

Complete IDDSI Framework Detailed definitions

INTRODUCTION

The International Dysphagia Diet Standardisation Initiative (IDDSI) was founded in 2013 with the goal of developing new global 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 ongoing work by the International Dysphagia Diet Standardisation Committee has culminated in a final dysphagia diet framework consisting of a continuum of 8 levels (0-7). Levels are identified by numbers, text labels and colour codes.

This 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 fits into.

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

The IDDSI Committee 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 the www.iddsi.org for further information

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<u>Committee Members:</u> Jianshe Chen (CHN), Roberto Dantas (BRA), Janice Duivestein (CAN), Ben Hanson (UK), Jun Kayashita (JPN), Caroline Lecko (UK), Mershen Pillay (ZAF), Luis Riquelme (USA), Soenke Stanschus (GER), Catriona Steele (CAN).

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The International Dysphagia Diet Standardisation Initiative Inc. (IDDSI) is an independent, 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.

Development of the IDDSI framework (2012-2015)

IDDSI would like to thank and acknowledge the following sponsors for their generous support in the development of the IDDSI framework:

- Nestlé Nutrition Institute (2012-2015)
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- apetito (2013-2015)
- Trisco (2013-2015)
- Food Care Co. Ltd. Japan (2015)
- Flavour Creations (2013-2015)
- Simply Thick (2015)
- Lyons (2015)

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





Description/ Characteristics	 Flows like water Fast flow Can drink through any type of teat/nipple, cup or straw as appropriate for age and skills
Physiological rationale for this level of thickness	Functional ability to safely manage liquids of all types
Testing method See also IDDSI Testing Methods document or http://iddsi.org/framework/drink-testing-methods/	
IDDSI Flow Test*	Test liquid flows through a 10 mL slip tip syringe completely within 10 seconds, leaving no residue (see IDDSI Flow Test instructions*)





Description/ Characteristics	 Thicker than water Requires a little more effort to drink than thin liquids Flows through a straw, syringe, teat/nipple Similar to the thickness of commercially available 'Anti-regurgitation' (AR) infant formula
Physiological rationale for this level of thickness	 Predominantly 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.
Testing method See also IDDSI Testing Methods do	cument or http://iddsi.org/framework/drink-testing-methods/
IDDSI Flow Test*	Test liquid flows through a 10 mL slip tip syringe leaving 1-4 mL in the syringe after 10 seconds (see IDDSI Flow Test instructions*)





Description/ Characteristics	 Flows off a spoon Sippable, pours quickly from a spoon, but slower than thin drinks Effort is required to drink this thickness through standard bore straw (standard bore straw = 0.209 inch or 5.3 mm diameter)
Physiological rationale for this level of thickness	 If thin drinks flow too fast to be controlled safely, these Mildly Thick liquids will flow at a slightly slower rate May be suitable if tongue control is slightly reduced.

TESTING METHOD

See also IDDSI Testing Methods document or http://iddsi.org/framework/drink-testing-methods/

IDDSI Flow Test*	 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*)





Description/characteristics Texture restrictions shown in summary table	 Can be drunk from a cup Some effort is required to suck through a standard bore or wide bore straw (wide bore straw = 0.275 inch or 6.9 mm) Cannot be piped, layered or moulded on a plate Cannot be eaten with a fork because it drips slowly in dollops through the prongs Can be eaten with a spoon No oral processing or chewing required – can be swallowed directly Smooth texture with no 'bits' (lumps, fibers, bits of shell or skin, husk, particles of gristle or bone)
Physiological rationale for this level of thickness	 If tongue control is insufficient to manage Mildly Thick drinks (Level 2), this Liquidised/Moderately thick level may be suitable Allows more time for oral control Needs some tongue propulsion effort Pain on swallowing

TESTING METHODS

See also IDDSI Testing Methods document or http://iddsi.org/framework/drink-testing-methods/ and

