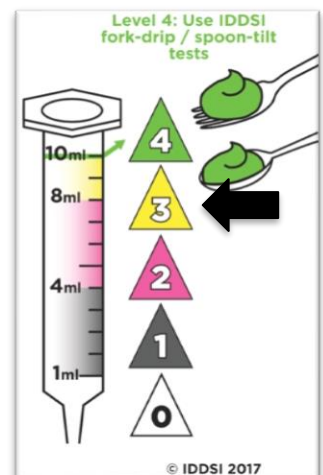
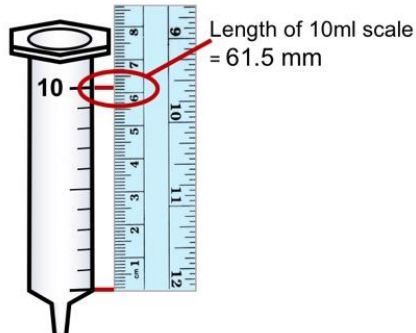
|                                                                          |                                                                                                                                                                                                                                                                                                                                            |
|--------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>IDDSI Flow Test*</b>                                                  | <ul style="list-style-type: none"> <li>• Test liquid flows through a 10 ml slip tip syringe leaving &gt; 8 ml in the syringe after 10 seconds (see IDDSI Flow Test Guide*)</li> </ul>                                                                                                                                                      |
| <b>Fork Drip Test</b>                                                    | <ul style="list-style-type: none"> <li>• Drips slowly in dollops through the prongs of a fork</li> <li>• When a fork is pressed on the surface of Level 3 Moderately Thick Liquid/Liquidised food, the tines/prongs of a fork do not leave a clear pattern on the surface</li> <li>• Spreads out if spilled onto a flat surface</li> </ul> |
| <b>Spoon Tilt Test</b>                                                   | <ul style="list-style-type: none"> <li>• Easily pours from spoon when tilted; does not stick to spoon</li> </ul>                                                                                                                                                                                                                           |
| <i>Where forks are not available</i><br><b>Chopstick Test</b>            | <ul style="list-style-type: none"> <li>• Chopsticks are not suitable for this texture</li> </ul>                                                                                                                                                                                                                                           |
| <i>Where forks are not available</i><br><b>Finger Test</b>               | <ul style="list-style-type: none"> <li>• It is not possible to hold a sample of this food texture using fingers, however, this texture slides smoothly and easily between the thumb and fingers, leaving a coating</li> </ul>                                                                                                              |
| <b>Food specific or Other examples (NB. this list is not exhaustive)</b> | <p>The following items may fit into IDDSI Level 3:</p> <ul style="list-style-type: none"> <li>• Infant “first foods” (runny rice cereal or runny pureed fruit)</li> <li>• Some sauces and gravies, as confirmed by IDDSI Flow Test</li> </ul>                                                                                              |



- Some syrups, as confirmed by IDDSI Flow Test

**#Before you test...**

You **must check** your syringe length because there are differences in syringe lengths. Your syringe should look like this





# 4 EXTREMELY THICK

|                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|-----------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Description/characteristics                         | <ul style="list-style-type: none"> <li>• Usually eaten with a spoon (a fork is possible)</li> <li>• Cannot be drunk from a cup because it does not flow easily</li> <li>• Cannot be sucked through a straw</li> <li>• Does not require chewing</li> <li>• Can be piped, layered or molded because it retains its shape, but should <u>not</u> require chewing if presented in this form</li> <li>• Shows some very slow movement under gravity but cannot be poured</li> <li>• Falls off spoon in a single spoonful when tilted and continues to hold shape on a plate</li> <li>• No lumps</li> <li>• <u>Not</u> sticky</li> <li>• Liquid must not separate from solid</li> </ul>         |
| Physiological rationale for this level of thickness | <ul style="list-style-type: none"> <li>• If tongue control is significantly reduced, this category may be easiest to control</li> <li>• Requires less propulsion effort than Minced &amp; Moist (level 5), Soft &amp; Bite-Sized (Level 6) and Regular and Regular Easy to Chew (Level 7) but more than Liquidised/Moderately thick (Level 3)</li> <li>• No biting or chewing is required</li> <li>• Increased oral and/or pharyngeal residue is a risk if too sticky</li> <li>• Any food that requires chewing, controlled manipulation or bolus formation are <u>not</u> suitable</li> <li>• Pain on chewing or swallowing</li> <li>• Missing teeth, poorly fitting dentures</li> </ul> |

Although descriptions are provided, use IDDSI Testing methods to decide if the food/liquid meets IDDSI Level 4.

## TESTING METHODS

See also *IDDSI Testing Methods* document or <https://iddsi.org/framework/food-testing-methods/>

|                                         |                                                                                                                                                                                                                                                                                                                            |
|-----------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| IDDSI Flow test                         | <ul style="list-style-type: none"> <li>• <b>n/a.</b> The IDDSI Flow test is not applicable, please use the Fork Drip Test and Spoon Tilt Test</li> </ul>                                                                                                                                                                   |
| Fork Pressure test                      | <ul style="list-style-type: none"> <li>• Smooth with no lumps and minimal granulation</li> <li>• When a fork is pressed on the surface of Level 4 Extremely Thick Liquid/Pureed food, the tines/prongs of a fork can make a clear pattern on the surface, and/or the food retains the indentation from the fork</li> </ul> |
| Fork Drip test<br>Fork Drip test contd. | <ul style="list-style-type: none"> <li>• Sample sits in a mound/pile above the fork; a small amount may flow through and form a short tail below the fork tines/prongs, but it <u>does not</u> flow or drip <u>continuously</u> through the prongs of a fork (see</li> </ul>                                               |

