NUTRICIA

MALNUTRITION IN ELDERLY: THE HIDDEN RISK TO SCREEN FOR IN PHARMACIES

Nutricia BeLux - February 2026



DANONE
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This information is intended exclusively for medical professionals and paramedics.

MALNUTRITION IN ELDERLY:
THE HIDDEN RISK TO SCREEN FOR IN PHARMACIES

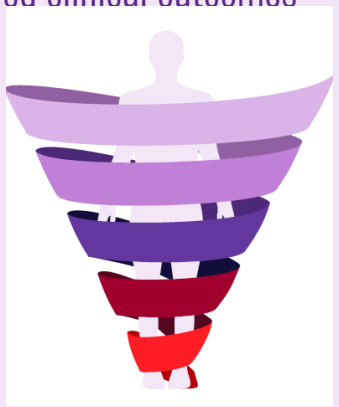
1. Malnutrition in elderly: signs and risks
2. Malnutrition and polymedication
3. Practical tips for screening on malnutrition in pharmacy
    - 3.1. mini nutritional assessment®- short form
    - 3.2. implementation and intervention
4. PILOT project malnutrition and polypharmacy
5. Q&A



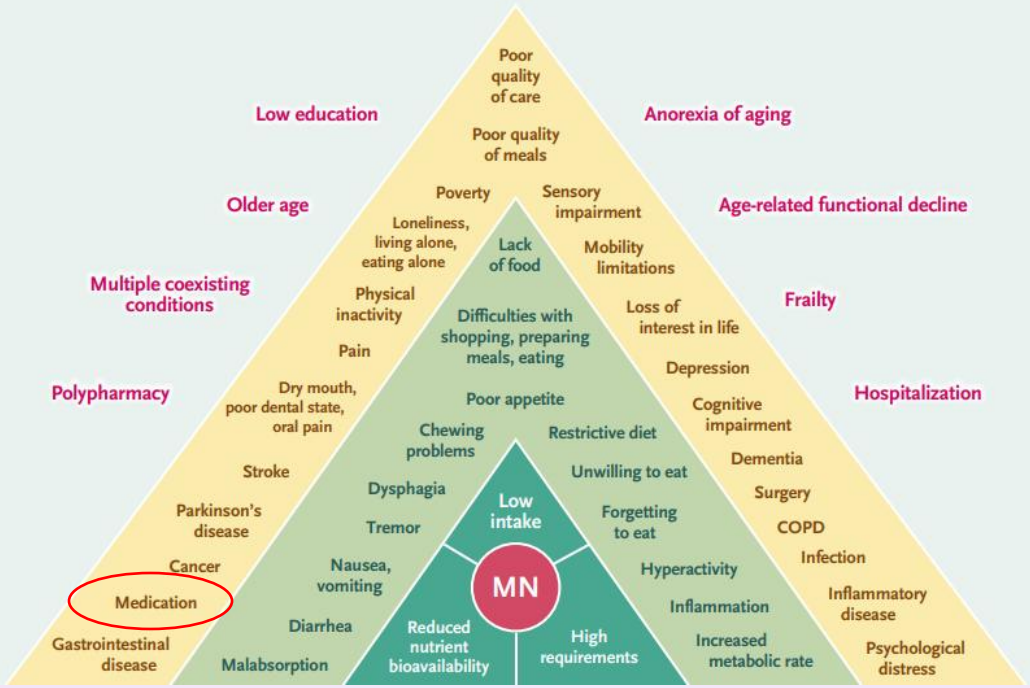
1 - MALNUTRITION IN ELDERLY: SIGNS AND RISKS

- **Malnutrition is a state of imbalance between the intake or uptake of nutrients and body needs**

- **It leads to:**
  - - altered body composition
  - - reduced physical and mental functioning
  - - and impaired clinical outcomes

