



NORDIC NUTRITION RECOMMENDATIONS

2023

Errata 9.1.2024 to NORDIC NUTRITION RECOMMENDATIONS 2023

All page numbers in this document corresponds to the new PDF-version published 9.1.2024.

- Spelling errors is corrected through the NNR2023 report
- Table of contents:
 - Choline is be moved up after "vitamin B12". This means that the summary on choline is moved accordingly.
 - Appendix has been moved to the end of the publication.
- Abbreviations:
 - "REE: Resting energy expenditure" added in line above RI
- Table 1 and 2
 - List of qSRs is updated and included all qSRs for fat and fatty acids and red meat.
- Table 8
 - "Average PAL 1.4" replaced with "Low active PAL 1.4"
 - "REE" replaced with "BEE"
 - The last four rows on "pregnant" and "lactating" moved up below females
- Page 64 "Carbohydrates and dietary fibre" and page 117 and 119
 - Specified that range 45-60E% is including energy from dietary fibre
- Box 8
 - Sentence "Older adults (>65 years): protein should provide 15-20 E% and".
- Table 12
 - New footnote number 8 included for vitamin D ≥ 70 years " "For age group 75 years and older."
 - Footnote number 6 is adjusted.
 - Most national authorities in the Nordic and Baltic countries recommend supplement of 400 μ g/d in addition to dietary intake for women in fertile age from planned pregnancy and throughout the first trimester.
 - Sentence deleted: "RI for females in reproductive age does not include the recommended supplementation of folic acid for females before and during the first trimester of pregnancy". "The recommendation for pregnant females is not including folic acid supplementation before and during pregnancy."
- Table 17:
 - Footnote number 5 is adjusted.
 - Most national authorities in the Nordic and Baltic countries recommend supplement of 400 μ g/d in addition to dietary intake

for women in fertile age from planned pregnancy and throughout the first trimester.

- Sentence deleted: "The recommendation for pregnant females is not including folic acid supplementation before and during pregnancy."
- Table 19:
 - Footnote number 2 included for Iron
- Page 37:
 - New paragraph added with the following text: "Some countries have included aspects of environmental sustainability into their FBDGs, but no country has integrated systematically the whole range of environmental aspects in their national guidelines. The EAT/Lancet report (Willett et al 2019) is a landmark in this respect, since it represents a comprehensive assessment on both health effects and environmental impacts of diets. While the EAT/Lancet report has a predominantly global perspective, the major focus of NNR2023 is the local context in the eight Nordic and Baltic countries, and their contributions both to local and planetary boundaries."
- Page 83:
 - Specified the eight nutrients " (vitamin K, biotin, pantothenic acid, choline, sodium, manganese, molybdenum, and fluoride)" where a new AI has been set in NNR2023
- Page 85:
 - Specified that the nine nutrients where AR and provisional AR has changes more than 20% applies to the age group 25-50 years
- Overall advice on food groups, page 96 and 104:
 - The text is adjusted and changed to the following: " Overall, we recommend a predominantly plant-based diet rich in vegetables, fruits, berries, pulses, potatoes and whole grains, ample amounts of fish and nuts, moderate intake of low-fat dairy products, limited intake of red meat, poultry, and minimal intake of processed meat, alcohol, and processed foods containing high amounts of added fats, salt and sugar."
- Table 24:
 - Beverages:
 - Column 4, SSB is added
 - "High-quality tap water should be the preferred choice of beverage" added to science advice
 - Cereals
 - "energy, protein, dietary" added to column 3
 - Vegetables, fruits and berries:
 - Column 2: "premature mortality" adjusted to "all-cause mortality"
 - Nuts and seeds:
 - Column 2: specified 20-30 gram "nuts" per day.
 - Fish:
 - Column 1: adjusted to "Fish and seafood"
 - Column 2 and 5: specified 300-450 grams "fish" per week
 - Red meat:
 - Column 5: specified 350 grams red meat from "cattle, sheep, goats and pigs"

