

4 Step Framework

Structured Recommendation Statement

Based on [*moderate* or *high*] quality evidence, the recommendation is made to consume between [*range*] grams of daily [*dietary bioactive**] to support [*structure/function* or *reduce risk associated with appropriate relationship*] among [*the general population* or *specific sub-population*].

**From specific foods if limitations are needed.*

For developing recommended intakes of bioactive dietary substances

American Society for Nutrition endorsed.

This step-by-step process can be used to **translate evidence into quantified** dietary bioactive intake recommendations. Health organizations can **adapt** the framework to work within their current guideline development processes. The recommendations generated through this framework are based on specific **health outcomes for normal structure/function** and reducing risk of disease conditions. Developing recommended intakes of bioactives differs from developing recommended intakes of essential nutrients because bioactives are **chemically complex** and may be rapidly converted to other active or non-active constituents, making it difficult to ascertain their individual contributions to specific health outcomes. In contrast to medical recommendations, these nutrient recommendations are intended to **enhance dietary intake**. The full framework is available at <https://academic.oup.com/advances/advance-article/doi/10.1093/advances/nmab044/6272070>.

Step 1: Characterize Bioactive

- 1.1 Characterize a single bioactive or group of bioactive compound(s).
- 1.2 Ensure that sufficient food composition data are available to enable the translation of quantified intakes into dietary choices.
- 1.3 Determine that intake of the bioactive is quantified by a reliable intake exposure or validated biomarker of intake.

Step 2: Evaluate Safety

- 2.1 Quantify what a relatively high level of dietary exposure is for the bioactive.
- 2.2 Document its history of safe consumption within the population.
- 2.3 Ascertain bioactive quantity with no known adverse health effects.

Step 3: Conduct Efficacy Review

- 3.1 Select a health outcome associated with the bioactive and relevant population.
- 3.2 Identify specific physiologic or biochemical measures recognized as indicators.
- 3.3 Characterize, through systematic evidence review, relationships between quantified intakes of bioactive(s) with health outcomes in the target population.

Step 4: Decide Recommendation

- 4.1 Determine whether the quality of evidence supports making a quantified recommendation. If less than moderate quality, no recommendation.
- 4.2 Develop the range of intakes with demonstrated efficacy and safe use.
- 4.3 State the recommendations in the structured form.



Visit the IAFNS website [here](https://www.iafns.org).

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Yates A.A., Dwyer J.T., Erdman J.W., King J.C., Lyle B.J., Schneeman B.O., Weaver C.M. Framework for developing recommended intakes of bioactive dietary substances. *Advances in Nutrition*. May 7, 2021. <https://doi.org/10.1093/advances/nmab044>