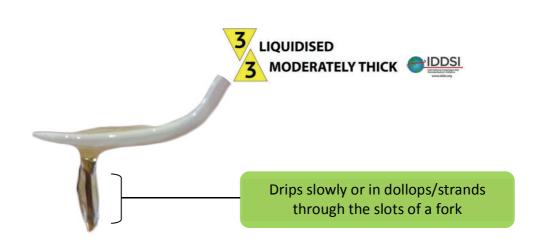
http://iddsi.org/framework/food-testing-methods/

IDDSI Flow Test*	 Test liquid flows through a 10 ml slip tip syringe leaving > 8 ml in the syringe after 10 seconds (see Syringe Test Guide*)
Fork Drip Test	 Drips slowly in dollops through the prongs of a fork Tines/Prongs of a fork do <u>not</u> leave a clear pattern on the surface Spreads out if spilled onto a flat surface
Spoon Tilt Test	Easily pours from spoon when tilted; does not stick to spoon
Chopstick Test	Chopsticks are not suitable for this texture
Finger Test	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

Food specific or Other examples (NB. this list is not exhaustive)

The following items may fit into IDDSI Level 3:

- Infant "first foods" (runny rice cereal or runny pureed fruit)
- Sauces and gravies
- Fruit syrup





IDDSI Flow test*

Fork Pressure test

Fork Drip test



Description/characteristics	 Usually eaten with a spoon (a fork is possible) Cannot be drunk from a cup Cannot be sucked through a straw
	Does not require chewing
	Can be piped, layered or molded
Texture restrictions shown in	Shows some very slow movement under gravity but cannot be poured
summary table	 Falls off spoon in a single spoonful when tilted and continues to
	hold shape on a plate
	• No lumps
	Not sticky Liquid must not separate from solid
	Liquid must not separate from solid
Physiological rationale for this	If tongue control is significantly reduced, this category may be
level of thickness	easiest to manage
	Requires less propulsion effort than Minced & Moist (level 5),
	Soft & Bite-Sized (Level 6) and Regular (Level 7) but more than
	Liquidised/Moderately thick (Level 3)
	No biting or chewing is required
	Increased residue is a risk if too sticky
	Any food that requires chewing, controlled manipulation or bolus
	formation are <u>not</u> suitable
	Pain on chewing or swallowing
	Missing teeth, poorly fitting dentures
TESTING METHODS	
See also IDDSI Testing Methods do	cument or http://iddsi.org/framework/food-testing-methods/

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Spoon Tilt Test

No lumps

n/a Flow test not applicable, please revert to Fork Drip Test and

Sample sits in a mound/pile above the fork; a small amount may

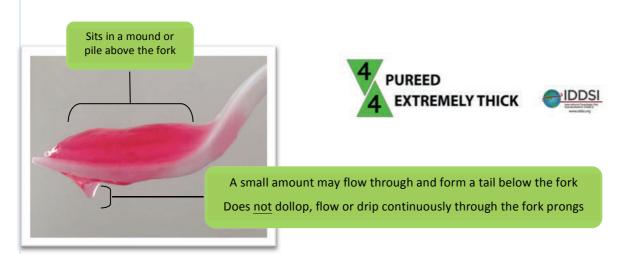
The tines/prongs of a fork can make a clear pattern on the surface, and/or the food retains the indentation from the fork

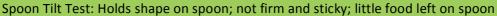
Fork Drip test contd.	flow through and form a tail below the fork tines/prongs, but it does not flow or drip continuously through the prongs of a fork
Spoon Tilt test	 Cohesive enough to hold its shape on the spoon A full spoonful must plop off the spoon if the spoon is titled or turned sideways; a very gentle flick 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; i.e. the sample should not be firm and sticky May spread out slightly or slump very slowly on a flat plate
Chopstick test	Chopsticks are not suitable for this texture
Finger test	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 residue
Indicators that a sample is too thick	Does not fall off the spoon when tiltedSticks to spoon