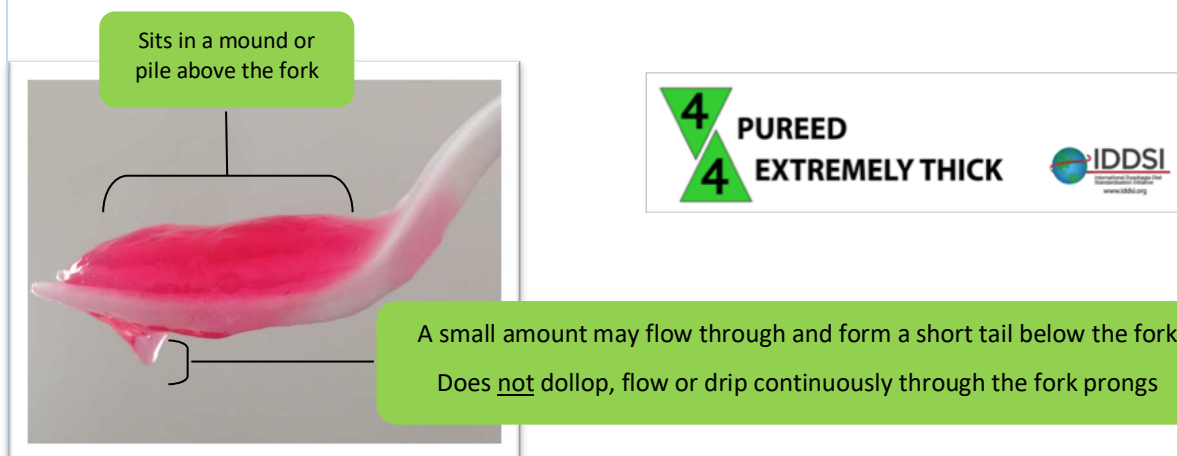


|                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|-------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                                 | picture below)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Spoon Tilt test                                 | <ul style="list-style-type: none"> <li>• Cohesive enough to hold its shape on the spoon</li> <li>• A full spoonful must plop off the spoon if the spoon is titled or turned sideways; a very gentle flick (using only fingers and wrist) may be necessary to dislodge the sample from the spoon, but the sample should slide off easily with very little food left on the spoon. A thin film remaining on the spoon after the Spoon Tilt Test is acceptable, however, you should still be able to see the spoon through the thin film; i.e. the sample should <u>not</u> be firm and sticky</li> <li>• May spread out slightly or slump very slowly on a flat plate</li> </ul> |
| Where forks are not available<br>Chopstick test | <ul style="list-style-type: none"> <li>• Chopsticks are not suitable for this texture</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| Where forks are not available<br>Finger test    | <ul style="list-style-type: none"> <li>• It is just possible to hold a sample of this texture using fingers. The texture slides smoothly and easily between the fingers and leaves noticeable coating</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| Indicators that a sample is too thick           | <ul style="list-style-type: none"> <li>• Does not fall off the spoon when tilted</li> <li>• Sticks to spoon</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |

#### FOOD SPECIFIC OR OTHER EXAMPLES

The following item may be suitable for IDDSI Level 4:

- Purees suitable for infants (e.g. pureed meat, thick cereal)

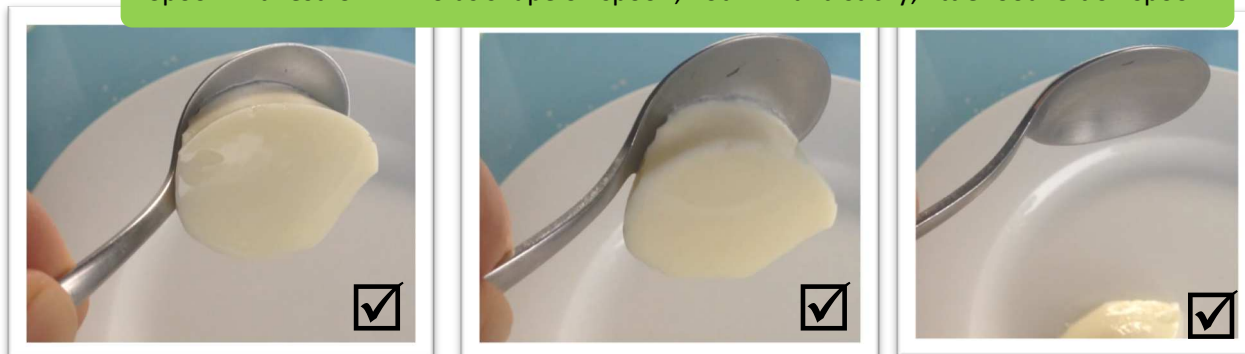


Spoon Tilt Test: Holds shape on spoon; not firm and sticky; little food left on spoon



The following images show examples of foods that would be suitable or unsuitable for Level 4 according to the IDDSI Spoon Tilt Test

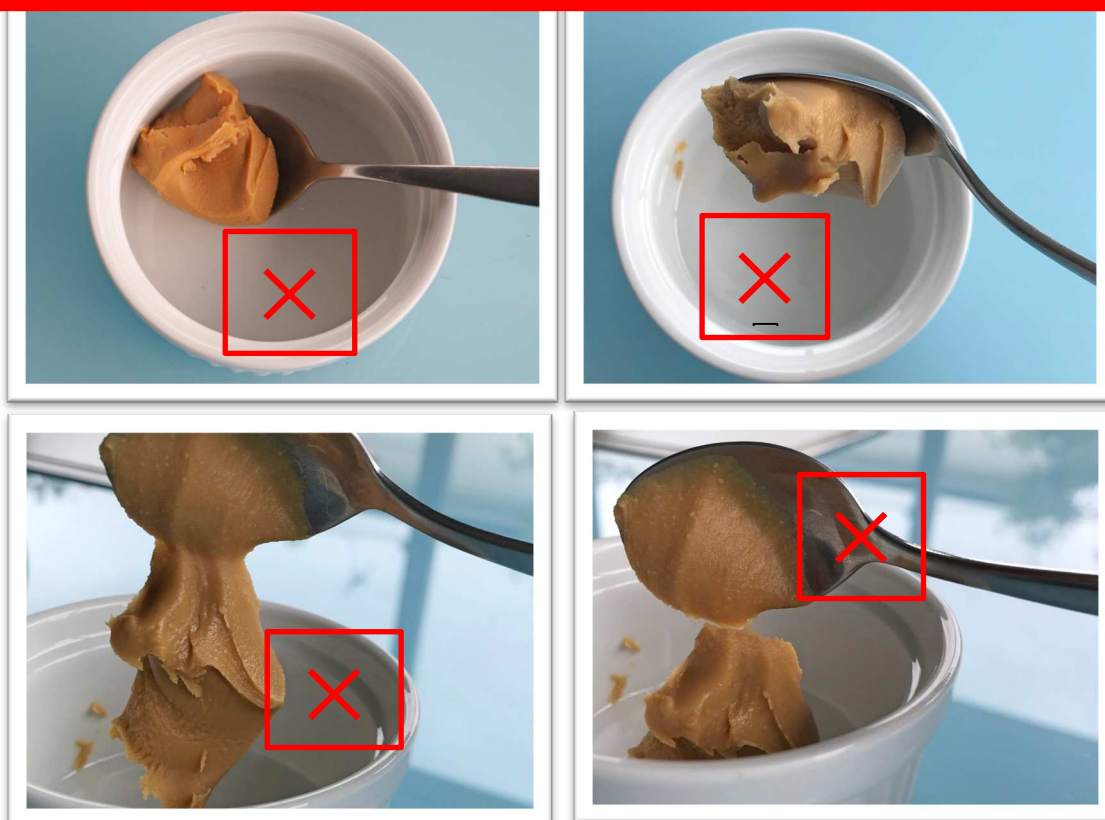
Spoon Tilt Test: SAFE: Holds shape on spoon; not firm and sticky; little food left on spoon



