



The Importance of Screening and the MNA[®]-SF

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Zurich, 18 January 2010



Why Screening?



- To identify those that are **affected by malnutrition** as well as those **at risk**
- To **predict the probability** of a better or worse outcome due to nutritional factors
- To provide a **systematic and structured** approach
- To start therapy **as early as possible**



Outcomes Relevant to Screening



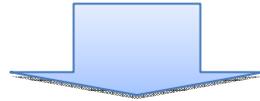
- **Improvement or at least prevention** of deterioration in mental and physical function
- **Accelerated recovery** from disease and shortened convalescence
- **Reduced consumption of resources**
(e.g. length of hospital stay and other prescriptions)



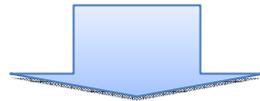
Diagnostic & Therapeutic Process



Screening



Assessment



Intervention



Monitoring



Diagnostic & Therapeutic Process



Screening



Assessment

Examination of metabolic, nutritional and functional variables by expert clinician, dietitian or nutrition nurse.



Intervention



Monitoring



Diagnostic & Therapeutic Process



Screening



Assessment



Intervention



Monitoring



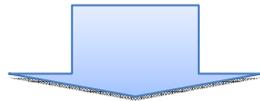
Diagnostic & Therapeutic Process



Screening



Assessment



Intervention



Monitoring



What Makes a Good Screening Tool?

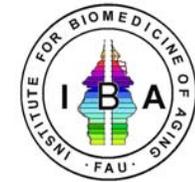


- Addressing precisely **the issue in focus** (validity)
- High **reliability**
- High **practicability** and **applicability**
- Focus on the **relevant population**
- **Inexpensiveness**
- **High acceptance** among health care professionals





Mini Nutritional Assessment MNA®



The Mini Nutritional Assessment – MNA®

The Established Nutrition Screening Tool in Older Persons

Last name:		First name:		
Sex:	Age:	Weight, kg:	Height, cm:	Date:

Complete the screen by filling in the boxes with the appropriate numbers. Add the numbers for the screen. If score is 11 or less, continue with the assessment to gain a Malnutrition Indicator Score.

