# At-Risk Minerals Tip Sheet: Calcium and Potassium

People need minerals for their bodies to function and develop normally. The newest 2020-2025 Dietary Guidelines for Americans (DGAs) state there is an underconsumption of calcium and potassium. Not eating enough of these nutrients can lead to osteoporosis, fatigue, weakness, and more. It is important for individuals to receive enough minerals to live a healthy life. Listed below are menu tips, food sources, and nutrient requirements for common under-consumed nutrients that SNP programs can incorporate into their meals and menus.

## Menu Tips

* Increasing vegetables, fruit, beans, whole grains, and dairy within meals will help participants reach the recommended intakes of all minerals.
* Use in-season produce to offer the highest nutrient content.
* Cook fruits and vegetables lightly or eat raw to preserve nutrients.
* Nutrient analysis software may misinterpret mineral content of a meal. If using nutrient analysis, it’s important to use standardized recipes and compare the database to your inventory’s food labels.
* Unprocessed foods should be the main source of minerals, but fortified foods and dietary supplements should be included if necessary.

## Nutrient Requirements, Food Sources, Menu Tips

The following sections provide the Dietary Reference Intakes (DRI) for the key nutrients listed above, which are important for older adults to consume. DRIs are the general terms for reference values of nutrient intakes that are compiled from recommended dietary allowance, adequate intake, and tolerable upper intake level.

## Calcium

Calcium is a mineral that helps form strong teeth and bones. A calcium deficiency can lead to thinning of bone tissues and loss of bone density over time.

Dietary Reference Intake: 1,000-1,200 mg/day

### Menu Tips

* Pair high calcium foods with high protein and vitamin D foods, such as salmon or tuna, to increase calcium absorption.
* Serve non-milk options as a calcium source, such as yogurt, fortified orange juice, and broccoli.

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| **Food** | **Serving size** | **Calcium (mg)** |
| Tofu prepared with calcium sulfate | ½ cup | 434 |
| Yogurt, plain, low-fat | 8 oz | 415 |
| Sardines, canned | 3.75 oz | 351 |
| Cheddar cheese | 1.5 oz | 303 |
| Milk (fat-free) | 8 oz | 300 |
| White beans | ½ cup | 81 |
| Chinese cabbage (Bok choy/Pak choi, cooked) | ½ cup | 79 |
| Figs (Dried) | ¼ cup | 61 |
| Orange | 1 medium | 60 |
| Kale | ½ cup | 47 |

*Adapted from the National Agricultural Library:* [*Calcium OSU Micronutrient Information Center*](https://lpi.oregonstate.edu/mic/minerals/calcium)*.*

See the [Dairy Requirements in Senior Nutrition Programs](https://acl.gov/senior-nutrition/DGAtoolkit) for more information.

## Potassium

Potassium is a mineral and electrolyte that is prevalent in fruits, vegetables, and dairy products. This mineral is crucial for a healthy diet because irregular levels of potassium can lead to muscular paralysis and abnormal heart rhythms.

Dietary Reference Intake:

Female: 2,600 mg/day

Male: 3,400 mg/day

### Menu Tips

* Add fruit, or dried fruits, to yogurt.
* Use potatoes as the carbohydrate component of a meal.
* Add spinach and other leafy greens to sandwiches.
* Serve meals that contain beans and legumes, such as vegetarian chili.

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| **Vegetable** | **Standard  Portion** | **Calories** | **Potassium (mg)** |
| Potato | 1 medium | 161 | 926 |
| Spinach | 1 cup | 41 | 839 |
| Carrot juice (100%) | 1 cup | 94 | 689 |
| Sweet potato | ½ cup | 95 | 286 |
| Tomatoes | ½ cup | 33 | 264 |
| White beans | ½ cup | 125 | 502 |
| Avocado | ½ cup | 120 | 364 |

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| **Fruit** | **Standard Portion** | **Calories** | **Potassium (mg)** |
| Kiwifruit | ½ cup | 55 | 281 |
| Orange juice (100%) | 1 cup | 112 | 496 |
| Melon | ½ cup | 30 | 236 |
| Banana | 1 medium | 112 | 451 |
| Apricots, dried | ¼ cup | 78 | 378 |

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| **Dairy** | **Standard  Portion** | **Calories** | **Potassium (mg)** |
| Yogurt, plain, nonfat | 1 cup | 137 | 625 |
| Milk, fat-free | 1 cup | 83 | 382 |
| Milk, 1% low-fat | 1 cup | 102 | 366 |

*Table adapted from* [*Dietary Guidelines for Americans: Food Sources of Potassium*](https://www.dietaryguidelines.gov/food-sources-potassium)

## Nutrition Education

Providing nutrition education to participants on the health benefits of eating enough essential minerals can help them make better choices at home and away. Calcium and potassium play important roles in older adults. See the [National Resource Center on Nutrition and Aging, Program Basics](https://acl.gov/senior-nutrition/program-basics) for more resources.

## General Resources

[Calcium Resources](https://www.nal.usda.gov/fnic/calcium) (USDA National Agricultural Library)

[Daily Value on the New Nutrition and Supplement Facts Labels](https://www.fda.gov/food/new-nutrition-facts-label/daily-value-new-nutrition-and-supplement-facts-labels#:~:text=As%20a%20general%20guide%3A%205%25%20DV%20or%20less,Lower%20in%20saturated%20fat%2C%20sodium%2C%20and%20added%20sugars) (FDA)

[Dietary Guidelines for Americans, 2020-2025](https://www.dietaryguidelines.gov/sites/default/files/2021-03/Dietary_Guidelines_for_Americans-2020-2025.pdf)

[NIH Office of Dietary Supplements](https://ods.od.nih.gov/)

[Nutrient Recommendations: Dietary Reference Intakes](https://ods.od.nih.gov/HealthInformation/Dietary_Reference_Intakes.aspx) (NIH ODS)

[Nutrition Needs for Older Adults: Calcium](https://acl.gov/sites/default/files/nutrition/Nutrition-Needs_Calcium_FINAL_508.pdf) (NRCNA)

[Potassium in diet](https://medlineplus.gov/ency/article/002413.htm) (MedlinePlus)

[Potassium Resources](https://www.nal.usda.gov/fnic/potassium) (USDA National Agricultural Library)

[Understanding Food Marketing Terms](https://www.eatright.org/food/nutrition/nutrition-facts-and-food-labels/understanding-food-marketing-terms) (Academy of Nutrition and Dietetics)

[Vitamin and Minerals Resources](https://www.nal.usda.gov/fnic/vitamins-and-minerals) (National Agricultural Library)

[Vitamins and Minerals](https://www.nutrition.gov/topics/whats-food/vitamins-and-minerals) (USDA)

*Disclaimer: All resources provided are from government websites or have been gathered from the National Agricultural Library.*