# **Becky Dorner & Associates, Inc.**

# **Webinar Course:**

# The International Dysphagia Diet Standardisation Initiative: The WHO, WHY, WHAT & HOW





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# **Description:**

This presentation was developed for food and nutrition professionals. It will be presented by a Speech-Language Pathologist who is board certified in swallowing and swallowing disorders and is an IDDSI champion. We will discuss the Who, Why, What, and How of the International Dysphagia Diet Standardisation Initiative (IDDSI) framework and descriptors to build **awareness**, assist in our **preparation**, and guide us along the way to eventual **adoption** of the IDDSI standards.



Since 2013, IDDSI, which is a multidisciplinary-international group of researchers and clinicians, has been working to increase patient safety through the development of international dysphagia diet standards with:

- a common terminology for all diet and liquid consistencies (from regular textures to texture modified foods and from thin liquids to thickened liquids)
- across all ages,
- · all care settings, and
- all cultures.

This presentation will explain how the IDDSI standards were developed, what the specific descriptors and testing methods are, and how the IDDSI framework maps to our prior standards (e.g., the National Dysphagia Diet). Implementation strategies and resources will be shared. Question and answer session will be guided by a registered dietitian nutritionist (RDN).

### **Course Objectives:**

After completing this continuing education course, participants will be able to:

- 1. Advocate for the International Dysphagia Diet Standardisation Initiative (IDDSI), by understanding IDDSI and why there is a global effort to standardize diets for people who have difficulty swallowing (dysphagia).
- 2. Classify foods and liquids according to the IDDSI Framework and Descriptors.
- 3. Demonstrate effective testing and analysis of foods and liquids, according to the IDDSI Framework Testing Methods.
- 4. Create individual and facility "to-do" lists in order to further the understanding of & connection to IDDSI
- 5. Gain resources to create a plan to move from IDDSI awareness, to preparation and eventually to adoption.

### **Audience:**

Registered Dietitians (RD), Registered Dietitian Nutritionists (RDN), Dietetic Technicians Registered (DTR), Nutrition and Dietetic Technicians Registered (NDTR) and members of the interdisciplinary team

Course CPE Hours: 1.5	CDR Level: 2
Suggested CDR Learning Needs Codes:	Suggested CDR Performance Indicators:
3050, 5210, 8010, 9050	6.2.4, 8.3.1, 8.3.6, 13.2.2

Speaker: Karen Sheffler, MS, CCC-SLP, BCS-S, has over 20 years of experience as a medical speech-



language pathologist, specializing in dysphagia since 1995, when she graduated from the University of Wisconsin-Madison. She obtained her Board Certification as a Swallowing Specialist (BCS-S) in 2012. In 2014, she started SwallowStudy.com, which is a dysphagia resource for patients and professionals. Karen has worked in acute care, rehabilitation centers, skilled nursing facilities, and in home health care. She currently works at two different hospitals in the Boston area, owns her own dysphagia consulting business, performs peer reviews and presentations, and provides dysphagia expert services to companies and law firms. Believing in constant continuing education, she has been awarded the ASHA Award for Continuing Education 5 times. She is a member of ASHA's Special Interest Group 13, the National Foundation of Swallowing Disorders (NFOSD), and the Dysphagia Research Society (where she is a

member of the Website, Communications and Public Relations Committee).

**Disclosures:** Karen Sheffler, MS, CCC-SLP, BCS-S and Becky Dorner, RDN, LD, FAND disclose that they are consultants to Hormel Health Labs.

# **Questions about the Continuing Professional Education Program?**

Please contact Becky Dorner & Associates, Inc. at info@beckydorner.com or 1-800-342-0285.





# **Today's Webinar**



### **Audio and Webinar**

· Please refer to handout for instructions.

### Handouts

Emailed to the person who registered for the program.

### Questions

Use GoToMeeting to ask questions.

The program will last approximately 90 min.

### Credit Hours

 Please refer to your handouts for detailed information on about credit hours.