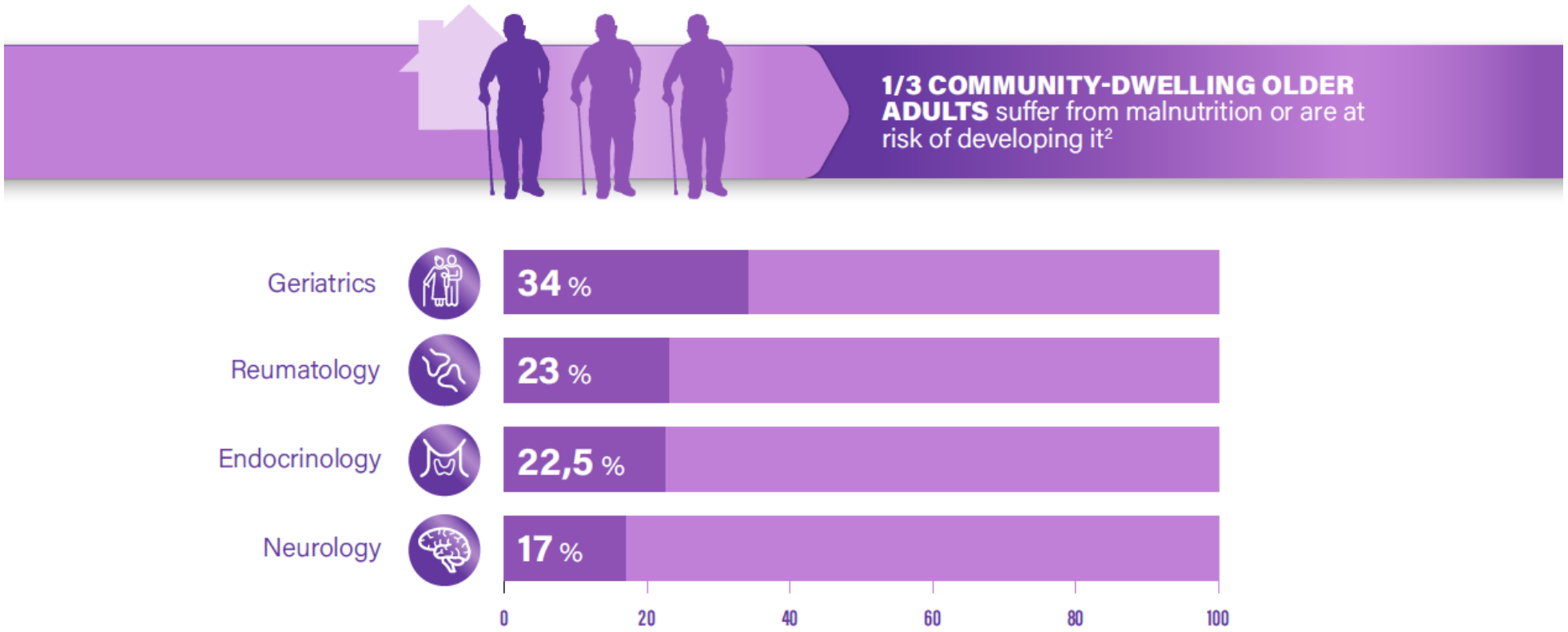


Determinants of Malnutrition in Aged Persons Model



1. Cruz-Jentoft A.J. and Volkert D. (2025). Malnutrition in older adults. New England Journal of Medicine, 392, 2244-2255.

1 - MALNUTRITION IN ELDERLY: SIGNS AND RISKS



1. Meulemans, A., Matthys, C., Vangoitsenhoven, R., Sabino, J., Van Der Schueren, B., Maertens, P., Pans, C., Stijnen, P., & Bruyneel, L. (2021). A multicenter propensity score matched analysis in 73,843 patients of an association of nutritional risk with mortality, length of stay and readmission rates. *The American Journal of Clinical Nutrition, 114*(3), 1123–1130. https://doi.org/10.1093/ajcn/nqab135 2. Sciensano (2023), ondervoeding bij ouderen; www.sciensano.be consulted Feb. 2026

