



Dairy in your residential aged care facility

A guidebook for catering and management
staff of aged care organisations

By Louise Murray (Accredited Practicing Dietitian)

About the author

Louise Murray is an Accredited Practising Dietitian, specialising in aged care nutrition and food services. She's on a mission to remove party pies and sausage rolls from aged care menus and has worked to improve food quality for older adults for the past 20 years.



Louise has a special interest in teaching chefs how to cook high nutritional quality food for older people while still making it taste delicious. She also teaches dietitians the skills and knowledge required to become an effective and supportive dietitian in aged care through an online mentoring program, to do more than just individual referrals.

Her consultancy Nosh Dietitians Co specialises in consulting directly to aged care organisations, older adults in the community. Connect with Louise on Instagram @louisemurray.dietitian or on her website noshdietitians.co.

Introduction

Welcome to the Dairy Australia *Dairy in your residential aged care facility guidebook*. This resource is designed to help catering and management staff of aged care organisations to improve the nutritional quality of their menus by increasing dairy serves to 3.5 per day, with the understanding of why it is so important to achieve it.

Malnutrition is more common in older people for a variety of reasons, including age-related loss of muscle, anorexia of ageing (hormonal changes that can result in poor appetite), food security issues, and poor nutritional intake¹.

As we age, our requirements for some nutrients increase. The most significant nutrient that older people have higher requirements for is protein, with a recommended 1.2g/kg body weight/day¹. This higher protein requirement is to reduce the progression of sarcopenia, the age-related loss of lean muscle mass and function.

Research has shown that improving nutrient intakes in aged care residents can be as simple as two extra serves of dairy per day², to meet the recommended **3.5–4 serves** of dairy foods per day.

Healthy ageing with dairy

Dairy foods, such as milk, cheese and yoghurt, are naturally rich in calcium and protein – two essential nutrients that build and maintain healthy bones and muscles. The combination of calcium and protein in dairy foods make them much more effective at improving muscle mass and bone strength than supplements alone.

A world-first study completed by the University of Melbourne has linked milk, cheese and yoghurt with the prevention of falls and fractures in older people.

Dairy consumption was increased from two to 3.5 serves per day by older adults in residential aged care, resulting in:

- **33% reduction in all fractures;**
- **46% reduction in hip fractures; and**
- **11% reduction in falls.**

These results were seen after only **five** months of implementing a menu with 3.5 serves of dairy per day.

Providing adequate milk, cheese and yoghurt is an easy and low-cost intervention³. The cost of providing additional dairy was 66 cents per resident per day, with an average overall saving of \$175 per resident per year.

Talk to your Facility Manager about the food budget at your facility, to allow an increase of dairy to 3.5 serves per day.

What is a serve of dairy?

One serve of dairy is equivalent to:



Milk
1 cup
(250ml)



Cheese
2 slices
(40g)



Yoghurt
¾ cup
(200g)



Ricotta
½ cup
(120g)

In residential aged care, ice cream may be considered ½ serve of dairy as it is made from 70 per cent milk. Ice cream is often more likely to be eaten by consumers with dementia, as their preference for sweet foods increases.

Portion sizes for other dairy foods as per the Australian Guide to Healthy Eating include:

- 250ml milk
- 125ml evaporated milk
- 100g condensed milk**
- 40g cheese (2 slices)
- 120g ricotta cheese
- 200g yoghurt
- 250ml custard
- 35g full cream milk powder (4Tbsp)
- 25g skim milk powder (3Tbsp)
- 2 cups ice cream (5 x 100ml scoops)**

**These are considered discretionary foods.

Swapping low-dairy menu options for high-dairy menu options results in protein intake increased by an average 25g per day, with a greater number of residents achieving the Recommended Daily Intake for protein.

* Dairy Australia is the national services body for the dairy industry. We invest in a range of activities across the supply chain to deliver the best outcomes for dairy farmers, the dairy industry and the broader community, including the health and nutrition space.

Increasing dairy can also contribute significant amounts of calcium across the day, to meet the target of 1300 mg/day:

| Regular menu | Calcium (mg/serve) | High dairy menu | Calcium (mg/serve) |
|---------------------------|--------------------|--------------------------|--------------------|
| White coffee | 24 | Milk coffee | 171 |
| Tomato soup (water-based) | 15 | Tomato soup (milk-based) | 122 |
| Mashed potato | 11 | Scalloped potato | 108 |
| Jelly and cream | 14 | Rice pudding | 279 |

Intakes of vitamin D, magnesium, phosphorous and zinc also increased during intervention, nutrients that are required for bone maintenance/preventing osteoporosis as well as for muscle building, wound healing and immune function.

The addition of dairy foods required minimal preparation by catering staff, less monitoring by care staff and was easily implemented. This shows that nutrition support in aged care settings does not need to be difficult to implement, time consuming or expensive. It just needs to be included as part of the bigger picture of providing adequate protein and other essential nutrients.



How do we calculate serves of dairy in an aged care facility menu?

When an Accredited Practising Dietitian is assessing a menu for residential aged care, dairy serves are based on recipes and/or portion sizes provided at the facility. This is easy when it is a single food item, such as adding custard to apple crumble for a dessert option. On most occasions, custard will be 0.5–0.75 serves of dairy as it is ½ to ¾ of a cup.

Estimating serves of dairy can be more challenging with combined recipes or meals such as lasagne.