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)















Description/characteristics Texture restrictions shown in summary table	 Can be eaten with a fork or spoon Could be eaten with chopsticks in some cases, if the individual has very good hand control Can be scooped and shaped (e.g. into a ball shape) on a plate Soft and moist with no separate thin liquid Small lumps visible within the food Paediatric, 2 mm lump size Adult, 4mm lump size Lumps are easy to squash with tongue
Physiological rationale for this level of thickness	 Biting is not required Minimal chewing is required Tongue force alone can be used to break soft small particles in this texture Tongue force is required to move the bolus Pain or fatigue on chewing Missing teeth, poorly fitting dentures

TESTING METHODS

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

Fork Pressure test	 When pressed with a fork the particles should easily be separated between and come through the tines/prongs of a fork Can be easily mashed with little pressure from a fork [pressure should <u>not</u> make the thumb nail blanch to white]
Fork Drip test	A scooped sample 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
Spoon Tilt test	 Cohesive enough to hold its shape on the spoon A full spoonful must slide/pour 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 not be sticky A scooped mound may spread or slump very slightly on a plate
Chopstick test	Chopsticks can be used to scoop or hold this texture if the sample is moist and cohesive and the person has very good

Chopstick test contd.	hand control to use chopsticks
Finger test	It is possible to easily hold a sample of this texture using fingers; small soft, smooth, rounded particles can be easily squashed between fingers. The material will feel moist and leave fingers wet.

FOOD SPECIFIC OR OTHER EXAMPLES http://iddsi.org/framework/food-testing-methods/

MEAT

- Finely minced or chopped, tender mince
 - o Paediatric, 2mm lump size
 - o Adult, 4mm lump size
- Serve in extremely thick, smooth, non-pouring sauce or gravy
- *If texture cannot be finely minced it should be pureed

FISH

- Finely mashed in extremely thick smooth, nonpouring sauce or gravy
 - o Paediatric, 2mm lump size
 - o Adult, 4mm lump size

FRUIT

- Serve mashed
- Drain excess juice
 - o Paediatric, 2mm lump size
 - o Adult, 4mm lump size

VEGETABLES

- Finely minced or chopped or mashed
- Drain any liquid
 - o Paediatric, 2mm lump size
 - o Adult, 4mm lump size

CEREAL

- Very thick and smooth with small soft lumps
 - o Paediatric, 2mm lump size
 - o Adult, 4mm lump size
- Texture fully softened
- Any milk/fluid must <u>not</u> separate away from cereal. Drain any excess fluid before serving BREAD
- Pre-gelled 'soaked' breads that are very moist and gelled through the entire thickness
- No regular, dry bread

RICE

• <u>Not</u> sticky or glutinous (particularly short grain rice) and should <u>not</u> be particulate or separate into individual grains when cooked and served (particularly long grain rice)





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





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

- > Paediatric, 2mm lump size
- > Adult, 4mm lump size





 Can be eaten with a fork, spoon or chopsticks Can be mashed/broken down with pressure from fork, spoon or chopsticks A knife is not required to cut this food, but may be used to help loading a fork or spoon Chewing is required before swallowing Soft, tender and moist throughout but with no separate thin liquid 'Bite-sized' pieces as appropriate for size and oral processing skills Paediatric, 8mm pieces Adults, 15 mm = 1.5 cm pieces
 Biting is not required Chewing is required Tongue force and control is required to move the food for chewing and to keep it within the mouth during chewing Tongue force is required to move the bolus for swallowing Pain or fatigue on chewing Missing teeth, poorly fitting dentures

TESTING METHODS

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

Fork Pressure test	 Pressure from a fork held on its side can be used to 'cut' or break this texture into smaller pieces
	 When a sample the size of a thumb nail (1.5x1.5 cm) is pressed with the base of a fork to a pressure where the thumb nail blanches to white, the sample squashes and changes shape, and does not return to its original shape when the fork is removed.
Spoon Pressure test	 Pressure from a spoon held on its side can be used to 'cut' or break this texture into smaller pieces. When a sample the size of a thumb nail (1.5 cm x1.5 cm) is pressed with the bowl of a spoon, the sample squashes and changes shape, and does not return to its original shape when the spoon is removed.
Chopstick test	Chopsticks can be used to break this texture into smaller pieces

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 will not return to its initial shape once pressure is released.