ESPEN
European Society for Clinical Nutrition and Metabolism

"Health care professionals, as well as informal caregivers, should be offered ***nutritional education*** *in order* ***to ensure awareness*** *of and basic knowledge* ***on nutritional problems*** *and thus* ***promote adequate dietary intake*** *of older persons with malnutrition or at risk of malnutrition."*



Volkert et al., 2022, ESPEN practical guidline: clinical nutrition and hydration in geriatrics, clinical nutrition 41, 958-989

1 - MALNUTRITION IN ELDERLY: SIGNS AND RISKS



General principles of nutritional care

GUIDANCE FOR NUTRITIONAL INTAKE

R1) Guiding value for **energy** intake in older persons is **30 kcal per kg body weight** and day; this value should be individually adjusted with regard to nutritional status, physical activity level, disease status and tolerance.[1]

R2) Protein intake in older persons should be at least **1 g protein per kg body weight** and day. The amount should be individually adjusted with regard to nutritional status, physical activity level, disease status and tolerance.[2]

R3) For EN, **fiber**-containing products should be used.[3]

R4) Provided that there is no specific deficiency, **micronutrients** should be delivered according to the recommendation for healthy older persons.[4]

R5) Older **women** should be offered at least **1.6 L of drinks each day**, while older **men** should be offered at least **2.0 L of drinks each day** unless there is a clinical condition that requires different approach.[61]

BASIC PRINCIPLES OF NUTRIONAL CARE

R6) In institutional settings, **standard operating procedures** for nutritional and hydration care shall be established and responsibilities well regulated.[7]

R7) Nutritional and hydration care for older persons shall be **individualized** and **comprehensive** in order to ensure adequate nutritional intake, maintain or improve nutritional status and improve clinical course and quality of life.[8]

R8) Nutritional interventions for older persons should be part of a **multimodal** and **multidisciplinary team intervention** in order to support adequate dietary intake, maintain or increase body weight and improve functional and clinical outcome.[9]

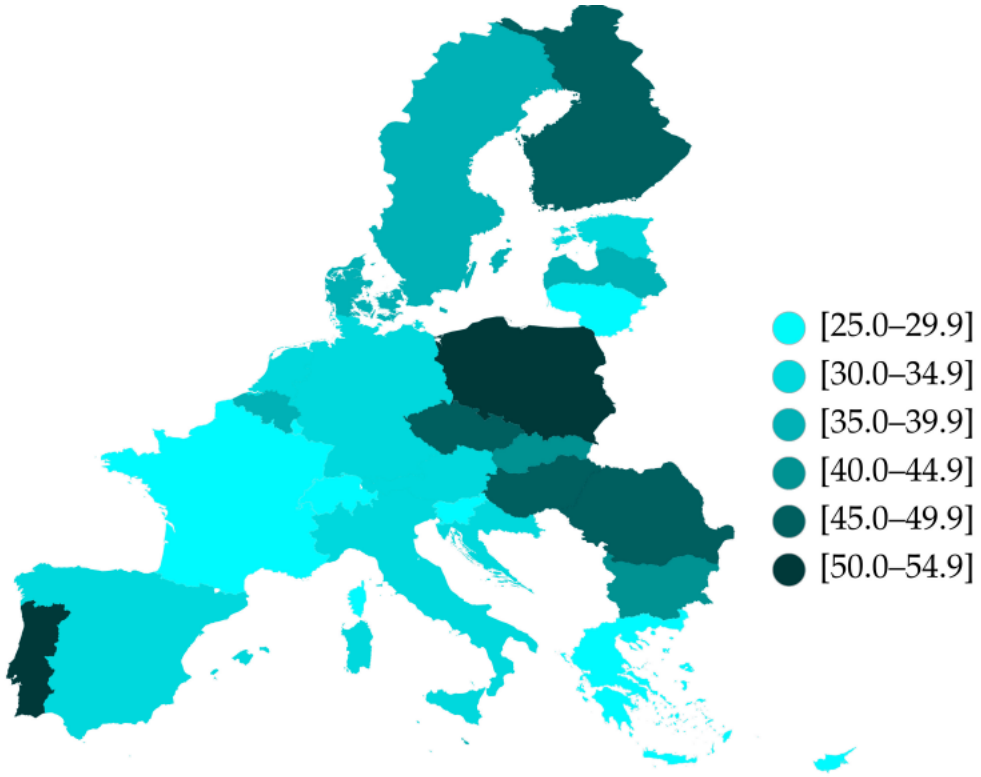
R9) Potential **causes** of malnutrition and dehydration shall be **identified and eliminated** as far as possible.[10]