#### Disclosures

- Honorarium for today's lecture from BeckyDorner.com
- Dysphagia consultant for Hormel Health Labs
- Member of Advisory Board for Hormel Health Labs
- Volunteered as IDDSI Champion since 2014

### Karen Sheffler, MS, CCC-SLP, BCS-S

### Presenter

Karen has over 20 years of experience as a medical speechlanguage pathologist, specializing in dysphagia since 1995, when she graduated from the University of Wisconsin-Madison. She obtained her Board Certification as a SwallowStudy.com, which is a dysphagia resource for patients and professionals. Karen has worked in acute care, rehabilitation centers, skilled nursing facilities, and in home health care. She currently works at two different hospitals in the Boston area, owns her own dysphagia consulting business, performs peer reviews and presentations, and provides dysphagia expert services to companies and law firms. Believing in constant continuing education, she has been awarded the ASHA Award for Continuing Education 5 times. She is a member of ASHA's Special Interest Group 13, the National Foundation of Swalioving Disorders (NFOSD), and the Dysphagia Research Society (where she is a member of the Website, Communications and Public Relations Committeel.)

# International Dysphagia Diet Standardisation Initiative (IDDSI): The Who, Why, What & How

By Karen Sheffler, MS, CCC-SLP, BCS-S
Board Certified Specialist in Swallowing & Swallowing Disorders
IDDSI Champion
Founder of <a href="https://www.karenSheffler.com">www.karenSheffler.com</a>
Follow me on Twitter & Facebook @SwallowStudySLP

SwallowStudy.com

### PLEASE NOTE:

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# International Dysphagia Diet Standardisation Initiative



www.IDDSI.org

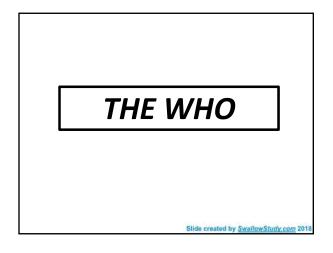
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# FOODS REGULAR SOFT & BITE-SIZED PUREED PURE

# **Learner Objectives**

### Participants will be able to:

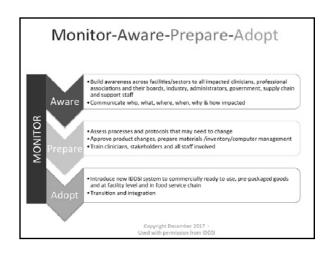
- Advocate for the International Dysphagia Diet Standardisation Initiative (IDDSI), by understanding IDDSI and why there is a global effort to standardize diets for people who have difficulty swallowing (dysphagia).
- Classify foods and liquids, according to the IDDSI Framework and Descriptors.
- 3. Demonstrate effective testing and analysis of foods and liquids, according to the IDDSI Framework Testing Methods.
- Create individual and facility "to-do" lists in order to further the understanding of & connection to IDDSI.
- Gain resources to create a plan to move from IDDSI awareness, to preparation, and eventually to adoption.

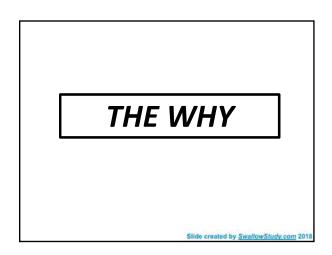




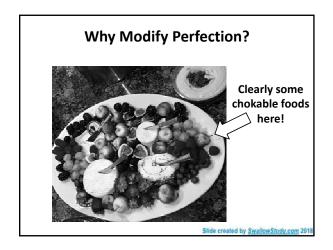












### But what does a Regular Diet (Level 7) require?

- Adequate Cognition: Is there lethargy/sedation, poor attention to
- task/distractibility, impulsivity, lack of self & safety awareness?

  Adequate Structure: Teeth/dentures? Can they chew with their gums?

  Pain? Dry? Tumor, missing anatomy, scar tissue, fibrotic/stiff, edema?
- Coordination: Can they coordinate of breathing & swallowing?
- Adequate Physiology or function:
  - Timing: Are they slow to process the food in the mouth? Slow to trigger the swallow? Slow airway closure? Slow esophageal empty?
  - Motility: Weakness in lips, tongue, cheeks, jaw, palate can all lead to poor food/liquid processing in mouth. Weakness in back of tongue and throat squeezing muscles can prevent food/liquid from clearing through the throat safely & efficiently. Could lead to food/liquid dropping into airway OR food/liquid remaining stuck in the mouth, throat, and/or esophagus.
  - Sensory: You need to feel the food/liquid to start a good swallow, AND to know if food/liquid enters the airway or gets stuck. Poor sensory input can give poor motor output.