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

Paediatric, 8mm pieces

Adult, 15mm = 1.5cm pieces

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, serve minced and moist

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

CASSEROLE/STEW/CURRY

- Liquid portion must be thick (as per clinician recommendations; refer to IDDSI levels 0-4)
- 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 mashed
 - 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 are often too firm and are not soft or tender

Contd.

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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 fluid must drained

BREAD

- Pre-gelled 'soaked' breads that are very moist and gelled through the entire thickness
- No regular dry bread unless assessed as suitable by dysphagia specialist, on an individual basis (if
 considered appropriate bread must also conform to paediatric 8mm, and adult 1.5 x1.5 cm size
 requirements)

RICE

Not particulate/grainy, sticky or glutinous













 Normal, everyday foods of various textures that are developmentally and age appropriate Any method may be used to eat these foods Foods may be hard and crunchy or naturally soft Sample size is not restricted at Level 7, therefore, foods may be of a range of sizes Smaller or greater than 8mm pieces (Paediatric) Smaller or greater than 15 mm = 1.5 cm pieces (Adults) Includes hard, tough, chewy, fibrous, stringy, dry, crispy, crunchy, or crumbly bits Includes food that contains pips, seeds, pith inside skin, husks or bones Includes 'dual consistency' or 'mixed consistency' foods and liquids Physiological rationale for this level of thickness 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' An ability to chew all food textures without tiring easily 		
level of thickness that they form a soft cohesive ball/bolus that is 'swallow ready'	There are <u>NO</u> texture	 developmentally and age appropriate Any method may be used to eat these foods Foods may be hard and crunchy or naturally soft Sample size is not restricted at Level 7, therefore, foods may be of a range of sizes Smaller or greater than 8mm pieces (Paediatric) Smaller or greater than 15 mm = 1.5 cm pieces (Adults) Includes hard, tough, chewy, fibrous, stringy, dry, crispy, crunchy, or crumbly bits Includes food that contains pips, seeds, pith inside skin, husks or bones
An ability to remove bone or gristle that cannot be swallowed safely from the mouth	_	 that they form a soft cohesive ball/bolus that is 'swallow ready' An ability to chew all food textures without tiring easily An ability to remove bone or gristle that cannot be swallowed

TESTING METHOD

Not Applicable

TRANSITIONAL FOODS



Description/characteristics	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)
Physiological rationale for this level of thickness	 Biting not required Minimal chewing required Tongue can be used to break these foods once altered by
	 temperature or with addition of moisture/saliva 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)

TESTING METHOD

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

Foul muses we toot	
Fork pressure test	 After moisture or temperature has been applied, the sample can be easily deformed and does not recover its shape when the force is lifted. 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 base of the fork until the thumbnail blanches to white. The sample is a transitional food texture if after removing the fork pressure: The sample has been squashed and disintegrated and no longer looks like its original state Or it has melted significantly and no longer looks like its
Spoon pressure test	original state (e.g. ice chips). As above, using the bowl of the spoon in place of the fork
Chopstick 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 should be easily broken apart using chopsticks with minimal pressure.

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
- Potato crisps only the mashed type (e.g. Pringles)
- Shortbread
- Prawn crisps

Specific examples used in paediatric or adult disability dysphagia management

Commercially available foods that are transitional foods textures include but are not limited to:

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

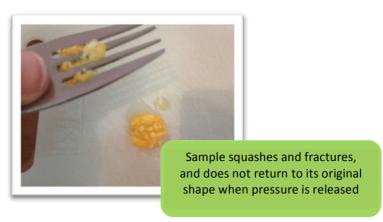
Apply 1 ml of water to sample





TRANSITIONAL FOODS





[#]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.