Spoon Tilt Test: SAFE: Holds shape on spoon; not firm and sticky; little food left on spoon



Spoon Tilt Test: UNSAFE: Holds shape on spoon; FIRM AND STICKY; LOTS OF food left on spoon





# MINCED & MOIST



**IDDSI**

International Dysphagia Diet  
Standardisation Initiative  
[www.iddsi.org](http://www.iddsi.org)

|                                                                                                                                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Description/characteristics                                                                                                                                         | <ul style="list-style-type: none"><li>• Can be eaten with a fork or spoon</li><li>• Could be eaten with chopsticks in some cases, if the individual has very good hand control</li><li>• Can be scooped and shaped (e.g. into a ball shape) on a plate</li><li>• Soft and moist with no separate thin liquid</li><li>• Small lumps visible within the food<ul style="list-style-type: none"><li>➤ <b>Paediatric, equal to or less than 2 mm width and no longer than 8mm in length</b></li><li>➤ <b>Adult, equal to or less than 4mm width and no longer than 15mm in length</b></li></ul></li><li>• Lumps are easy to squash with tongue</li></ul> |
| Physiological rationale for this level of thickness                                                                                                                 | <ul style="list-style-type: none"><li>• Biting is not required</li><li>• Minimal chewing is required</li><li>• Tongue force alone can be used to separate the soft small particles in this texture</li><li>• Tongue force is required to move the bolus</li><li>• Pain or fatigue on chewing</li><li>• Missing teeth, poorly fitting dentures</li></ul>                                                                                                                                                                                                                                                                                             |
| <b>Although descriptions are provided, use IDDSI Testing methods to decide if the food meets IDDSI Level 5.</b>                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| <b>TESTING METHODS</b>                                                                                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| See also <i>IDDSI Testing Methods</i> document or <a href="https://iddsi.org/framework/food-testing-methods/">https://iddsi.org/framework/food-testing-methods/</a> |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| Fork Pressure test                                                                                                                                                  | <ul style="list-style-type: none"><li>• When pressed with a fork the particles should easily be separated between and come through the tines/prongs of a fork</li><li>• Can be easily mashed with little pressure from a fork [pressure should <u>not</u> make the thumb nail blanch to white]</li></ul>                                                                                                                                                                                                                                                                                                                                            |
| Fork Drip test                                                                                                                                                      | <ul style="list-style-type: none"><li>• When a sample is scooped with a fork it sits in a pile or can mound on the fork and does not easily or completely flow or fall through the tines/prongs of a fork</li></ul>                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Spoon Tilt test                                                                                                                                                     | <ul style="list-style-type: none"><li>• Cohesive enough to hold its shape on the spoon</li><li>• A full spoonful must slide/pour off/fall off the spoon if the spoon is tilted or turned sideways or shaken lightly; the sample should slide off easily with very little food left on the spoon; i.e. the sample should <u>not</u> be sticky</li><li>• A scooped mound may spread or slump very slightly on a plate</li></ul>                                                                                                                                                                                                                       |
| Where forks are not available<br>Chopstick test                                                                                                                     | <ul style="list-style-type: none"><li>• Chopsticks can be used to scoop or hold this texture if the sample is moist and cohesive <i>and</i> the person has very good hand control to use chopsticks</li></ul>                                                                                                                                                                                                                                                                                                                                                                                                                                       |

Where forks are not available  
Finger test

- It is possible to easily hold a sample of this texture using fingers; small, soft, smooth, rounded particles can be easily separated using fingers. The material will feel moist and leave fingers wet.

FOOD SPECIFIC OR OTHER EXAMPLES <https://iddsi.org/framework/food-testing-methods/>

#### MEAT

- Finely minced\* or chopped\*, soft mince
  - Paediatric, equal to or less than 2mm width and no longer than 8mm in length
  - Adult, equal to or less than 4mm width and no more than 15mm in length
- Serve in mildly, moderately or extremely thick, smooth, sauce or gravy, draining excess
- \*If texture cannot be finely minced it should be pureed



#### MINCED & MOIST



Use slot between fork prongs (4mm) to determine whether minced pieces are the correct or incorrect size

#### FISH

- Finely mashed in mildly, moderately or extremely thick smooth, sauce or gravy, draining excess
  - Paediatric, equal to or less than 2mm width and no longer than 8mm in length
  - Adult, equal to or less than 4mm width and no more than 15mm in length

#### FRUIT

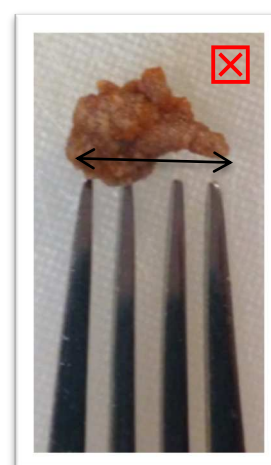
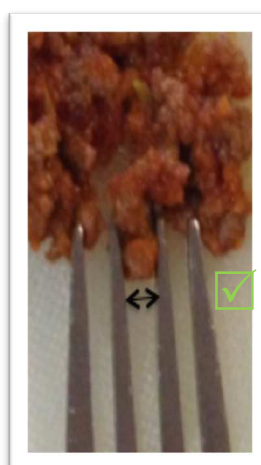
- Serve finely minced or chopped or mashed
- Drain excess juice
- If needed, serve in mildly, moderately or extremely thick smooth sauce or gravy AND drain excess liquid. No thin liquid should separate from food
  - Paediatric, equal to or less than 2mm width and no longer than 8mm in length
  - Adult, equal to or less than 4mm width and no more than 15mm in length