# Oropharyngeal dysphagia & aspiration



# Advander, 59 gaging on tosts at Dreakrast, olde on mitocen at unch (2014, AO)... Male 44, choked in food Nottingham Mental Health Unit (2015, UK)... Male, 45 choked on hazelnut spread and ed... Mona Belle, 95 choked on carrots and peas (AU)... Woman 73 choked on Ondeh-ondeh utinous, Jump-sized food (Singapore)... Eldon, 88 with poor dentition choked on partially ewed food (Canada)... Brian, 84 on 'soft diet' choked on toast and died (AU)... Katie, 56 choked u meat at a group home and died... Pamela, 78 with Alzheimer's choked on toast and ed care, choked on chocolate cake and died... Marjo orone Inquests

# So the world ended up with too many different diet modification systems!

- $\bf 8$  sets of published standards from USA, UK, Australia, New Zealand, Ireland, Sweden, Denmark, and Japan.
- Diverse terminology, diet levels and descriptions have created confusion.
- United States: National Dysphagia Diet (NDD) 2002.
  - New Zealand had different standards from Australia.
  - UK standards were directly inverse (set up opposite) to the Irish standards.
  - Japan: had 3 sets of national standards, but Japan did use the pyramid concept that was captured in the IDDSI framework

### IDDSI got to work:

researching, publishing, & developing a new global framework which borrowed from the best-evidence-based standards from around the world.



# IDDSI 2013-2014 Stakeholder Surveys

IDDSI started with a global survey about LABELS for food textures and liquid thicknesses (over 5000 responses).

<u>Liquids</u>: 27 different labels to describe liquid levels!
 Typically 3-4 levels of thickness

**Only 25%** used a color, number or symbol to help identify thickened liquids.

• <u>Food Textures</u>: **54** different labels for dysphagia diets! Typically 4-5 levels

**Only 16%** used a color, number, or symbol to help identify the texture modified foods.

See The IDDSI Framework article in Dysphagia (2017) 32: 293-314 by Cichero, et al.

Slide created by SwallowStudy.com 201

# IDDSI 2013-2014 Stakeholder Surveys

Only 40% of respondents reported that they check if the food textures and liquid thickness is accurate right before serving!

Point of serving is a KEY time to ensure correct texture and consistency.



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## Why do we need a standardised system?

### Safety

- Multiple labels and definitions cause confusion
- Within and between institutions

   Individuals with swallowing difficulties
   Family/Care providers
  - oHealth care professionals
  - oFood services

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### Why do we need a standardised system?

## Clinical efficiency

- Avoids re-assessment to determine safe liquid and diet levels
- Reduces need to confirm and clarify clinical information.

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### Why do we need a standardised system?

## **Commercial implications**

 So that 'ready to use/off-the-shelf' items are consistent from manufacturer/supplier to manufacturer/supplier and, similar to those produced in hospitals/care facilities/at home

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### Why do we need a standardised system?

# Development of clinical evidence and conducting research

· To be able to compare research across healthcare and research facilities throughout the world to create strong clinical evidence

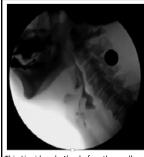


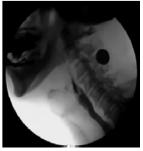
# Summary of Systematic Review (2015)

### There is evidence that:

- Thickening liquids does help those who aspirate thin liquids. Moves slower & allows time for the person to react if swallow is delayed. Thin liquids can be fast and unpredictable.
  - However, there is such a thing as "too thick," where residue begins to accumulate in your throat.
  - Solid foods and thicker consistencies require more oral processing & greater effort to swallow.