R10) **Dietary restrictions** that may limit dietary intake are potentially harmful and should be **avoided**.[11]

R11) Health care professionals as well as informal caregivers should be offered **nutritional education** in order to ensure awareness of and basic knowledge on nutritional problems and thus promote adequate dietary intake of older persons with malnutrition or at risk of malnutrition.[17]

Volkert, D., Beck, A. M., Cederholm, T., Cruz-Jentoft, A., Goisser, S., Hooper, L., … Bischoff, S. C. (2019). ESPEN guideline on clinical nutrition and hydration in geriatrics. Clinical Nutrition, 38(1), 10–47. https://www.espen.org/files/ESPEN-Guidelines/ESPEN_guideline_on_clincal_nutrition_and_hydration_in_geriatrics.pdf

2. MALNUTRITION AND POLYMEDICATION



Midão, L., Giardini, A., Menditto, E., Kardas, P., & Costa, E. (2018). Polypharmacy prevalence among older adults based on the Survey of Health, Ageing and Retirement in Europe. *Journal of Clinical Medicine*, 7(10), 322. https://doi.org/10.3390/jcm7100322

2. MALNUTRITION AND POLYMEDICATION

Characteristics of older adults in different healtcare settings and risks for malnutrition

Table 1 Participants' characteristics and potential risk factors of malnutrition for community-dwelling older adults, patients of a geriatric day hospital, receivers of home care and nursing home residents; secondary data analysis of studies conducted among adults aged ≥65 years, Germany, in 2009, 2012, 2010 and 2007, respectively

	Community (*n* 1073)		Geriatric day hospital (*n* 180)		Home care (*n* 335)		Nursing home (*n* 197)		*P*
Demographics									
Age (years)*	76·0[a]	6·6	79·3[b]	6·2	80·9[b]	7·7	85·5[c]	7·9	0·001
Female gender (%)	50·2[a]		71·7[b]		63·6[b]		73·6[b]		0·001
Living alone (%)	33·5[a]		63·8[b]		39·7[a]		–		0·001
Health status									
Polypharmacy (%)	54·9[a]		87·2[b]		83·9[b]		82·7[b]		0·001
Multimorbidity (%)	50·6[a]		84·4[b]		85·7[b]		83·2[b]		0·001
Diabetes mellitus (%)	17·6[a]		40·6[b]		28·1[c]		35·0[b,c]		0·001
Heart diseases (%)	31·4[a]		45·0[b]		73·7[c]		76·6[c]		0·001
Stroke (%)	8·5[a]		12·8[a]		29·9[b]		28·9[b]		0·001
Cancer (%)	4·4[a]		7·2[a,b]		12·2[b]		7·1[a,b]		0·001
Respiratory diseases (%)	10·7[a]		16·7[a,b]		26·6[b]		17·3[a,b]		0·001
Gastrointestinal diseases (%)	8·9[a]		6·7[a]		16·7[b]		15·7[b]		0·001
Renal diseases (%)	4·7[a]		28·9[b]		11·9[c]		18·8[b,c]		0·001
Arthropathy (%)	17·9[a]		42·2[b]		54·9[c]		31·0[b]		0·001
Mental function									
Cognitive impairment (%)	22·7[a]		11·7[b]		40·7[c]		65·7[d]		0·001
Depressive symptoms (%)	10·8[a]		30·2[b]		37·0[b]		35·2[b]		0·001
Depressive symptoms not assessed (%)†	0[a]		0[a]		12·9[b]		23·4[c]		
Physical function									
Mobility limitations (%)	17·1[a]		42·8[b]		56·4[c]		66·0[c]		0·001
Difficulties with eating (%)	9·0[a]		9·8[a]		43·6[b]		59·9[c]		0·001
Dietary intake-related problems									
Nausea (%)	17·8[a]		15·0[a]		27·7[b]		11·2[a]		0·001
Chewing problems (%)	19·5[a]		10·0[b]		16·2[a,b]		14·8[a,b]		0·002
Swallowing problems (%)	23·9[a]		13·9[b]		28·1[a]		12·3[b]		0·001
Poor appetite (%)	9·5[a]		25·6[b]		37·3[c]		35·4[b,c]		0·001
Dietary behaviour									
Low fruit/vegetable intake (%)	13·8[a]		35·6[b]		16·1[a]		33·9[b]		0·001
Low fluid intake (%)	2·2[a]		2·2[a]		1·5[a]		3·6[a]		0·293
Total number of risk factors‡	3[a]	2–5	6[b]	4–7	7[c]	6–9	7[c]	5–9	0·001