#### VEGETABLES

- Serve finely minced or chopped or mashed
- Drain any liquid
- If needed, serve in mildly, moderately or extremely thick smooth sauce or gravy AND drain excess liquid. No thin liquid should separate from food
  - Paediatric, equal to or less than 2mm width and no longer than 8mm in length
  - Adult, equal to or less than 4mm width and no more than 15mm in length

#### CEREAL

- Thick and smooth with small soft lumps
  - Paediatric, equal to or less than 2mm width and no longer than 8mm in length
  - Adult, equal to or less than 4mm width and no more than 15mm in length
- Texture fully softened
- Any milk/fluid must not separate away from cereal. Drain any excess fluid before serving



**Note - lump size requirements for all foods in Level 5 Minced & Moist:**

- Paediatric, equal to or less than 2mm width and no more than 8mm in length
- Adult, equal to or less than 4mm width and no more than 15mm in length

## BREAD

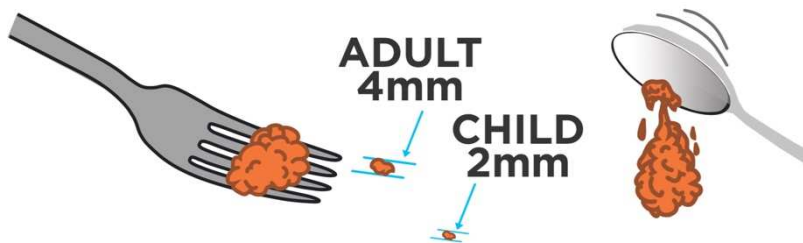
- No regular, dry bread, sandwiches or toast of any kind
- Use IDDSI Level 5 Minced & Moist sandwich recipe video <https://www.youtube.com/watch?v=W7bOufqmz18>
- Pre-gelled 'soaked' breads that are very moist and gelled through the entire thickness



## RICE, COUSCOUS, QUINOA (and similar food textures)

- Not sticky or glutinous
- Should not be particulate or separate into individual grains when cooked and served
- Serve with smooth mildly, moderately or extremely thick sauce AND Sauce must not separate away from rice, couscous, quinoa (and similar food textures). Drain excess fluid before serving

**Minced & Moist food must  
pass all three tests!**



### IDDSI Fork Test

**Paediatric**, equal to or less than 2mm width and no more than 8mm in length

**Adult**, equal to or less than 4mm width and no more than 15mm in length

4mm is about the gap between the prongs of a standard dinner fork



**Soft enough to squash easily with fork or spoon**

**Don't need thumb nail to blanch white**



### IDDSI Spoon Tilt Test

Sample holds its shape on the spoon and falls off fairly easily if the spoon is tilted or lightly flicked

Sample should **not** be firm or sticky





# SOFT & BITE-SIZED



**IDDSI**  
International Dysphagia Diet  
Standardisation Initiative  
[www.iddsi.org](http://www.iddsi.org)

|                                                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Description/characteristics</b>                         | <ul style="list-style-type: none"><li>• Can be eaten with a fork, spoon or chopsticks</li><li>• Can be mashed/broken down with pressure from fork, spoon or chopsticks</li><li>• A knife is not required to cut this food, but may be used to help load a fork or spoon</li><li>• Soft, tender and moist throughout but with no separate thin liquid</li><li>• Chewing is required before swallowing</li><li>• 'Bite-sized' pieces as appropriate for size and oral processing skills<ul style="list-style-type: none"><li>➤ <b>Paediatric, 8mm pieces (no larger than)</b></li><li>➤ <b>Adults, 15 mm = 1.5 cm pieces (no larger than)</b></li></ul></li></ul> |
| <b>Physiological rationale for this level of thickness</b> | <ul style="list-style-type: none"><li>• Biting is not required</li><li>• Chewing is required</li><li>• Food piece sizes designed to minimize choking risk</li><li>• Tongue force and control is required to move the food and keep it within the mouth for chewing and oral processing</li><li>• Tongue force is required to move the bolus for swallowing</li><li>• Pain or fatigue on chewing</li><li>• Missing teeth, poorly fitting dentures</li></ul>                                                                                                                                                                                                      |

Although descriptions are provided, use IDDSI Testing methods to decide if the food meets IDDSI Level 6.

## TESTING METHODS

See also *IDDSI Testing Methods* document or <https://iddsi.org/framework/food-testing-methods/>

|                                                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|--------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Fork Pressure test                                     | <ul style="list-style-type: none"><li>• Pressure from a fork held on its side can be used to 'cut' or break apart or flake this texture into smaller pieces</li><li>• When a sample the size of a thumb nail (1.5x1.5 cm) is pressed with the tines of a fork to a pressure where the thumb nail blanches to white, the sample squashes, breaks apart, changes shape, and does not return to its original shape when the fork is removed.</li></ul> |
| Spoon Pressure test                                    | <ul style="list-style-type: none"><li>• Pressure from a spoon held on its side can be used to 'cut' or break this texture into smaller pieces.</li><li>• When a sample the size of a thumb nail (1.5 cm x1.5 cm) is pressed with the base of a spoon, the sample squashes, breaks apart, changes shape, and does not return to its original shape when the spoon is removed.</li></ul>                                                              |
| <i>Where forks are not available</i><br>Chopstick test | <ul style="list-style-type: none"><li>• Chopsticks can be used to break this texture into smaller pieces or puncture food</li></ul>                                                                                                                                                                                                                                                                                                                 |



Where forks are not available  
Finger test

- Use a sample the size of a thumb nail (1.5 cm x 1.5 cm). It is possible to squash a sample of this texture using finger pressure such that the thumb and index finger nails blanch to white. The sample breaks apart and will not return to its initial shape once pressure is released.