- Column 3: "protein" added and the following sentence added: "but also a source of saturated fatty acids, and processed meat is a source of sodium"
 - White meat:
 - Column 5: word "total" omitted
 - Eggs:
 - Column 4: "and dairy" omitted
 - Dietary patterns:
 - Column 4: added "Limiting food waste and overconsumption is important for limiting the environmental impact."
 - Page 119, summary dietary fibre
 - Overall science advice in graphical abstract changed to "at least 3 g/MJ/d" for both females and males
 - Page 121, protein summary:
 - In section main function the following sentence is added: "Protein is an essential nutrient needed in the human body for growth and maintenance."
 - Page 127, vitamin D summary:
 - Graphical abstract
 - Beneficial health effects: last bullet point omitted "decreasing total mortality and cancer mortality"
 - Indicator of adverse effect: "and hypercalciuria" added
 - Main function:
 - The following text added: "The active form of vitamin D exerts its mechanism of action through the vitamin D receptor on cellular functions such as proliferation, differentiation, and immunity."
 - Indicator for recommended intake:
 - The following text omitted: "Due to method-related discrepancies between different laboratories analysing 25(OH)D, all measurements should be standardized by participating in a standardization programme."
 - Page 146, folate:
 - Dietary sources and intake: mg/d changed to µg/d
 - Dietary reference values: UL 7 mg changed to 1000 µg/d
 - Page 152, vitamin C:
 - Graphical abstract, adverse effects of high intake:
 - Last bullet point "Oxalate formation and kidney stone formation in susceptible individuals" deleted
 - Dietary reference values:
 - UL omitted
 - Page 154, calcium:
 - Dietary sources and intake
 - The following included: "Most foods contain calcium but usually not in high concentrations. There are large differences in the bioavailability of calcium from foods and it is generally low from vegetables"
 - "Dark green vegetables" replaced with "cruciferous vegetables (e.g. kale, broccoli)"
 - µg/d replaced with mg/d
 - Page 156, phosphorus:

- Graphical abstract
 - Indicator for recommended intake: the following text omitted: "Serum inorganic phosphate reflects short term intake after meal." "Surrogate markers such FGF23 or PTH are also influenced by other nutrients."
 - Dietary intake: "Phosphorus replaced with "organic and inorganic phosphate compounds"
 - Indicator of adverse effect: text omitted and replaced with "Increase in serum phosphate concentration and changes in mineral metabolism"
- Dietary sources and intake: $\mu\text{g}/\text{d}$ replaced with mg/d
- Indicator for recommended intake: added "Serum inorganic phosphate reflects short term intake after meal. Surrogate markers such as FGF23 or PTH are also influenced by other nutrients."
- Page 158, magnesium:
 - Dietary sources and intake: $\mu\text{g}/\text{d}$ changed to mg
- Page 160, sodium
 - Graphical abstract
 - Box "Interactions with potassium intake" and included as bullet point in box indicator of recommended intake
- Page 163, potassium:
 - Graphical abstract:
 - Box "Interactions with sodium intake" and included as bullet point in box indicator of recommended intake
 - All numbers changed from g/d to mg/d
- Page 165, iron:
 - Dietary sources and intake: "In vegetarian diets" omitted
- Page 167, zinc:
 - Graphical abstract and recommendations: unit changed from $\mu\text{g}/\text{d}$ to mg/d
- Page 174, copper:
 - Values in text changed from mg/d to $\mu\text{g}/\text{d}$
- Page 178, manganese:
 - Dietary sources and intake:
 - Sentence omitted: "Breastmilk contains approximately 3 $\mu\text{g}/\text{L}$, and"
- Page 190, breastfeeding:
 - References "Benton et al 2022" and "Meltzer et al 2023" omitted
- Page 192, complementary feeding:
 - Graphical abstract, beneficial health effects:
 - "before 6 months" replaced with "about 6 months"
 - References "Benton et al 2022" and "Meltzer et al 2023" omitted
 - Environmental impacts: "based on cereals/vegetables/fruits/meat/ fish associates with" replaced with "depends on". "Origin" replaced with "ingredients".
- Page 196, beverages:
 - Graphical abstract, adverse health effects:
 - "and CVD" added
 - Graphical abstract, environmental impacts:
 - "and SSB" added