Kiesswetter et al. (2019). Malnutrition and related risk factors in older adults from different health-care settings: An enable study. *Public Health Nutrition, 23*(3), 446–456. https://doi.org/10.1017/S1368980019002271

2. MALNUTRITION AND POLYMEDICATION

- **Systematic review[1]**
  - People 65 and older, with polypharmacy, without sarcopenia or frailty
  - Mainly community-dwelling
  - 7 studies (5 cross-sectional, 1 cohort, 1 case-control)
  - Screening via MNA-SF(2), MNA-LF(3), GLIM(1)

Significant association between malnutrition and polypharmacy in all studies

Kok, W. E., Haverkort, E. B., Algra, Y. A., Mollema, J., Hollaar, V. R. Y., Naumann, E., de van der Schueren, M. A. E., & Jerković-Ćosić, K. (2022). The association between polypharmacy and malnutrition (risk) in older people: A systematic review. *Clinical Nutrition ESPEN*, 47, 84–94.

3. PRACTICAL TIPS FOR SCREENING ON MALNUTRITION IN PHARMACY

3.1. MNA-SF

Mini nutritional assesment® – short form



- developed and validated in elderly population
- ease of use and limited time per patient
- first line care setting (pharmacies, general practicioners, nurses,...)
- 6 questions
- score is referring to type of intervention

https://www.mna-elderly.com/ consulted on 4/2/2026 1. Milne AC, et al. Cochrane Database Syst Rev. 2009:2:CD003288 2. Gariballa S, et al. Am J Med. 2006;119:693-699