## FOOD SPECIFIC OR OTHER EXAMPLES

### MEAT

- Cooked, tender meat no bigger than
  - *Paediatric, 8mm pieces*
  - *Adults, 15 mm = 1.5 x 1.5 cm pieces*
  - If texture cannot be served soft and tender at 1.5 cm x 1.5 cm (as confirmed with fork/ spoon pressure test), serve minced and moist

**Note - food size requirements for all foods in Level 6 Soft & Bite-sized:**

- **Paediatric, 8mm pieces**
- **Adult, 15mm = 1.5cm pieces**

### FISH

- Soft enough cooked fish to break into small pieces with fork, spoon or chopsticks no larger than
  - *Paediatric, 8mm pieces*
  - *Adults, 15 mm = 1.5 cm pieces*
- No bones or tough skins

### CASSEROLE/STEW/CURRY

- Liquid portion (e.g. sauce) must be thick (as per clinician recommendations)
- Can contain meat, fish or vegetables if final cooked pieces are soft and tender and no larger than
  - *Paediatric, 8mm pieces*
  - *Adults, 15 mm = 1.5 cm pieces*
- No hard lumps

### FRUIT

- Serve minced or mashed if cannot be cut to soft & bite-sized pieces
  - *Paediatric, 8mm pieces*
  - *Adults, 15 mm = 1.5 cm pieces*
- Fibrous parts of fruit are not suitable
- Drain excess juice
- Assess individual ability to manage fruit with high water content (e.g. watermelon) where juice separates from solid in the mouth during chewing

### VEGETABLES

- Steamed or boiled vegetables with final cooked size of
  - *Paediatric, 8mm pieces*
  - *Adults, 15 mm = 1.5 cm pieces*
- Stir fried vegetables may be too firm and are not soft or tender. Check softness with fork/spoon pressure test

### CEREAL

- Smooth with soft tender lumps no bigger than
  - *Paediatric, 8mm pieces*
  - *Adults, 15 mm = 1.5 cm pieces*
- Texture fully softened
- Any excess milk or liquid must be drained and/or thickened to thickness level recommended by clinician

## BREAD

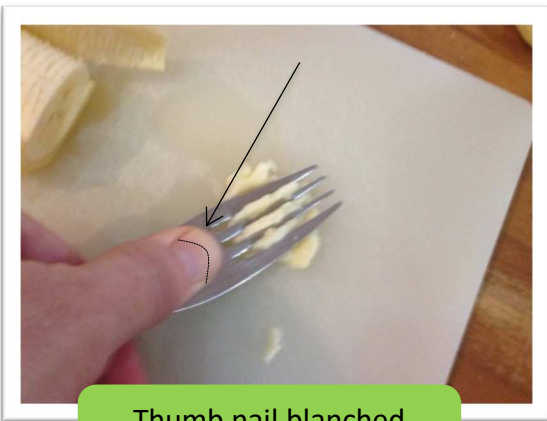
- No regular dry bread, sandwiches or toast of any kind
- Use IDDSI Level 5 Minced & Moist sandwich recipe video to prepare bread and add to filling that meets Level 6 Soft & Bite-sized requirements  
<https://www.youtube.com/watch?v=W7bOufqmz18>
- Pre-gelled 'soaked' breads that are very moist and gelled through the entire thickness



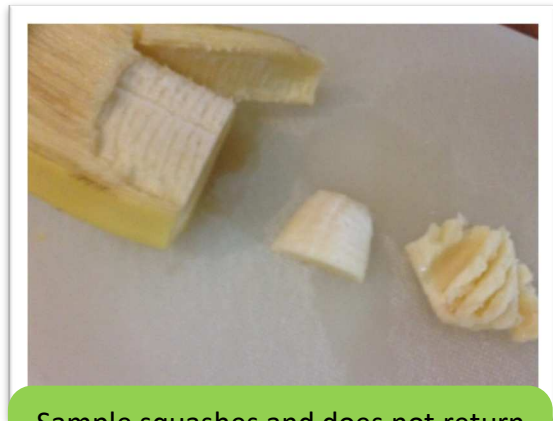
## RICE, COUCOUS, QUINOA (and similar food textures)

- Not particulate/grainy, sticky or glutinous

# 6 SOFT & BITE-SIZED



Thumb nail blanched to white



Sample squashes and does not return to its original shape when pressure is released

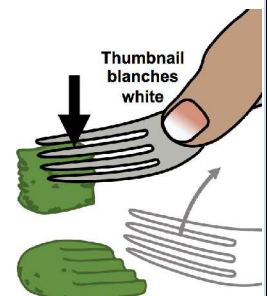
Food pieces no bigger than 8mm x 8mm lump size for children



Food pieces no bigger than 1.5cm x 1.5cm bite size for adults



**Soft & Bite-Sized food must pass both food piece size and softness tests!**



|                                                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
|------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Description/characteristics</b>                         | <ul style="list-style-type: none"> <li>• Normal, everyday foods of <b><i>soft/tender textures</i></b> that are developmentally and age appropriate</li> <li>• Any method may be used to eat these foods</li> <li>• Sample size is not restricted at Level 7, therefore, foods may be of a <b><i>range of sizes</i></b> <ul style="list-style-type: none"> <li>➤ Smaller or greater than 8mm pieces (Paediatric)</li> <li>➤ Smaller or greater than 15 mm = 1.5 cm pieces (Adults)</li> </ul> </li> <li>• Does not include: hard, tough, chewy, fibrous, stringy, crunchy, or crumbly bits, pips, seeds, fibrous parts of fruit, husks or bones</li> <li>• May include 'dual consistency' or 'mixed consistency' foods and liquids if also safe for Level 0, and at clinician discretion. If unsafe for Level 0 Thin, liquid portion can be thickened to clinician's recommended thickness level</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| <b>Physiological rationale for this level of thickness</b> | <ul style="list-style-type: none"> <li>• Requires the ability to bite soft foods and chew and orally process food for long enough that the person forms a soft cohesive ball/bolus that is 'swallow ready'. Does not necessarily require teeth.</li> <li>• Requires the ability to chew and orally process soft/tender foods without tiring easily</li> <li>• May be suitable for people who find hard and/or chewy foods difficult or painful to chew and swallow</li> <li>• This level could present a choking risk for people with clinically identified increased risk of choking, because food pieces can be of <i>any</i> size. Restricting food piece sizes aims to minimize choking risk (e.g. Level 4 Pureed, Level 5 Minced &amp; Moist, Level 6 Soft &amp; Bite-sized have food piece size restrictions to minimize choking risk)</li> <li>• This level may be used by qualified clinicians for developmental teaching, or progression to foods that need more advanced chewing skills</li> <li>• <b>If the person needs supervision to eat safely, before using this texture level consult a qualified clinician to determine the person's food texture needs, and meal time plan for safety</b> <ul style="list-style-type: none"> <li>• People can be unsafe to eat without supervision due to chewing and swallowing problems and/or unsafe mealtime behaviours. Examples of unsafe mealtime behaviors include: not chewing very well, putting too much food into the mouth, eating too fast or swallowing large mouthfuls of food, inability to self-monitor chewing ability.</li> <li>• Clinicians should be consulted for specific advice for patient needs, requests and requirements for supervision.</li> <li>• <b>Where mealtime supervision is needed, this level should only be used under the strict recommendation and written guidance of a qualified clinician</b></li> </ul> </li> </ul> |

