

Summary of Scientific Article

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Title of Article:	A Novel Stable Isotope Approach for Determining the Impact of Thickening Agents on Water Absorption		
Reference:	Hill R., Dodrill P., Bluck L.J.C. & Davies P.S.W. A Novel Stable Isotope Approach for Determining the Impact of Thickening Agents on Water Absorption. <i>Dysphagia</i> 2010, 25:1-5		
Origin (Country):	Australia	Type of Study:	Proof of concept
Publication Date:	2010	Sample:	1 (case study)
Financing:	N/A	Age Group:	25 years old
Key Message:	<i>In this case study (n=1), it appears that the bioavailability of water is not affected when consumed with xanthan gum, however more research is required to generalize to all thickeners and for clients presenting dysphagia.</i>		
Summary:	<p><u>Purpose:</u></p> <ul style="list-style-type: none"> Suggest an alternate (less invasive) method of assessing the bioavailability of water when consumed with thickening agents <p><u>Methods:</u></p> <ul style="list-style-type: none"> Total body water measured using nonradioactive, nontoxic isotopes Participant given xanthan gum fluid thickener (EasyThick, Flavour Creations) Urine samples collected prior to administering isotopes and xanthan gum dose, 4-6 hours after and then once every 24 hours for the following 15 days <p><u>Conclusion:</u></p> <ul style="list-style-type: none"> Bioavailability of water was not affected when combined with xanthan gum Suggested methodology appeared to be more accurate and less invasive compared to the blood and saliva samples and bioelectrical impedance used in a previous study (Sharpe et al., 2007) More research is needed to evaluate the bioavailability of water in thickened beverages, while using their methodology is recommended 		
Limitations of Study:	<ol style="list-style-type: none"> Case study - sample size: n=1 Authors neglected to mention the following regarding the participant: <ol style="list-style-type: none"> Sex Health status Medications Quantity of xanthan gum ingested Limited number of references used Unable to generalize the conclusions as the suggested methodology and findings were based on a healthy adult 		
Comments:	<ul style="list-style-type: none"> Discussion was focused on the novel methodology (comparing to others) rather than the effects of thickening agents on the bioavailability of water when thickened with xanthan gum This case study approach may be adequate to provide a tentative “proof of concept” of the current issue at hand, however <ul style="list-style-type: none"> The evidence is not sufficient to provide a solid conclusion that can be generalized to all thickeners nor to patients presenting dysphagia 		
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Date:	October 2011		