

# MEALTIME MEMO



In the United States, about 7% of children ages 1–5 have iron deficiency anemia—and this number is even higher for children ages 1–2. Iron deficiency anemia occurs when there is not enough iron in the body to produce healthy red blood cells to carry oxygen throughout the body. Our bodies only need a small amount of iron, but without it, a child can appear pale in color; suffer from frequent headaches; or feel cranky, tired, and weak. This Mealtime Memo reviews good sources of iron and how the CACFP Meal Pattern supports a healthy intake of iron.



## Sources of Iron

There are two main types of iron found in the food we eat. Heme iron is found in animal products like meat, seafood, and eggs. Non-heme iron is found in plants like dried beans



Heme iron is absorbed better in the body than non-heme iron. Let's explore ways to serve foods so that the body best absorbs iron.

## CACFP Meal Patterns and Iron

### Infants and Iron

Infants are born with a certain amount of iron in their bodies. Over time, they need additional iron from their diet for proper development. As the infant is developmentally ready, the [CACFP Infant Meal Pattern](#) allows for serving foods that are good sources of iron, such as iron-fortified infant cereal, meat, fish, poultry, eggs, and cooked dry beans and peas.



### Transition From Infant to Toddler

As infants become toddlers, they transition from getting a large portion of calories from formula or breast milk to getting most of their calories and nutrients from food. You may notice that some toddlers rely on milk in a bottle or sippy cup to fill them up. While milk is a source of many nutrients, it is low in iron. Filling up on milk may increase the risk of iron deficiency anemia. The CACFP meal pattern supports the transition to more iron-rich foods by requiring that all meal components be served starting at 1 year of age. Encouraging toddlers to eat all of the



more iron.

## High Iron Meats/Meat Alternates

In the CACFP, meats and meat alternates may be served as a breakfast component up to three times a week, are required at lunch (and/or supper), and are an option at snack. Yogurt and cheese are not good sources of iron, but the following meats/meat alternates are good sources of iron.



- Lean meat, poultry, and fish\*
- Tofu and soy products
- Eggs\*
- Cooked dry beans or peas
- Peanut butter, soy nut butter, or other nut and seed butter (These can be choking hazards and should only be offered when developmentally appropriate.)

\*Heme iron sources (noted above with an asterisk) are better absorbed than non-heme sources. However, eating non-heme and heme iron sources together helps increase non-heme iron absorption. For example, serving chicken thighs and baked beans together will increase the absorption of the non-heme iron in the baked beans.

## Fruits and Vegetables and Iron

Many vegetables are a source of non-heme iron, which is not absorbed as well in the body as heme iron from animal sources.

To help the body better absorb non-heme iron, serve these foods with fruits and vegetables that are good sources of vitamin C.

Good sources of non-heme iron:

- Broccoli
- Lentils
- Potatoes
- Soybeans
- Spinach
- Sweet potatoes

Good sources of vitamin C:

- Bell peppers
- Oranges
- Strawberries
- Tomatoes

Examples of pairing a source of non-heme iron with a food high in vitamin C:

- Bean burrito and tomatoes
- Spinach salad with strawberries
- Stir-fry with broccoli and bell peppers

## Whole and Enriched Grains as Sources of Iron

Whole grains such as quinoa, brown rice, and oatmeal are natural sources of non-heme iron.



grain) removed, which is where most of the iron is. However, many grains are enriched, which means that iron and other nutrients are added back into the product. The CACFP meal pattern requires that all refined grains served be enriched. Therefore, providing and encouraging grain products as required by the CACFP will add to the overall iron intake.



## Mealtime Discussion Prompts

During mealtime, raise children's awareness about the importance of iron using the questions below.

- Has anyone ever felt really tired? What was that like?
- Has anyone heard of something called iron that is in some foods? What foods on your plate do you think contain iron?
- Does anyone know why eating iron is important?



## Menu Ideas

that are appropriate for young children and have at least one component that contains iron. Some recipes contain multiple food components listed in parentheses after the recipe.

## Breakfast



Vegetable Frittata  
(Meat Alternate,  
Vegetable)

1% Milk

## Lunch/Supper



Barbeque Chicken or  
Turkey Salad  
(Meat and Vegetable)

Whole Grain Roll  
Cantaloupe Chunks

1% Milk

## Snack




Edamame  
(Vegetable)  
Strawberries

Water



## Recipes

- The [Child Nutrition Recipe Box](#) has USDA standardized recipes for child care centers and family child care homes.
- The [Child Nutrition Recipe Box: New CACFP Lunch/Supper Recipes](#) has standardized recipes per age group (3–5 and 

## References

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Gupta, P. M., Perrine, C. G., Mei, Z., & Scanlon, K. S. (2016). *Iron, anemia, and iron deficiency anemia among young children in the United States*. *Nutrients*, 8(6), 330. <https://doi.org/10.3390/nu8060330>

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*program infant meal pattern.*

<https://theicn.org/resources/1482/cacfp-meal-pattern-posters-and-infographics/115250/cacfp-infant-meal-pattern-poster.pdf>

## Previous 2023 Mealtime Memos



**October 2023 –  
Staff and  
Workplace  
Wellness**



**September 2023  
– Tools for  
Determining  
Amounts of Food  
to Purchase**



**July 2023 –  
Creating Variety  
and Flavor With  
Seasonal Produce**



**June 2023 –  
Supporting  
Healthy Iron  
Intake**





## April 2023 – Nutrition Facts Labels and the CACFP



## March 2023 – National Nutrition Month®



## January 2023 – Menu Planning

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**Platform!**



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