Although descriptions are provided, use IDDSI Testing methods to decide if the food meets IDDSI Level 7 Easy to Chew.

#### TESTING METHODS

See also IDDSI Testing Methods document or <https://iddsi.org/framework/food-testing-methods/>

|                                                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
|--------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Fork Pressure Test                                     | <ul style="list-style-type: none"> <li>Pressure from a fork held on its side can be used to 'cut' or break apart or flake this texture into smaller pieces</li> <li>When a sample the size of a thumb nail (1.5x1.5cm) is pressed with the tines of a fork to a pressure where the thumb nail blanches to white, the sample squashes, breaks apart, changes shape and does not return to its original shape when the fork is removed.</li> </ul> |
| Spoon Pressure Test                                    | <ul style="list-style-type: none"> <li>Pressure from a spoon held on its side can be used to 'cut' or break or flake this texture into smaller pieces</li> <li>When a sample the size of a thumb nail (1.5x1.5cm) is pressed with the base of a spoon to a pressure where the thumb nail blanches to white, the sample squashes, breaks apart, changes shape and does not return to its original shape when the spoon is removed.</li> </ul>     |
| <i>Where forks are not available</i><br>Chopstick Test | <ul style="list-style-type: none"> <li>Chopsticks can be used to puncture this texture</li> </ul>                                                                                                                                                                                                                                                                                                                                                |
| <i>Where forks are not available</i><br>Finger test    | <ul style="list-style-type: none"> <li>Use a sample the size of a thumb nail (1.5x1.5cm). It is possible to squash a sample of this texture using finger pressure such that the thumb and index finger nails blanch to white. The sample squashes and breaks apart and will not return to its initial shape once pressure is released.</li> </ul>                                                                                                |

#### FOOD SPECIFIC OR OTHER EXAMPLES

##### MEAT

- Cooked until tender.
- If texture cannot be served soft and tender, serve minced and moist

##### FISH

- Soft enough cooked fish to break into small pieces with the side fork, spoon or chopsticks

##### CASSEROLE/STEW/CURRY

- Can contain meat, fish, vegetables, or combinations of these if final cooked pieces are soft and tender
- Serve in mildly, moderately or extremely thick sauce AND drain excess liquid
- No hard lumps

##### FRUIT

- Soft enough to be cut broken apart into smaller pieces with the side of a fork or spoon. Do not use the fibrous parts of fruit (e.g. the white part of an orange).

##### VEGETABLES

- Steam or boil vegetables until tender. Stir fried vegetables may be too firm for this level. Check softness with fork/spoon pressure test

##### CEREAL

- Served with texture softened
- Drain excess milk or liquid and/or thicken to thickness level recommended by clinician

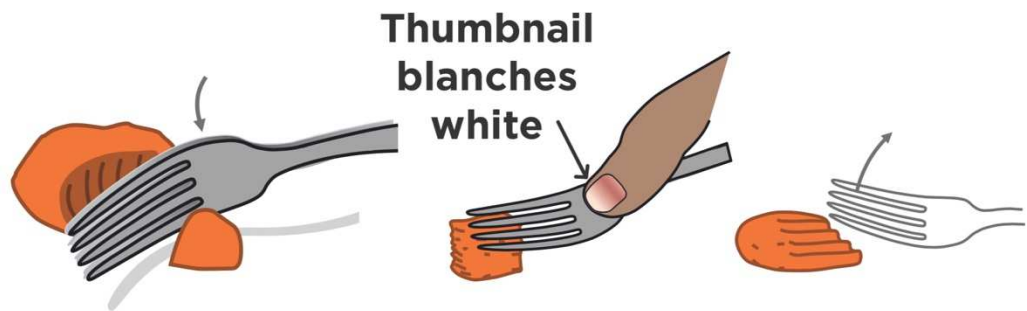
##### BREAD

- Bread, sandwiches and toast that can be cut or broken apart into smaller pieces with the side of a fork or spoon can be provided at clinician discretion

RICE, COUSCOUS, QUINOA (and similar food textures)

- No special instructions

***Easy to Chew foods must break apart easily with the side of a fork or spoon and pass Fork Pressure Test***



***Must be able to break food apart easily with the side of a fork or spoon***

#### **IDDSI Fork Pressure Test**

***To make sure the food is soft enough,*** press down on the fork until the thumbnail blanches to white, then lift the fork to see that the food is completely squashed and does not regain its shape



|                                                                                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|---------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p><b>Description/characteristics</b></p> <p>There are <u>NO</u> texture restrictions at this level</p> | <ul style="list-style-type: none"> <li>• Normal, everyday foods of various textures that are developmentally and age appropriate</li> <li>• Any method may be used to eat these foods</li> <li>• Foods may be hard and crunchy or naturally soft</li> <li>• Sample size is not restricted at Level 7, therefore, foods may be of a <b>range of sizes</b> <ul style="list-style-type: none"> <li>➤ Smaller or greater than 8mm pieces (Paediatric)</li> <li>➤ Smaller or greater than 15 mm = 1.5 cm pieces (Adults)</li> </ul> </li> <li>• Includes hard, tough, chewy, fibrous, stringy, dry, crispy, crunchy, or crumbly bits</li> <li>• Includes food that contains pips, seeds, pith inside skin, husks or bones</li> <li>• Includes 'dual consistency' or 'mixed consistency' foods and liquids</li> </ul> |
| <p><b>Physiological rationale for this level of thickness</b></p>                                       | <ul style="list-style-type: none"> <li>• Ability to bite hard or soft foods and chew them for long enough that they form a soft cohesive ball/bolus that is 'swallow ready'</li> <li>• An ability to chew all food textures without tiring easily</li> <li>• An ability to remove bone or gristle that cannot be swallowed safely from the mouth</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                     |