Screening	
A Has food intake declined over the past 3 months due to loss of appetite, digestive problems, chewing or swallowing difficulties? 0 = severe decrease in food intake 1 = moderate decrease in food intake 2 = no decrease in food intake	<input type="checkbox"/>
B Weight loss during the last 3 months 0 = weight loss greater than 3 kg (6.6 lbs) 1 = does not know 2 = weight loss between 1 and 3 kg (2.2 and 6.6 lbs) 3 = no weight loss	<input type="checkbox"/>
C Mobility 0 = bed or chair bound 1 = able to get out of bed / chair but does not go out 2 = goes out	<input type="checkbox"/>
D Has suffered psychological stress or acute disease in the past 3 months? 0 = yes 2 = no	<input type="checkbox"/>
E Neuropsychological problems 0 = severe dementia or depression 1 = mild dementia 2 = no psychological problems	<input type="checkbox"/>
F Body Mass Index (BMI) (weight in kg) / (height in m ²) 0 = BMI less than 19 1 = BMI 19 to less than 21 2 = BMI 21 to less than 23 3 = BMI 23 or greater	<input type="checkbox"/>
Screening score (subtotal max. 14 points) 12 points or greater: Normal – not at risk – no need to complete assessment 11 points or below: Possible malnutrition – continue assessment	<input type="checkbox"/> <input type="checkbox"/>
Assessment	
G Lives independently (not in a nursing home or hospital) 1 = yes 0 = no	<input type="checkbox"/>
H Takes more than 3 prescription drugs per day 0 = yes 1 = no	<input type="checkbox"/>
I Pressure sores or skin ulcers 0 = yes 1 = no	<input type="checkbox"/>
J How many full meals does the patient eat daily? 0 = 1 meal 1 = 2 meals 2 = 3 meals	<input type="checkbox"/>
K Selected consumption markers for protein intake • At least one serving of dairy products (milk, cheese, yogurt) per day yes <input type="checkbox"/> no <input type="checkbox"/> • Two or more servings of legumes or eggs per week yes <input type="checkbox"/> no <input type="checkbox"/> • Meat, fish or poultry every day yes <input type="checkbox"/> no <input type="checkbox"/> 0.0 = if 0 or 1 yes 0.5 = if 2 yes 1.0 = if 3 yes	<input type="checkbox"/> <input type="checkbox"/>
L Consumes two or more servings of fruits or vegetables per day? 0 = no 1 = yes	<input type="checkbox"/>
M How much fluid (water, juice, coffee, tea, milk...) is consumed per day? 0.0 = less than 3 cups 0.5 = 3 to 5 cups 1.0 = more than 5 cups	<input type="checkbox"/> <input type="checkbox"/>
N Mode of feeding 0 = unable to eat without assistance 1 = self-fed with some difficulty 2 = self-fed without any problem	<input type="checkbox"/>
O Self view of nutritional status 0 = views self as being malnourished 1 = is uncertain of nutritional state 2 = views self as having no nutritional problem	<input type="checkbox"/>
P In comparison with other people of the same age, how does the patient consider his / her health status? 0.0 = not as good 0.5 = does not know 1.0 = as good 2.0 = better	<input type="checkbox"/> <input type="checkbox"/>
Q Mid-arm circumference (MAC) in cm 0.0 = MAC less than 21 0.5 = MAC 21 to 22 1.0 = MAC 22 or greater	<input type="checkbox"/> <input type="checkbox"/>
R Calf circumference (CC) in cm 0 = CC less than 31 1 = CC 31 or greater	<input type="checkbox"/>
Assessment (max. 16 points)	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
Screening score	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
Total Assessment (max. 30 points)	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
Malnutrition Indicator Score	
17 to 23.5 points	<input type="checkbox"/> at risk of malnutrition
Less than 17 points	<input type="checkbox"/> malnourished

Ref. Velaz B, Vilaz H, Abellan G, et al. Overview of the MNA® - its History and Challenges. J Nutr Health Aging 2006; 10: 456-465.
Rubenstein LZ, Harker JC, Salva A, Guigoz Y, Velaz B. Screening for Undernutrition in Geriatric Practice: Developing the Short-Form Mini Nutritional Assessment (MNA-SF). J Gerontol 2001; 56A: M36-377.
Guigoz Y. The Mini-Nutritional Assessment (MNA®) Review of the Literature - What does it tell us? J Nutr Health Aging 2006; 10: 466-487.
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For more information: www.mna-elderly.com



The MNA[®]

A Reference Tool in Science and Practice



- **> 400 Scientific Articles:**

Available at the website of the
U.S. National Library of Medicine
via www.ncbi.nlm.nih.gov/pubmed



- Recommended by:

National & International Scientific Societies

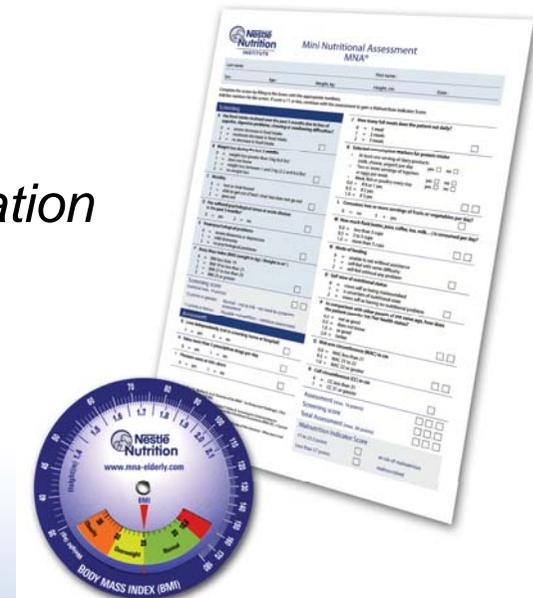
- The European Society for Clinical Nutrition and Metabolism (**ESPEN**)
- The International Association of Gerontology and Geriatrics (**IAGG**)
- The International Academy for Nutrition in the Aged (**IANA**)