# Example of aspiration prevented when liquid is thicker (one tool)





Thin Liquid aspiration before the swallow Nectar/Mildly Thick Liquid: No aspiration

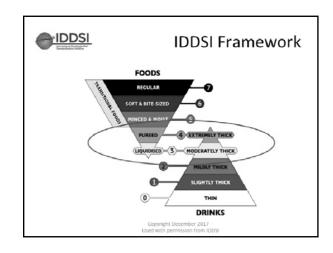
# Summary of Systematic Review (2015)

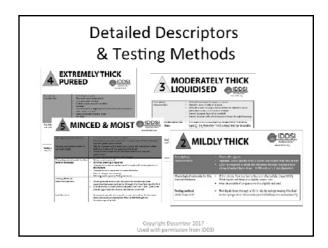
- •Very little evidence for:
  - Specific rheological values to define thickness boundaries
  - Specifics on types of modified foods that should be used for management of dysphagia.

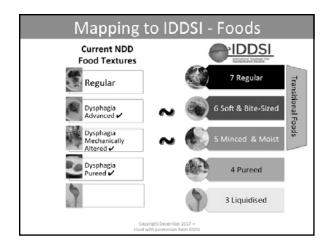
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# **First Question Break**









# Soft & Bite-Sized - Level 6

- Soft, tender & moist throughout. No separate thin liquid.
- · Chewing is required. Biting is NOT required.
- Bite-Sized pieces, with particle size of:
  - Adults: 1.5cm squared (15mm or 0.6 inches or size of adult thumbnail)
  - Pediatric: 8mm (0.3 inches or child's pinky nail)
  - Sizes measured to diameter of trachea/prevent choking
- Can be eaten with fork, spoon, chopsticks, fingers.
- Knife not needed, as food pre-cut to bite sizes
- Tongue force & control are required to move food for chewing, keep in mouth for chewing, & to move food back for the swallow.
- Food squashes with "fork pressure test." Changes shape & does not return to original shape when fork lifted.

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# Minced & Moist - Level 5

- · Soft & Moist with no separate liquid
- Small visible lumps, with particle sizes of
  - Adult: 4mm lump size
  - Pediatric: 2mm lump size
  - This is the size of food after it is chewed; "ready to swallow"
- Lumps are easy to squash with tongue
- Minimal chewing required. Biting is NOT required.
- · Can be eaten with a fork or spoon
- Could be eaten with chopsticks, if good hand control
  - Can be scooped and shaped (e.g., into a ball) on a plate

Again, see Framework & Descriptors document

for some food examples for each diet & Food Texture Requirements.

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# Puree & Extremely Thick Liquid Level 4

- Usually eaten with a spoon, but 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
- Shows some very slow movement under gravity, but cannot be poured
- Falls off spoon in a single spoonful WHEN TILTED
- · Continues to hold shape on plate
- NO lumps -> smooth
- NOT sticky -> moist

https://youtu.be/EIItIGY3ndo

• Liquid must not separate from solid

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### 'Transitional foods'

isel (1991) Dev Med Child Neurol, 33: 69-79; Dovey (2013) Dysphagia, 28: 501-510

- Start as one texture (e.g. solid) and change to another when moisture is applied (saliva, water) or temperature (heat) change occurs
- · Minimal chewing required
- Tongue pressure may be sufficient to break food down after alteration in moisture or temperature
- · Developmental teaching or rehabilitation of chewing skills







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# **Food Testing**

### <u>Important Food Properties for</u> *simple POINT OF SERVICE testing*:

DO DON'T
Softness Hardness
Cohesiveness Crumbly
Slipperiness Stickiness

Size & Shape of Food: crucial factors in choking risk

See Steele, et al. (2015). The Influence of Food Textures & Liquid Consistency Modification on Swallowing Physiology and Function: A Systematic Review. *Dysphagia*, 30, 2-26.

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# 1. Spoon Tilt Test

USED TO MEASURE LEVELS 4 AND 5 (PUREE AND MINCED & MOIST)

- How sticky or adhesive is the sample?
- How well does the food hold together (cohesiveness)?

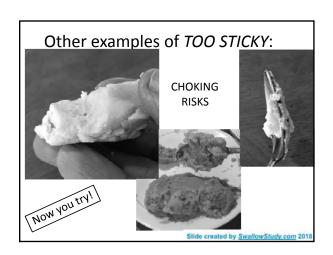
THE FOOD SAMPLE SHOULD:

- Be cohesive enough to hold its shape on the spoon, but not sticky.
- Be slippery enough so that the full spoonful slides/pours off the spoon when the spoon is tilted sideways (or shaken lightly).
- · Very little food left on the spoon.
- A scoop mound may spread or slump over only slightly on a
  plate.