## TESTING METHOD

- Not Applicable



# TRANSITIONAL FOODS



|                                                                                                                                                                                                                                                                                                                                                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Description/characteristics                                                                                                                                                                                                                                                                                                                              | <ul style="list-style-type: none"> <li>Food that starts as one texture (e.g. firm solid) and changes into another texture specifically when moisture (e.g. water or saliva) is applied, or when a change in temperature occurs (e.g. heating)</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| Physiological rationale for this level of thickness                                                                                                                                                                                                                                                                                                      | <ul style="list-style-type: none"> <li>Biting not required</li> <li>Minimal chewing required</li> <li>Tongue can be used to break these foods once altered by temperature or with addition of moisture/saliva</li> <li>➤ May be used for developmental teaching or rehabilitation of chewing skills (e.g. development of chewing in the paediatric population and developmental disability population; rehabilitation of chewing function post stroke)</li> </ul>                                                                                                                                                                                                                                                                                 |
| <p><b>Although descriptions are provided, use IDDSI Testing methods to decide if the food meets the requirements for Transitional foods.</b></p> <p><b>TESTING METHOD</b></p> <p>See also <i>IDDSI Testing Methods</i> document or <a href="https://iddsi.org/framework/food-testing-methods/">https://iddsi.org/framework/food-testing-methods/</a></p> |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| Fork pressure test                                                                                                                                                                                                                                                                                                                                       | <ul style="list-style-type: none"> <li>After moisture or temperature has been applied, the sample can be easily deformed and does not recover its shape when the force is lifted.</li> <li>Use a sample the size of the thumb nail (1.5 cm x 1.5 cm), place 1 ml of water on the sample and wait one minute. Apply fork pressure using the tines of the fork until the thumbnail blanches to white. The sample is a transitional food texture if after removing the fork pressure: <ul style="list-style-type: none"> <li>The sample has been squashed and disintegrated and no longer looks like its original state</li> <li>Or it has melted significantly and no longer looks like its original state (e.g. ice chips).</li> </ul> </li> </ul> |
| Spoon pressure test                                                                                                                                                                                                                                                                                                                                      | <ul style="list-style-type: none"> <li>As above, using the base of the spoon in place of the fork</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| <i>Where forks are not available</i><br>Chopstick test                                                                                                                                                                                                                                                                                                   | <ul style="list-style-type: none"> <li>Use a sample the size of the thumb nail (1.5 cm x 1.5 cm), place 1 ml of water on the sample and wait one minute. The sample should be easily broken apart using chopsticks with minimal pressure.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |

Where forks are not available  
Finger test

- Use a sample the size of the thumb nail (1.5 cm x 1.5 cm), place 1 ml of water on the sample and wait one minute. The sample will break apart completely by rubbing the sample between the thumb and index finger. The sample will not return to its initial shape

## FOOD SPECIFIC OR OTHER EXAMPLES

IDDSI Transitional Foods may include and are not limited to:

- Ice chips
- Ice cream/Sherbet if assessed as suitable by a Dysphagia specialist
- Japanese Dysphagia Training Jelly sliced 1 mm x 15 mm
- Wafers (also includes Religious Communion wafer)
- Waffle cones used to hold ice cream
- Some biscuits/ cookies/ crackers
- Some potato crisps – only ones made or formed from mashed potato (e.g. Pringles)
- Shortbread
- Prawn crisps

### Specific examples used in paediatric or adult disability dysphagia management

Commercially available foods<sup>#</sup> that are transitional foods textures include but are not limited to:

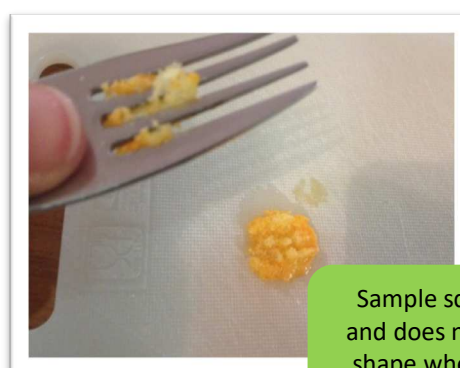
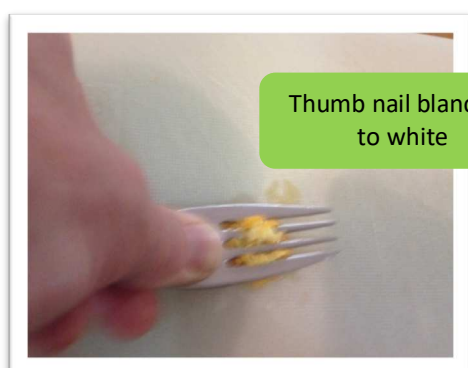
- Veggie Stix™
- Cheeto Puffs™
- Rice Puffs™
- Baby Mum Mums™
- Gerber Graduate Puffs™

<sup>#</sup>The mention of certain manufacturers' products does not imply that they are endorsed or recommended in preference to others of a similar nature that are not mentioned.

## TRANSITIONAL FOODS



- Apply 1 ml of water to sample
- Wait 1 minute



# FOOD TEXTURES THAT POSE A CHOKING RISK

Examples are drawn from international autopsy reports



**Hard or dry textures are a choking risk because** they require good chewing ability to break down *and* mix with saliva to make them moist enough to be safe to swallow.

*Examples of hard or dry textures:* nuts, raw carrots, crackling, hard crusty rolls

**Fibrous or tough textures are a choking risk because** they require good chewing ability, and sustained chewing ability to break down to small enough pieces that are safe to swallow.