This can include:

- Calculating how much milk would be used in bechamel sauce for the lasagne top layer.
- Calculating how much cheddar or mozzarella cheese is used to sprinkle over the top.
- Divide by the number of residents.

For example: 500ml of full cream milk to make bechamel sauce for 10 serves = 50ml milk per serve (0.2 serves of dairy). 300g grated cheese for lasagne with 10 serves = 30g cheese per serve (0.75 serves of dairy). This will be an estimated one serve of dairy per serve of lasagne.

Opportunities for older adults to consume dairy foods on an aged care menu include:

- Milk on cereal at breakfast or in porridge.
- Milk to drink – e.g. as a full milk hot chocolate or coffee.
- Milkshakes or smoothies as mid-meal drinks.
- Dairy based desserts, such as rice pudding or mousse and when custard is added to a fruit crumble/ pudding.
- Cheese - in sandwiches, snacks (e.g. crackers and cheese), in baked goods (e.g. scones), in recipes (e.g. mornay, egg dishes etc)
- Yoghurt – served on its own at breakfast or as part of a dessert.

Tip: It is important to know how many serves of dairy are on your current menu before you start adding more dairy-based foods, with the target of 3.5 serves per day.

How to increase dairy serves in aged care menus

Three top tips for increasing dairy into each daily menu:

- 1 Find out from residents' at the facility what their preferred meals, desserts and snacks are.** The 'classics' such as apple pie with custard or lasagne are likely to be suggested, but also look for the suggestions that may lead to new ideas. Traditional desserts such as a flummery may sound boring to a chef but it can easily add an extra ½ serve of dairy to a meal.
- 2 Find ways to add in more dairy serves into existing recipes or menu items.** Add a cauliflower and broccoli gratin to Sunday's roast beef or add ricotta cheese to a pasta dish. It can be as simple as adding milk and milk powder into porridge at breakfast. See the 'Swap It' suggestions below for more ideas.
- 3 Aim for one serve of dairy at each mealtime.** This will spread dairy serves across the day, reducing the lactose load at any one meal. It is also an easy checklist to see where you can add in dairy to your existing menu. For example: if dinner includes soup, a light hot meal and dessert, aim to include either milk powder into the soup, or a dairy based dessert, or a combination of both.

'Swap it' suggestions

Here is a typical example of an aged care menu and how we can increase dairy serves at each meal or mid-meal snack (based on estimated portions and recipes):

| | Before | | After | |
|----------------------|---|--|---|--|
| Breakfast | Breakfast cereals, porridge (made with water), fruits, yoghurt, toast. 1 serve |  | Breakfast cereals, porridge (made with milk and milk powder), fruits, yoghurt, toast. 2 serves |  |
| Morning tea | Cup cake, tea/coffee. 0 serves |  | Buttermilk scones, tea/coffee. 0.25 serves |  |
| Lunch | Chicken cacciatore with buttered pasta, steamed broccoli and carrots. Chocolate mud cake with chocolate sauce. 0 serves |  | Chicken cacciatore with ricotta, buttered pasta, steamed broccoli and carrots. Chocolate pudding with custard. 1.5 serves |  |
| Afternoon tea | Plain biscuits, tea/coffee. 0 serves |  | Cheese and crackers, tea/coffee. 1 serve |  |
| Dinner | Cream of tomato soup. Beef stroganoff with mashed potato, Brussels sprouts. French vanilla cheesecake. 1 serve |  | Cream of tomato soup (cream with milk powder), Beef stroganoff with cheesy mashed potato, Brussels sprouts. French vanilla cheesecake. 2 serves |  |
| Supper | Plain biscuits, tea/coffee. 0 serves |  | Full milk hot chocolate or malt drink, plain biscuits. 1 serve |  |

What about lactose?

Lactose intolerance is mostly a deficiency rather than an absence of the lactase enzyme, which helps break down lactose. With a diagnosis of lactose intolerance, the amount of lactose that can be tolerated will vary from person to person.

When it comes to dairy foods and lactose intolerance there is some confusion in the community. Many people misunderstand 'low lactose' or 'lactose free' to mean 'dairy free', yet evidence shows many people can still enjoy dairy foods even with lactose intolerance.

For people with lactose intolerance, the Australian Dietary Guidelines recommend:

- Up to 250ml of milk may be well tolerated if consumed with other foods or if intake is spread throughout the day.
- Most hard cheeses are virtually lactose free.

- Yoghurt contains 'good' bacteria that help to digest lactose.
- Lactose free milks are available and contain similar nutrients to regular milk.

What does this mean for residents with this increase in dairy serves?

Choosing a variety of recipes that provide different amounts of milk, cheese and yoghurt will help residents tolerate the increase in dairy if they have lactose intolerance.

There are now many options available for lactose free dairy options, particularly with milk and custard. These can be purchased from your suppliers and provided where required, such as on cereal at breakfast or for a full milk hot chocolate.

¹ Bauer J, et al. Evidence-based recommendations for optimal dietary protein Intake in older people: A position paper from the PROT-AGE study group. JAMDA. 2013; 14:542-559.

² Iuliano S, et al. Effect of dietary sources of calcium and protein on hip fractures and falls in older adults in residential care: cluster randomised controlled trial. BMJ.

³ Baek Y, et al. Reducing hip and non-vertebral fractures in institutionalised older adults by restoring inadequate intakes of protein and calcium is cost-saving. Age Ageing. 2023 Jun 1;52(6):afad114. doi: 10.1093/ageing/afad114.