Advantages of the MNA®



- Focusing the population at risk
– **The Older Individual**
- Applicability in **all settings**:
Hospital - Nursing home - Community – Rehabilitation
- **Essential component** of the Comprehensive Geriatric Assessment





Who Should be Screened?

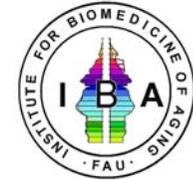


- Routine yearly screening of all older persons **above age 65**
- **Absolute necessity** for
 - Frail older people
 - Older people with chronic diseases
 - Older people depending on social services or living in assisted living facilities
 - Older people in hospitals and nursing homes





Mini Nutritional Assessment MNA®



The NEW Mini Nutritional Assessment – Short Form MNA®-SF

Optimising an established tool

Last name:		First name:		
Sex:	Age:	Weight, kg:	Height, cm:	Date:

Complete the screen by filling in the boxes with the appropriate numbers. Total the numbers for the final screening score.

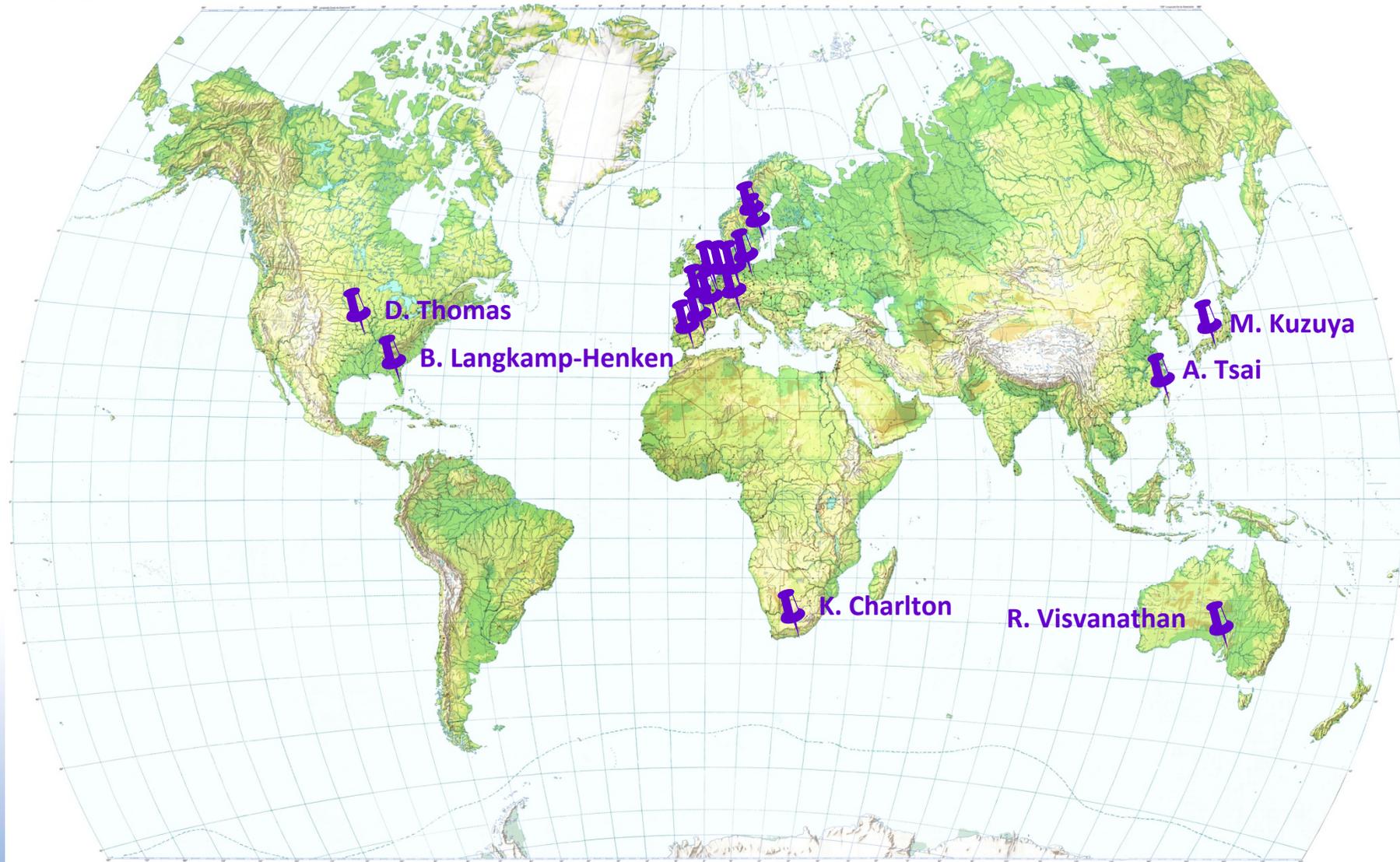
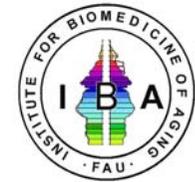
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F1 Body Mass Index (BMI) (weight in kg) / (height in m ²) 0 = BMI less than 19 1 = BMI 19 to less than 21 2 = BMI 21 to less than 23 3 = BMI 23 or greater	<input type="checkbox"/>
<small>IF BMI IS NOT AVAILABLE, REPLACE QUESTION F1 WITH QUESTION F2. DO NOT ANSWER QUESTION F2 IF QUESTION F1 IS ALREADY COMPLETED.</small>	
F2 Calf circumference (CC) in cm 0 = CC less than 31 3 = CC 31 or greater	<input type="checkbox"/>
Screening score (max. 14 points)	<input type="checkbox"/> <input type="checkbox"/>
12-14 points: Normal nutritional status 8-11 points: At risk of malnutrition 0-7 points: Malnourished	