3. PRACTICAL TIPS FOR SCREENING ON MALNUTRITION IN PHARMACY

3.1. MNA-SF

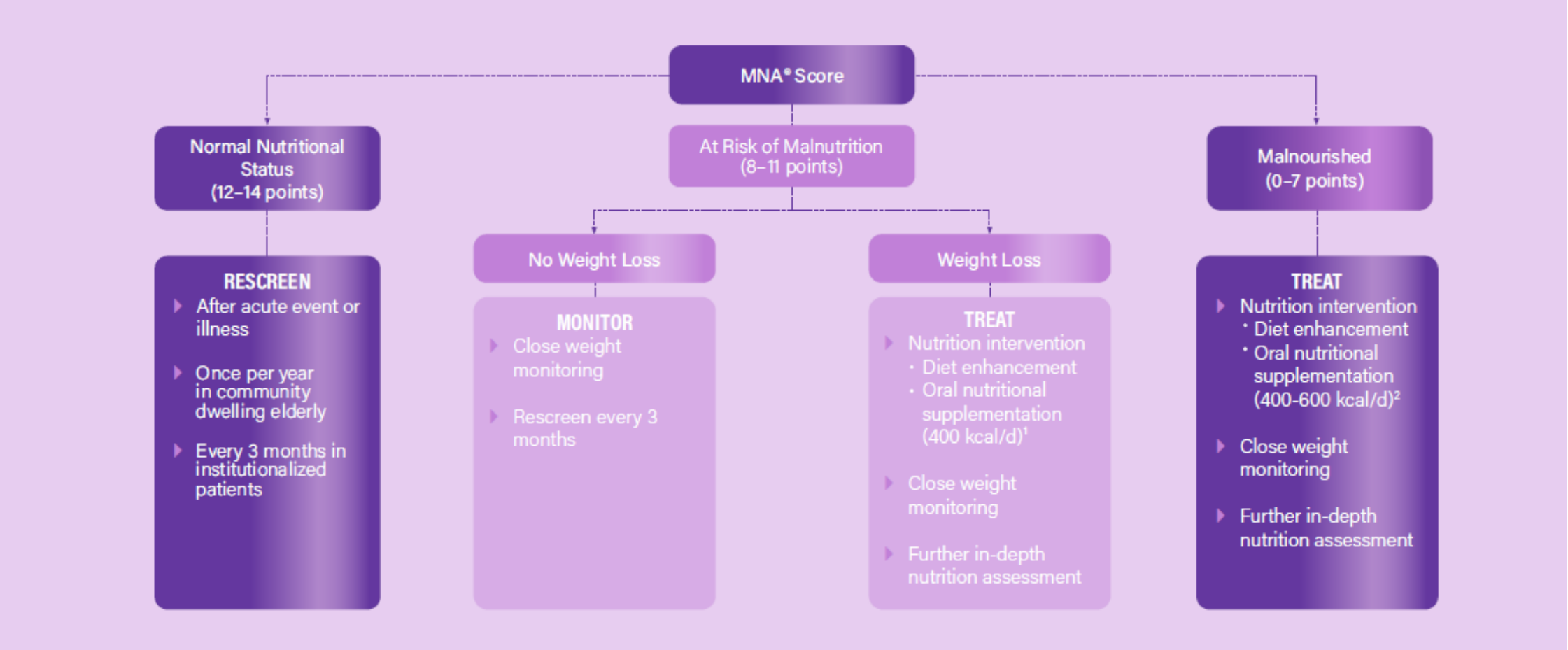
MINI NUTRITIONAL ASSESMENT® SCREENING

Question	Score
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
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
C Mobility	0 = bed or chair bound 1 = able to get out of bed / chair but does not go out 2 = goes out
D Has suffered psychological stress or acute disease in the past 3 months?	0 = yes 2 = no
E Neuropsychological problems	0 = severe dementia or depression 1 = mild dementia 2 = no psychological problems
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
F2 Calf circumference (CC) in cm	0 = CC less than 31 3 = CC 31 or greater

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3. PRACTICAL TIPS FOR SCREENING ON MALNUTRITION IN PHARMACY

3.1. MNA-SF



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3. PRACTICAL TIPS FOR SCREENING ON MALNUTRITION IN PHARMACY

3.2. Implementation and intervention



SUPPORTIVE INTERVENTIONS | NUTRITIONAL COUNSELING | FOOD MODIFICATION | **ONS** | EN | PN

INDICATION

- Elderly people with (risk of) malnutrition with acute or chronic condition(s)* if nutritional couseling and food enrichment is insufficient
- Elderly people with (risk of) malnutrition after hospitilazation** if nutritional couseling and food enrichment is insufficient