Slide created by SwallowStudy.com 201

# Our barium pudding is a bit too sticky!



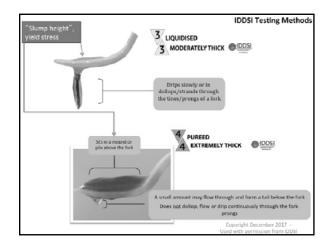


# 2. Fork Drip Test

- Test for Levels 3 & 4: thick drinks (moderately & extremely thick) and smooth foods (liquidized & puree).
- Do they flow through the slots/tines of a fork.
  - Drips slowly or in strands/dollops through the tines of a fork
  - Sits in a mound or pile on top of the fork Only a small amount may flow through & form a tail below

Does not flow or drip continuously through the fork tines

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# 3. Particle Size Compliance

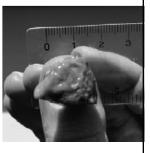
### For SOFT & BITE-SIZED:

### ADULT:

- Bite-size = 1.5 x 1.5 cm
  - Adult thumb nail
  - About the width of fork
- **AVERAGE ADULT AIRWAYS:** Male = 21.5 mm Female = 17 mm

### PEDIATRIC:

- Bite-size = 8 mm
- PEDIATRIC AIRWAY = 8 mm
- INFANT AIRWAY = 6.5 mm



# 3. Particle Size Compliance

### For MINCED & MOIST:

Average particle size of chewed solids before swallowing

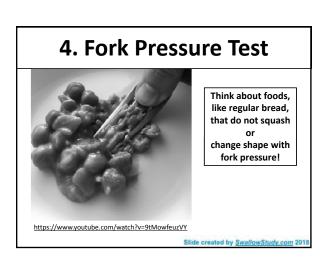
### ADULT:

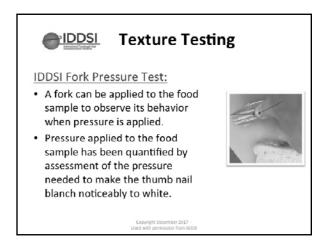
• Lump size = 4 mm Width between two tines of a fork