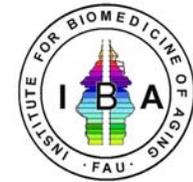
For a more in-depth assessment, complete the full MNA® which is available at www.mna-elderly.com

Ref. Vellas B, Villars H, Abellan G, et al. Overview of the MNA® - Its History and Challenges. *J Nutr Health Aging* 2006; 10:456-465.
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 For more information: www.mna-elderly.com



The 2008 – 2009 MNA[®] International Initiative





The MNA[®]-SF (Short-Form)

A: Appetite loss	0-2pts.
B: Weight loss	0-3pts.
C: Mobility	0-2pts.
D: Acute disease	0-2pts.
E: Depression/Dementia	0-2pts.



BMI available

CC available

F: BMI 0-3pts.

R: CC 0 - 3 pts.



12-14 pts.	Well Nourished
7 -11 pts.	At Risk
0 - 7 pts.	Malnourished



Key features of the MNA[®]-SF

- **Stand alone**
nutrition screening tool
- **Calf circumference**
as an alternative to BMI
- Three categories
 - **Well Nourished**
 - **At Risk**
 - **Malnourished**



Mini Nutritional Assessment MNA[®]



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Sex:	Age:	Weight, kg:	Height, cm:	Date:

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Conclusion



- Nutrition screening is **highly relevant** for maintaining and improving health in older people
- A **universal screening** effort is necessary by all those involved in the care of older people
- Nutrition screening with the new MNA[®]-SF is easy
Takes less than 4 minutes
- Due to the **Specific Geriatric Focus**, the MNA[®] should be recommended as the basis for nutritional screening in older people
- Successful screening will **improve the nutritional status** of the older population