

Abstract – Original Research

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Title of Presentation:

Do Adults Drink During Meals or Outside Meals? Results of the Liq.In7 Cross Sectional Surveys

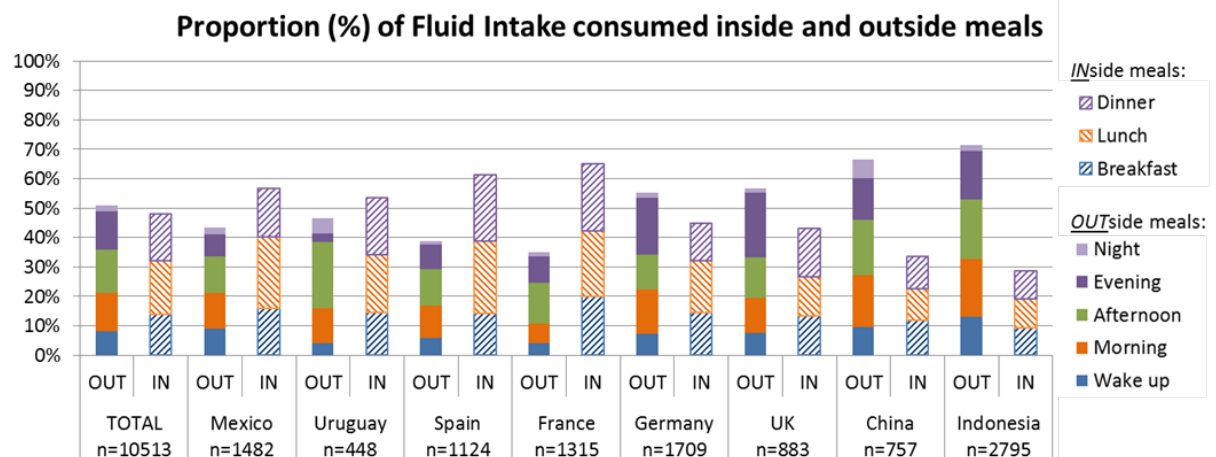
1. Brief description/abstract for the content of the poster presentation

PURPOSE: To estimate fluid intake (FI, sum of drinking water and all other beverages) consumed on different moments of the day. In light of a health intervention, moments with low FI could be potential opportunities for individuals to change their FI towards an adequate water intake.

METHODS: 10 513 adults (41±13 years) (47% men) recruited in the Liq.In7 cross-sectional surveys completed a 7 day fluid specific record supported by visuals of standard containers. To compare the country mean to the overall group mean, an analysis of means methods was used.

RESULTS: The mean (SEM) FI of the total sample was 2113 mL/d (9). Compared to this, the mean intake of Mexico, Spain, France and China was significantly lower (respectively 1848 mL/d (24); 1958 mL/d (27); 1536 mL/d (25); 1884 mL/d (33); p=0,001) and the one of Uruguay, Germany, UK and Indonesia higher (respectively 2658 mL/d (43); 2459 mL/d (22); 2258 mL/d (30); 2305 mL/d (17); p=0,001).

In the total sample 52% of FI was consumed outside of meals. In Mexico, Uruguay, Spain and France this proportion was lower, and in Germany, UK, China and Indonesia higher than the total mean (for all P<0.001) (see figure). In Mexico highest FI is consumed during lunch (24%). In Uruguay highest FI occurred in the afternoon (23%), followed by lunch (20%) and dinner (19%) (p<0.001). In France and Spain mean FI consumed during meals is comparable. In the UK and Germany most FI is consumed in the evening. In China and Indonesia most FI is consumed outside of meals. As expected, on average only 2% is consumed during the night time. The second moment on which the least FI is consumed is upon awakening (mean 8%). Only in Indonesia and China FI at awakening is significant higher than the group mean (respectively 13%; 10%, p<0.001).



2. Please give two to three key references (published by you or others) which can be used to inform future work:

- Morin C, et al. A cross-cultural comparison of drinking behavior using a harmonized methodology (Liq.In7) in 6 countries. EJM 2018
- Ziauddeen N, Almiron-Roig E, Penney TL, Nicholson S, Kirk SFL, Page P (2017) Eating at Food Outlets and "On the Go" Is Associated with Less Healthy Food Choices in Adults: Cross-Sectional Data from the UK National Diet and Nutrition Survey Rolling Programme (2008-2014). Nutrients 9 (12). doi:10.3390/nu9121315

3. Please identify, where possible, up to three specific key messages that participants will take away from your poster presentation to inform their future practice.

These results have a practical and methodological significance.

1. Nutritional advice aiming at meeting the adequate water intake could focus on specific moments of the day (eg start your day with a glass of water).
2. The methodological significance of the results relates to methods to accurately assess fluid intake: since up to 71% of FI can take place outside of meals, recording methods should draw attention to record intakes outside meals. If fluid intake is the primary outcome, a fluid specific questionnaire should be considered.