

# Online Test-Retest Reliability of the COAST Malnutrition Screening Tool

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## BACKGROUND

Inadequate protein and energy consumption leads to muscle loss and malnutrition (Crichton et al. 2019), and these deficits are associated with frailty (Lorenzo-Lopez et al. 2017), reduced quality of life (Rasheed et al. 2013), and mortality (Shakersain et al. 2016). Nutrition risk screening is a first step to quickly identify individuals who might be malnourished or at risk of malnutrition.

The Comprehensive Older Adult Screening Tool (COAST) is a malnutrition screening tool developed to determine nutritional risk in lower income, community-dwelling older adult populations. In a face-to-face setting, it has been shown to be easy to use and exhibits internal consistency/reliability and validity as a screening tool for malnutrition risk (Alabasi et al 2020); however, the test-retest reliability of the screening tool has not been established.

COAST link (English): <https://doi.org/10.32473/edis-fs393-2020>  
COAST link (Spanish): <https://doi.org/10.32473/edis-fs396-2020>



Source: UF/IFAS

## OBJECTIVE

To determine the test-retest reliability of the COAST malnutrition screening tool in an online setting.

## METHODS

**Participants:** Older adults (> 60 years)

**Recruitment:** Through <https://www.researchmatch.org>.

**Study Procedures:** Interested volunteers were emailed a Qualtrics link to the consent description and the 7-item COAST at two timepoints, two weeks apart.

The screening tool (Figure 1) examines weight loss, decreased appetite, illness affecting food intake, diet quality, and intake of protein foods.

**Scoring System:** From 0 to 8 points

**0-4 points** -> high risk of malnutrition

**5-6 points** -> moderate risk of malnutrition

**7-8 points** -> low risk of malnutrition.

**Primary outcome:** Correlation of scores at two timepoints.

**COAST**

1. Have you lost weight recently without trying?  
Yes  
No
2. Have you been eating less food because of a decreased appetite?  
Yes  
No
3. Do you have an illness or condition that has made you change the kind and/or amount of food you eat?  
Yes  
No
4. In general, how healthy is your overall diet?  
Poor  
Good  
Very good
5. Do you consume...

• Dairy products (milk, cheese, yogurt) or soy milk at least once a day?	Yes	No
• Meat, poultry (e.g. chicken), fish/seafood, or eggs every day?	Yes	No
• Legumes (e.g. beans), soy products, nuts, or seeds at least twice a week?	Yes	No

Figure 1. Comprehensive Older Adult Screening Tool (COAST)

## RESULTS

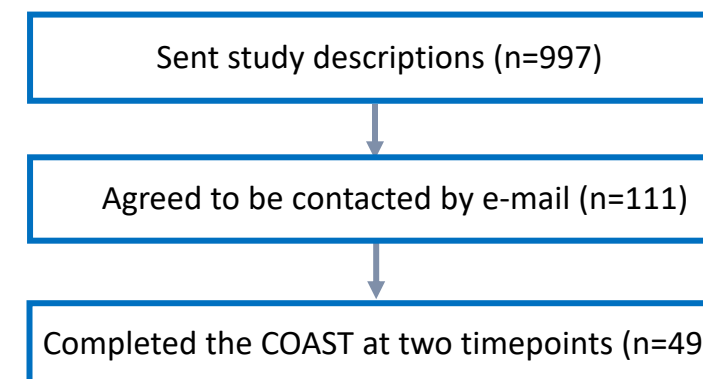


Figure 2. Study flow diagram

The COAST test-retest reliability coefficient was 0.74, which is considered acceptable reliability for a screening tool; 75% of participants were similarly categorized as at high risk, moderate risk, or low risk of malnutrition at both timepoints.

Inconsistent responses to the COAST question, “In general, how healthy is your overall diet?” explained 50% of the misclassifications, suggesting a need to clarify this item.

## DISCUSSION AND CONCLUSIONS

The COAST malnutrition screening tool demonstrated acceptable test-retest reliability when used in an online format. As the tool was previously validated for face-to-face administration, future research to determine the test-retest reliability using face-to-face administration may be warranted.

## REFERENCES

- Alabasi KM. et al. 2020 *JNEAFCS*. 2020 (15):17-21.  
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**SNEB Competencies:** 2.1 and 8.1