### **PEDIATRIC:**

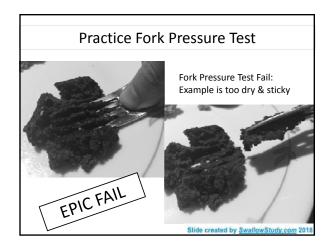
• Lump size = 2 mm

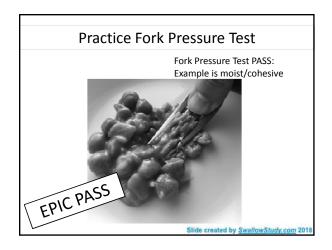




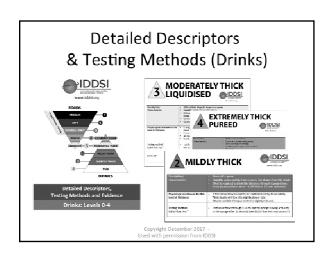


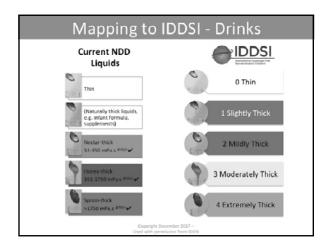


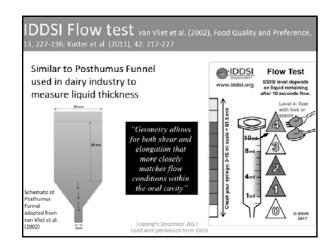


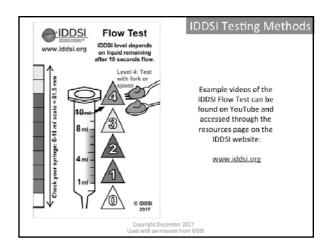


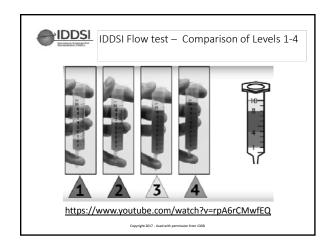












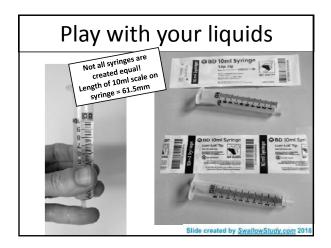


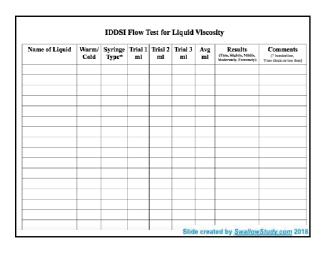
IDDSI Flow Test Good for
Levels 1, 2, 3

Mildly Thick Liquid 2
https://youtu.be/XBqi iOLLHw

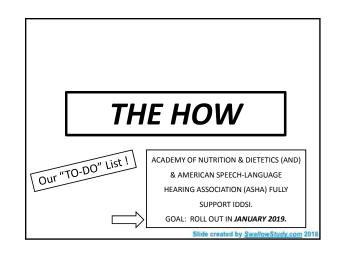
Slightly Thick Liquid 1
https://youtu.be/xyvDubBGJQU

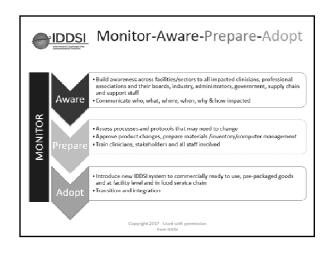
Thin Liquid 0 (white background)







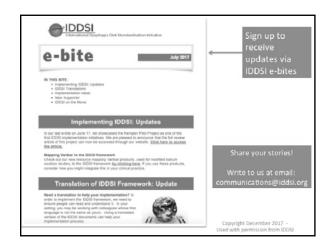


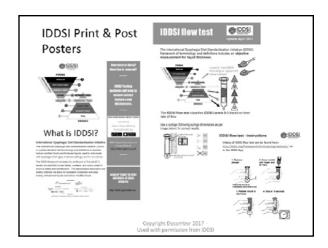


# Find "Champions" in Your Facility

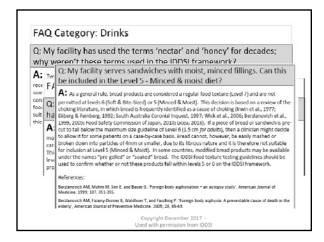
- The Registered Dietitian & Speech-Language Pathologist can start raising awareness & building a task force/team.
- Team up with food service & nursing.
- At our hospital, our chef became a chief advocate.
- Review every item on the menu, using detailed descriptors and all testing methods.
- You may need to delete items, change items, and add new recipes.
- Consider sharing your ideas/recipes on IDDSI.org!

