



Fluid Testing Methods Recommended by IDDSI

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Creech et al. have recently published an investigation seeking to find a tool to predict flow rate of pediatric formulas (and water) in a training cup with drinking nozzle [1]. The approach was scientific and thorough, using bespoke apparatus to measure the flow of liquids through a variety of syringes.

We felt it important to highlight that although there is frequent reference to the International Dysphagia Diet Standardisation Initiative, IDDSI, the materials and methods used in this paper are different to those required for the standard IDDSI flow test. The IDDSI Flow test requires 10 mL of test sample to be placed in a 10-mL capacity syringe (measuring 61.5 mm from the 0–10 mL lines), and flow is allowed for 10 s. The remaining volume in mL is the measurement used to categorize liquid thickness [2]. In contrast, Creech et al. have measured the average rates of

flow over a variable, unreported, period of time (within 2 min) using variable syringe volumes.

Although the authors state the IDDSI flow test was “performed according to standardized protocol,” they have not included results of the published standard IDDSI Flow Test, namely, the volume of liquid (in mL) remaining after 10 s’ flow. Instead, they have applied additional measurement tools (electronic balance) to analyze and report the entire outflow of liquid. This alternative measurement was created in order to address the authors’ specific research aim, but it is not required for classifying liquids in the global IDDSI framework. Creech et al.’s methods are not IDDSI procedures.

Of benefit, the Creech et al. study demonstrated using their syringe outflow method that it is not possible to substitute the IDDSI-specified syringe for alternative syringe types, as the outcomes will be different. The standardization of the IDDSI Flow Test comes from (a) standardized volume, (b) standardized flow time, (c) standardized syringe dimensions to give categorization of liquid thickness that is internationally comparable. For the dysphagia research community to build capacity in this area of liquid thickness measurement, standardized methods should be preserved to allow for valid comparisons between studies.

We would like to remind readers that the original descriptions of IDDSI tests are available open access in this journal [2], and the web site www.IDDSI.org has the most up-to-date links to videos and training materials. For example, since its original publication, additional clarification has been added to highlight that a fork test is required to classify Level 4 when the material is too thick to be used in a Flow Test.

Please note that the IDDSI Framework is licensed under the Creative Commons license as follows:

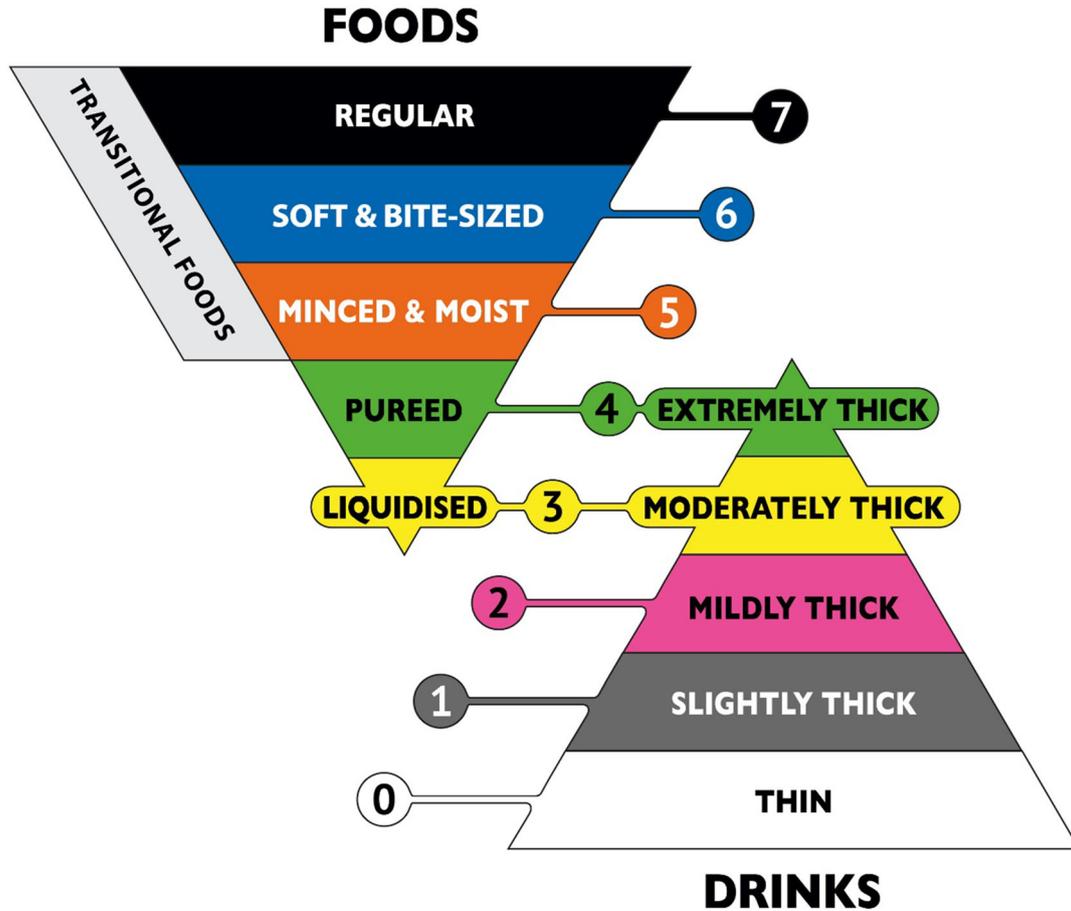
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IDDSI framework. *Dysphagia*. 2017;32:293. <https://doi.org/10.1007/s00455-016-9758-y>.

References

1. Creech TN, Bailey-Van Kuren M, Sparks J, et al. A comparison of measurements of a pediatric supplement. *Dysphagia*. 2018. <https://doi.org/10.1007/s00455-018-9931-6>.
2. Cichero JAY, Lam P, Steele CM, et al. Development of international terminology and definitions for texture-modified foods and thickened fluids used in Dysphagia management: the

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