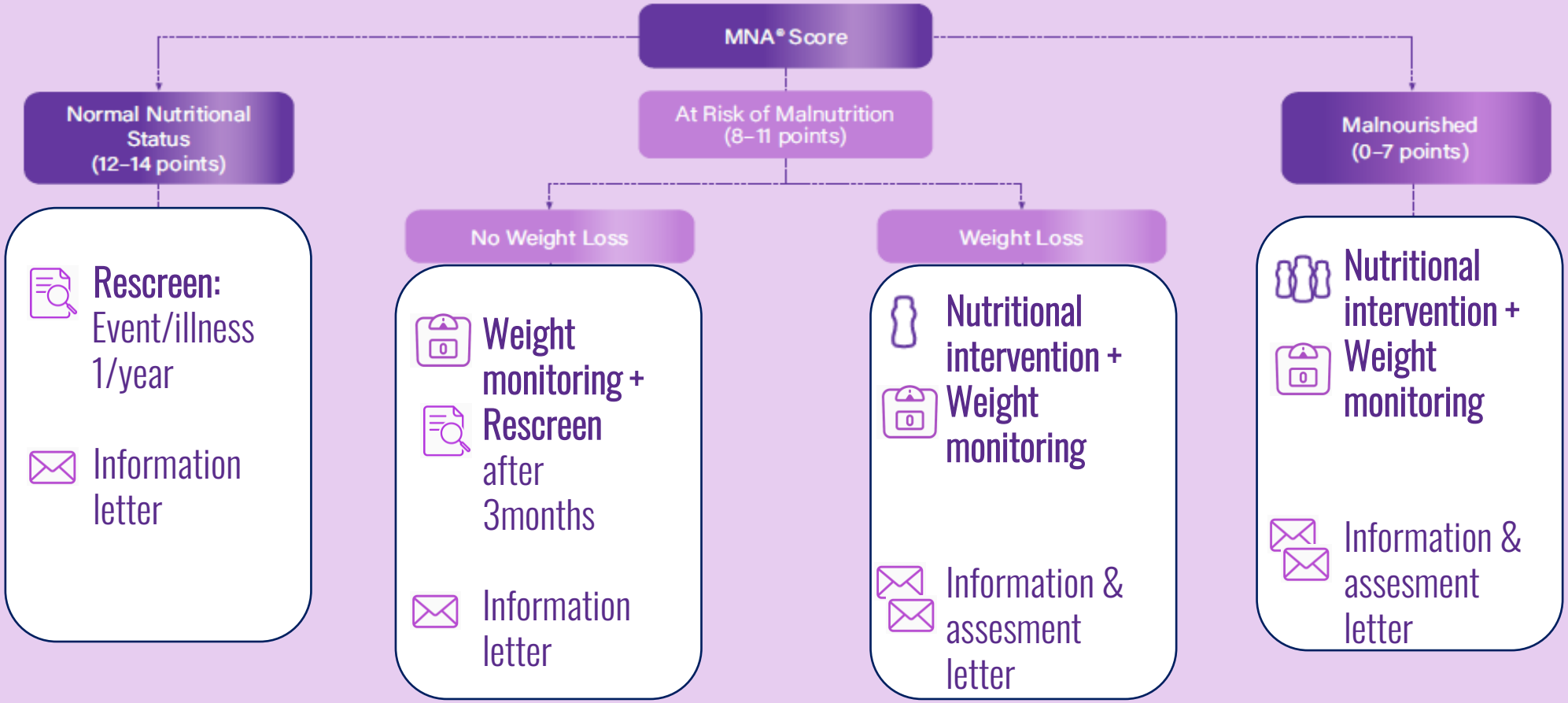
IMPLEMENTATION

- 400 kcal/day and 30g proteins/day
- Min. 1 month and evaluation of adherence

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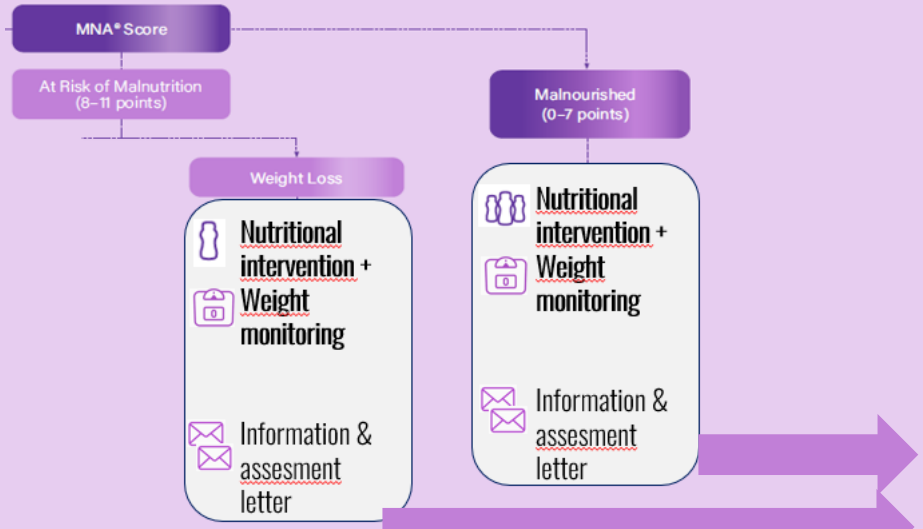
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3. PRACTICAL TIPS FOR SCREENING ON MALNUTRITION IN PHARMACY

3.2. Implementation and intervention







Fortimel and Cubitan are foods for special medical purposes for the dietary management of disease-related malnutrition. For use under medical supervision only.

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3. PRACTICAL TIPS FOR SCREENING ON MALNUTRITION IN PHARMACY

3.2. Implementation and intervention









FORTIMEL
COMPACT PROTEIN
2.4 KCAL



FORTIMEL
PROTEIN
2 KCAL

FORTIMEL
PLANT BASED PROTEIN
2 KCAL

FORTIMEL
JUCY PLUS

FORTIMEL
CRÈME



CUBITAN

FORTIMEL
DIACARE

Fortimel and Cubitan are foods for special medical purposes for the dietary management of disease-related malnutrition. For use under medical supervision only.

4. PILOT PROJECT MALNUTRITION AND POLYPHARMACY

BACKGROUND

- Over the past two decades, the prevalence of **polypharmacy** has significantly increased and is now considered **a global health concern**, particularly among individuals aged 65 and older.

- **Increasing use of drugs among elderly** people has raised concerns about possible **negative health outcomes, including malnutrition**, associated with polypharmacy.