FOOD TEXTURE REQUIREMENTS



A green shaded check mark in the summary table below indicates a characteristic that is required and acceptable for foods in each level.

A red shaded in the summary table below indicates a food characteristic that is <u>not</u> acceptable for foods in each level.

Description/Characteristics	3 Liquidised/ Moderately thick	4 Pureed/ Extremely thick	5 Minced & moist	6 Soft & bite- sized
No skin, no crust even after cooking, heating or standing				
No separation of thin (watery) liquid		\overline{V}		V
Will hold its shape on a plate, fork or spoon	×			V
Soft grainy texture quality	×	V	V	V
Visible lumps	×	X	V	V
Can contain soft, smooth, rounded, moist, small (2-4 mm) lumps if tender throughout	×	×		V
Can contain soft, moist large (8-15 mm) lumps if tender throughout	×	X	×	V

FOOD TEXTURE RESTRICTIONS



A green shaded check mark \square in the summary table below indicates a characteristic that is acceptable and may be included for foods in each level.

A red shaded in the summary table below indicates a food characteristic that is <u>not</u> acceptable and must be avoided for foods in each level.

Description/Characteristics	3 Liquidised/	4 Pureed/	5 Minced &	6 Soft &	7 Regular
	Moderately thick	Extremely thick	moist	bite- sized	J
Mixed thin-thick textures (e.g. soup with pieces of food, cereal with milk; bubble tea)	×	×	×	×	V
Hard or dry food (e.g. nuts, raw carrot, apple, crackling, hard crusty rolls)	×	X	X	X	V
Fibrous or tough (e.g. steak, pineapple)	×	X	\boxtimes	×	V
Chewy (e.g. lollies/candies/sweets, cheese chunks, marshmallows, chewing gum, sticky mashed potato, dried fruits)	×	X	X	×	V
Crispy (e.g. crackling, crisp bacon, cornflakes)	×	×	\boxtimes	×	\overline{V}
Crunchy (e.g. raw carrot, raw apple, popcorn)	×	×	X	×	V
Sharp or spiky (e.g. corn chips)	×	×	×	×	V
Crumbly bits (e.g. crumbly dry cakes or biscuits)	×	×	×	$\overline{\checkmark}$	V
Pips, seeds, pith (e.g. apple seeds, orange pith)	×	×	\boxtimes	×	V
Skins or outer shells (e.g. peas, grapes)	×	×	\boxtimes	×	V
Husks (e.g. psyllium, bran)	×	×	×	X	V
Skin (e.g. chicken skin, salmon skin)	×	×	\boxtimes	X	V
Bone or gristle (e.g. chicken bones, fish bones)	×	×	\boxtimes	X	V
Round, long shaped foods (e.g. sausage, grapes)	×	×	×	X	V
Sticky or Gummy foods (e.g. nut butter, overcooked oatmeal, edible gelatin; Konjac containing jelly, sticky rice cakes)	×	X	X	×	V
Stringy foods (e.g. beans, rhubarb)	×	×	\boxtimes	×	V
Hard pieces, skins or crusts formed during cooking or heating	×	X	×	×	V

Description/Characteristics	3 Liquidised/ Moderately thick	4 Pureed/ Extremely thick	5 Minced & moist	6 Soft & bite- sized	7 Regular
'Floppy' textures (e.g. lettuce, cucumber, baby spinach leaves)	×	X	X	X	V
'Juicy' food where the juice separates from the solid in the mouth (e.g. watermelon)	×	X	X	X	$\overline{\mathbf{V}}$

*Accompanying documents (http://iddsi.org/framework/):

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