- Science advice: "High-quality tap water should be the preferred choice of beverage." added
- Page 199, Cereals:
 - The following text included under section "health effects":
 - "Dose-response curves show that risk reduction for all-cause mortality is observed for intakes up to 50-60 g/day of whole grains. Higher intakes (i.e. 90 g/day) confer even greater risk reduction for coronary heart disease, type-2 diabetes and colorectal and breast cancer (Reynolds et al., 2019)."
 - Risk groups: "gluten intolerant people" replaced with "People coeliac disease and other gluten-related disorders"
- Page 202, vegetables, fruit and berries:
 - Graphical abstract, beneficial health effects:
 - "dietary fibre," added
- Page 207, potatoes:
 - Graphical abstract, beneficial health effects:
 - Iron and magnesium omitted from list of nutrients
- Page 212, pulses:
 - Graphical abstract, adverse health effects:
 - "Hormonal effects of soy products on young children might be a risk" omitted and replaced with "No established adverse effects."
- Page 216, nuts and seeds:
 - Graphical abstract, beneficial health effects:
 - Last bullet point "Inverse associations with cancer deaths and all-cause mortality" omitted
- Page 219, fish and seafood:
 - Dietary sources and intake
 - Average intake of fish and seafood 150-500 "g/d" is corrected to "g/week"
 - Graphical abstract, beneficial health effects
 - ", all-cause mortality" added
 - Graphical abstract, environmental impacts:
 - Sentence " from being as low as cod to being as high as pork, " omitted
 - Science advice: 350-400 grams "fish"/week specified
- Page 222, red meat
 - Science advice: specified 350 grams red meat from "cattle, sheep, goats and pigs"
 - Health effects:
 - Following text added: "The relative risk of colon cancer is increased by 10% per 50 grams intake of unprocessed red meat per day"
 - Health effects:
 - Changed from "two qSRs" to "three qSRs". Reference "Fogelholm et al., 2012" included.
- Page 227, white meat:
 - Science advice: "totalt" omitted
- Page 230, milk and dairy:
 - Health effects and science advice based on health effects:

- The following added: "Since calcium and iodine content of cheese varies in national food tables and between products, national authorities may define a national conversion factor. Typically, about 10-20 grams cheese corresponds to 100 g milk."
- Page 234, eggs:
 - Graphical abstract, environmental impacts:
 - "and dairy" omitted
 - Text on health effects:
 - "Consumption of up to 1 egg per day can be part of a healthy diet (Virtanen & Larsson, 2023)" added
 - Text on environmental impacts:
 - In sentence "Egg production produces GHG emissions per kilogram which are lower than those of other land animal sourced foods meat and dairy but considerably higher than those for root vegetables and legumes (Meltzer et al., 2023)" "meat and dairy" is omitted
 - Science advice based on health outcomes:
 - "Consumption of up to 1 egg per day can be part of a healthy diet (Virtanen & Larsson, 2023)" omitted
 - Science advice based on environmental impacts:
 - "meat and dairy" replaced with "most other animal sourced foods"
- Page 244, dietary patterns
 - Graphical abstract, beneficial health effects:
 - In sentence " Such dietary patterns are often micronutrient dense....." the word "often" is omitted
 - Graphical abstract, environmental impacts and in science advice based on environmental impacts:
 - "Reduction of food waste and overconsumption is important to reduce environmental impacts." added
- Page 296, Appendix 1:
 - Affiliation Agneta Hörnell changed to UmU, "breastfeeding" changed to "infant feeding"
 - Affiliation Elin Rööb changed from NO to SE
 - Affiliation Elinor Hallström changed from RI to RISE
 - Role Hanna Lagström changed from "breastfeeding" to "infant feeding"
 - Affiliation Veronica Öhrvik added " Axfoundation, SE"
- Page 333, Appendix 3:
 - Link to Modified AMSTAR 2 form omitted and replaced with PDF version of the form
- Page 335, Appendix 4:
 - Table 4 and 5
 - "REE" replaced with "BEE"
 - Table 6 and 7 have been included as new tables
- Page 357
 - RI for niacin age group 4 years is corrected to 1.6
- Page 359
 - AI for vitamin K for girls 13 years is corrected to 50