- The probability of nutritional problems as a consequence of drugs is highest in elderly people suffering from **several diseases**. Drug treatment may contribute to poor nutritional status by causing loss of appetite, gastrointestinal problems, and other alterations in body function.

- **Malnutrition in elderly is common** and leads to negative health outcomes.

Kok, W. E., Haverkort, E. B., Algra, Y. A., Mollema, J., Hollaar, V. R. Y., Naumann, E., de van der Schueren, M. A. E., & Jerković-Ćosić, K. (2022). The association between polypharmacy and malnutrition (risk) in older people: A systematic review. *Clinical Nutrition ESPEN*, 47, 84–94.

4. PILOT PROJECT MALNUTRITION AND POLYPHARMACY

OBJECTIVES

- Education on association between polypharmacy and malnutrition in elderly
- Education on screening for malnutrition in pharmacy, initiation on medical nutrition and improvement of adherence
- Implementation of screenigprotocol for pharmacies with or without medication review for elderly, followed by initiation if needed

4. PILOT PROJECT MALNUTRITION AND POLYPHARMACY

METHODOLOGY

- MNA-SF (paper version)

- Screening for malnutrition may be combined with a review of medication

- Priority for high-risk 65+ groups (not limited)
  - Extensive polymedicated patients
  - Patients during and after acute illness, hospital stay (“green envelop”) or chirurgical intervention
  - Patients with multiple chronic diseases s.a. COPD, rheumathoidic arthritis, diabetes, decubitus, heart failure
  - Oncology Patients
  - Patients with a high fall incidence

THANK YOU