*Examples of fibrous or tough textures:* steak, pineapple

**Chewy textures are a choking risk because** they are sticky and can become stuck to the roof of the mouth, the teeth or cheeks and fall into the airway

*Examples of chewy textures:* candies/lollies/sweets, cheese chunks, marshmallows, chewing gum, sticky mashed potato

**Crispy textures are a choking risk because** they require good chewing ability to break down and mix with saliva to make them soft, rounded and moist enough to be safe to swallow.

*Examples of crispy textures:* crackling, crisp bacon, some dry cereals

**Crunchy textures are a choking risk because** they require good chewing ability, and sustained chewing ability to break them into small enough pieces and mix with saliva so that they are safe to swallow.

*Examples of crunchy textures:* raw carrot, raw apple, popcorn

**Sharp or spiky textures are a choking risk because** they require good chewing ability to break them into small enough, soft, rounded pieces and moist enough to be safe to swallow.

*Example of sharp or spiky textures:* dry corn chips

**Crumbly textures are a choking risk because** they need good tongue control to bring crumbly pieces together and mix with enough saliva to hold together to be moist and safe to swallow.

*Examples of crumbly textures:* crumbly dry cakes, dry cookies, dry biscuits or scones

**Pips, seeds, and the white parts of fruit are a choking risk because** they are hard and part of other hard or fibrous textures, making it a complex process to separate and remove them from the mouth

*Examples of pips, seeds and white parts of fruit* include apple or pumpkin seeds, the white part of oranges

**Skins, husks or outer shells are a choking risk because** the pieces are often fibrous, spiky, and dry needing good chewing skills to make the pieces smaller, and enough saliva to make it moist, OR enough skill to remove the pieces from the mouth. These small pieces become stuck to teeth and gums and catch in the throat when swallowed.

*Examples of skins, husks or outer shells* include pea shells, grape skin, bran, psyllium

**Bone or gristle is a choking risk because** these pieces are hard and not usually chewed and swallowed. They require good tongue skills to remove them from the food texture they are attached to, and then remove the bone or gristle from the mouth.

*Examples of bone or gristle* includes chicken bones, fish bones

**Round, or long shaped foods are a choking risk because** if they are not chewed into small pieces and are swallowed whole they are a shape that can completely block the airway causing choking

*Examples of round or long shaped foods* include sausages, grapes

**Sticky or gummy textures are a choking risk because** they are sticky and can become stuck to the roof of the mouth, the teeth or cheeks and fall into the airway. They require sustained and good chewing ability to reduce stickiness by adding saliva to make them safe to swallow.

*Examples of chewy textures:* nut butter, overcooked oatmeal, edible gelatin, Konjac containing jelly, sticky rice cakes, candy

**Stringy textures are a choking risk because** the string can be difficult to break and the flesh can become trapped with part in the mouth and part in the throat tied together by the stringy texture.

*Examples of stringy textures* include: green string beans, rhubarb

**Mixed thin-thick textures are a choking risk because** they require an ability to hold the solid piece in the mouth while the thin liquid portion is swallowed. After the liquid portion is swallowed the solid pieces are chewed and swallowed. This is a very complex oral task.

*Examples of mixed thin-thick textures* include: soup with food pieces, cereal pieces with milk, bubble tea

**Complex food textures are a choking risk because** they require an ability to chew and manipulate a variety of food textures in one mouthful.

*Examples of complex food textures* include: hamburger, hot dog, sandwich, meatballs and spaghetti, pizza

**Floppy textures are a choking risk because** if they are not chewed into small pieces they become thin and wet and can form a covering over the opening of the airway, stopping air from flowing.

*Examples of floppy textures* include: lettuce, thin sliced cucumber, baby spinach leaves

**Juicy food textures where the juice separates from the food when chewing is a choking risk** because it needs the person to be able to swallow the juice while controlling the solid piece in the mouth, Once the juice has been swallowed good chewing skills are needed to break the food into smaller pieces for safe swallowing. It is a complex oral task.

*Example of juicy food textures* include: watermelon

**Hard skins or crusts formed during cooking or heating are a choking risk** because they require good chewing skills to break them down into smaller pieces while mixed with other food textures not affected by the heating process.

## **Foods that pose a choking risk - Autopsy report references:**

Berzlanovich, A.M., Muhm, M., Sim, E., and Bauer, G. (1999) 'Foreign body asphyxiation – an autopsy study', *American Journal of Medicine*, 107, 351-355.

Berzlanovich, A.M., Fazeny-Dorner, B., Waldhoer, T., and Fasching, P. (2005) 'Foreign body asphyxia: A preventable cause of death in the elderly', *American Journal of Preventive Medicine*, 28, 65-69.

Centre for Disease control and prevention (2002) Non-fatal choking related episodes among children, United States 2001. Morbidity and Mortality Weekly Report, 51: 945-948.

Dolkas, L., Stanley C., Smith, A.M., Vilke G.M. (2007) Deaths associated with choking in San Diego. *Journal of Forensic Science*, 52, 176-179.

Ekberg, O. and Feinberg, M. (1992) 'Clinical and demographic data in 75 patients with near-fatal choking episodes', *Dysphagia*, 7, 205-208.

Wick, R., Gilbert, J.D., and Byard, R.W. (2006) 'Café coronary syndrome-fatal choking on food: An autopsy approach.', *Journal of Clinical Forensic Medicine*, 13, 135-138.

Food Safety Commission, Japan (2010) Risk Assessment Report: Choking accidents caused by foods. [https://www.fsc.go.jp/english/topics/choking\\_accidents\\_caused\\_by\\_foods.pdf](https://www.fsc.go.jp/english/topics/choking_accidents_caused_by_foods.pdf) (accessed June 2019).

Harris C.A., Baker, S.P., Smith, G.A., Harris R.M. (1984) Childhood asphyxiation by food: A national analysis and overview. *JAMA*, 251, 2231-2235.

Irwin, R.S., Ashba, J.K., Braman, S.S., Lee, H.Y., and Corrao, W.M. (1977) 'Food asphyxiation in hospitalized patients', *JAMA*, 237,2744-2745.

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## **\*Accompanying documents <https://iddsi.org/framework/>**

- IDDSI Testing Methods
- IDDSI Evidence
- IDDSI Frequently Asked Questions (FAQs)

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