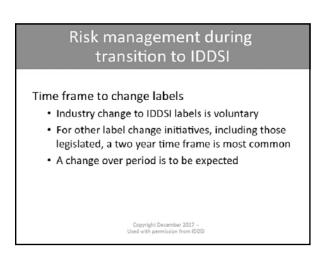




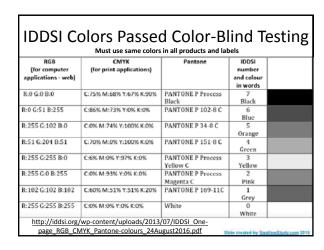


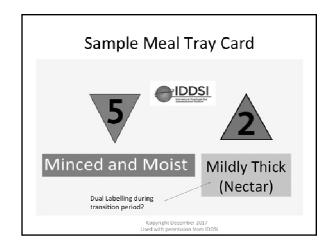


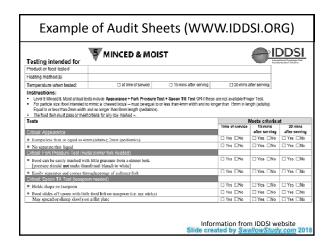


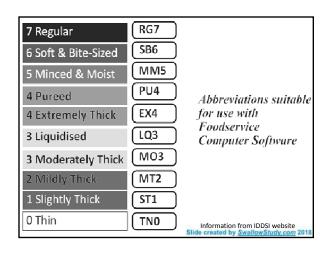






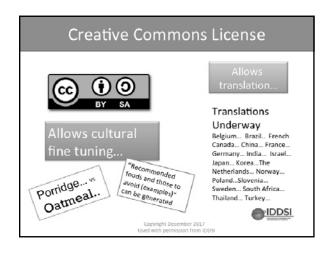














### References

# IDDSI Documents from IDDSI.org (more references in these documents):

- Complete IDDSI Framework Detailed Definitions: <a href="http://iddsi.org/Documents/IDDSIFramework-completeFramework.pdf">http://iddsi.org/Documents/IDDSIFramework-completeFramework.pdf</a>
- IDDSI Framework Testing Methods: <a href="http://iddsi.org/Documents/IDDSIFramework-TestingMethods.pdf">http://iddsi.org/Documents/IDDSIFramework-TestingMethods.pdf</a>
- IDDSI Framework Translations: <a href="http://iddsi.org/translations/">http://iddsi.org/translations/</a>
- Please see the IDDSI.org Resources page for more tools: <a href="http://iddsi.org/resources/">http://iddsi.org/resources/</a>

### References

### IDDSI Publications:

Cichero, J.A.Y., Steele, C., Duivestein, J., et al. (2013). The Need for International Terminology and Definitions for Texture-Modified Foods and Thickened Liquids Used in Dysphagia Management: Foundations of a Global Initiative. Current Physical Medicine and Rehabilitation Reports, 1(4), 280-291. https://doi.org/10.1007/s40141-013-0024-2

Steele, C.M., Alsanei, W.A., Ayanikalath, S., et al. (2015). The Influence of Food Texture and Liquid Consistency Modification on Swallowing Physiology and Function: A Systematic Review. *Dysphagia*, 30(1), 2-26. https://doi.org/10.1007/s00455-014-9578-x

Cichero, J.A.Y., Lam, P., Steele, C.M., et al. (2017). Development of International Terminology and Definitions for Texture-Modified Foods and Thickened Fluids Used in Dysphagia Management: The IDDSI Framework. *Dysphagia*, 32(2), 293-314. https://doi.org/10.1007/s00455-016-9758-y

# References

Lam, P., Stanschus, S., Zaman, R. & Cichero, J.A.Y. (2017). The International Dysphagia Diet Standardisation Initiative (IDDSI) framework: The Kempen Pilot. *BJNN/Stroke Association Supplement*, 13(2), S18-S26. <a href="http://iddsi.org/wp-content/uploads/2017/08/bjnn.2017.13.sup2\_s18.pdf">http://iddsi.org/wp-content/uploads/2017/08/bjnn.2017.13.sup2\_s18.pdf</a>

Steele, C.M., Namasivayam-MacDonald, A.M., Guida, B.T., Cichero, J.A.Y., Duivestein, J., Hanson, B., Lam, P. & Riquelme, L.F. (2018). Creation and Initial Validation of the International Dysphagia Diet Standardisation Initiative Functional Diet Scale, Archives of Physical Medicine and Rehabilitation, doi: 10.1016/j.apmr.2018.01.012

### References noted on IDDSI Flow Test slide:

van Vliet, T. (2002). On the relation between texture perception and fundamental mechanical parameters for liquids and time dependent solids. Food Quality and Preference, 13(4), 227-236. https://doi.org/10.1016/S0950-3293(01)00044-1

Kutter, A., Singh, J.P., Rauh, C. & Delgado, A. (2011). Improvement of the prediction of mouthfeel attributes of liquid foods by a Posthumus Funnel. *Journal of Texture Studies*, 41, 217-227.

# References

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Gisel, E.G. (1991). Effect of Food Texture on the Development of Chewing of Children Between Six Months and Two Years of Age. *Developmental Medicine & Child Neurology*, 33, 69-79. doi:10.1111/j.1469-8749.1991.tb14786.x

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