



**THE FRACTURES TRIAL  
UPDATE**

**MAY 2022**

# BACKGROUND



- **Aim is for older adults to maintain independence and quality of life**
- **Ageing population = increased need for residential aged care**
- **68% malnourished**
- **30% of hip fractures occur in aged care**
  - Fractures lead to ongoing disability
- **Malnutrition is preventable with good nutrition!**
- **Food served in aged care often lacks adequate nutrition**

# DAIRY RECOMMENDATIONS AND INTAKES IN AUSTRALIA

**Recommended**

**Actual**

**Women (50 years +)**



**Aged-care**



**Men (70 years +)**



**Community (70 years+)**



# FRACTURES TRIAL



Research study that aimed to look at how improving the food in aged care impacted on the health of the residents, using milk, cheese and yoghurt



Our Programs, Your Breakthroughs



Dairy for life

Aarhus University Hospital



NATIONAL DAIRY COUNCIL



## WHAT WAS DONE?



- 60 aged-care facilities
- 7000 residents (80s and 90s)
- 2 years



- Normal menu or increased dairy
- Falls, fractures, malnutrition, muscle health, bone health, heart health





# WHAT WAS FOUND?

Multiple research papers to come – the major study was published in November 2021

## Increasing dairy from 2 to 3.5 serves:

- ↑ protein and calcium
- 33% ↓ in all fractures
- 46% ↓ in hip fractures
- 11% ↓ in falls
  - Protein content
  - Muscle maintenance

### RESEARCH

OPEN ACCESS

Check for updates

## Effect of dietary sources of calcium and protein on hip fractures and falls in older adults in residential care: cluster randomised controlled trial

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Additional material is published online only. To view please visit the journal online.

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### ABSTRACT

#### OBJECTIVE

To assess the antifracture efficacy and safety of a nutritional intervention in institutionalised older adults replete in vitamin D but with mean intakes of 600 mg/day calcium and 11 g/kg body weight protein/day.

#### DESIGN

Two year cluster randomised controlled trial.

#### SETTING

60 accredited residential aged care facilities in Australia housing predominantly ambulant residents.

#### PARTICIPANTS

7195 permanent residents (4920 (68%) female; mean age 86.0 (SD 8.2) years).

#### INTERVENTION

Facilities were stratified by location and organisation, with 30 facilities randomised to provide residents with additional milk, yoghurt, and cheese that contained 562 (166) mg/day calcium and 12 (6) g/day protein achieving a total intake of 1142 (353) mg calcium/day and 69 (15) g/day protein (1.1 g/kg body weight). The 30 control facilities maintained their usual menus, with residents consuming 700 (247) mg/day calcium and 58 (14) g/day protein (0.9 g/kg body weight).

#### MAIN OUTCOME MEASURES

Group differences in incidence of fractures, falls, and all cause mortality.

#### RESULTS

Data from 27 intervention facilities and 29 control facilities were analysed. A total of 324 fractures (135 hip fractures), 4302 falls, and 1974 deaths were observed. The intervention was associated with risk reductions of 33% for all fractures (121 v 203; hazard ratio 0.67, 95% confidence interval 0.48 to 0.93;  $P=0.02$ ), 46% for hip fractures (42 v 93; 0.54, 0.35 to 0.83;  $P=0.005$ ), and 11% for falls (1879 v 2423; 0.89, 0.78 to 0.98;  $P=0.04$ ). The risk reduction for hip fractures and falls achieved significance at

five months ( $P=0.02$ ) and three months ( $P=0.004$ ), respectively. Mortality was unchanged (900 v 1074; hazard ratio 1.01, 0.43 to 3.08).

#### CONCLUSIONS

Improving calcium and protein intakes by using dairy foods is a readily accessible intervention that reduces the risk of falls and fractures commonly occurring in aged care residents.

#### TRIAL REGISTRATION

Australian New Zealand Clinical Trials Registry ACTRN12613000238785.

#### Introduction

Longevity increases the proportion of older adults in the population. The accompanying increased prevalence of chronic illnesses, loss of musculoskeletal mass, frailty, and bone fragility increase the risk of falls and fractures.<sup>1</sup> Loss of independence increases the number of people needing full time institutionalised care, the source of around 30% of all hip fractures in the community.<sup>2</sup> Thus, targeting an intervention to all aged care residents is a rational approach to reducing the fracture burden in the whole community.

The widespread use of antiresorptive therapy is unlikely to reduce this fracture burden because of a paucity of evidence of antifracture efficacy in people over 80 years of age, the common occurrence of adverse events, and high cost given the large numbers of people that must be treated.<sup>3</sup> However, these people often have calcium intakes below 700 mg daily, an amount unlikely to offset obligatory loss of calcium.<sup>4</sup> They also often have protein intakes below 1 g/kg body weight/day, predisposing to loss of lean muscle mass.<sup>5</sup> Thus, an alternative approach is to target all institutionalised older adults with a non-pharmaceutical nutritional intervention.

Few studies have investigated the efficacy and safety of a nutritional approach to reduction of fracture risk in aged care residents. Chapuy and colleagues showed antifracture efficacy with pharmacological doses of calcium and vitamin D in female nursing home residents with low calcium intakes and vitamin D deficiency.<sup>6</sup> No studies have examined the effects of protein supplementation on reduction of fracture risk, despite evidence of improved muscle function and reduced falls.<sup>7</sup>

Consumption of milk, yoghurt, and cheese, foods rich in calcium and protein, slows bone loss and improves insulin-like growth factor 1.<sup>8,9</sup> These foods are widely available, palatable, and low cost and so are likely to be adhered to. Accordingly, we conducted a prospective,

#### WHAT IS ALREADY KNOWN ON THIS TOPIC

Few studies have investigated the efficacy and safety of a nutritional approach to reduction of fracture risk in institutionalised older adults

One study using pharmacological doses of calcium and vitamin D reduced hip fractures in female nursing home residents with low calcium intakes and vitamin D deficiency

#### WHAT THIS STUDY ADDS

Supplementation using high calcium, high protein dairy foods reduced falls and fractures in vitamin D replete older adults in aged care

## WHAT'S SO SPECIAL ABOUT THE WORK?

- ✓ **First high quality study to link dairy foods and fracture risk reduction**
- ✓ **Effective and safe**
- ✓ **Residents enjoyed the food**
- ✓ **Affordable**
- ✓ **Widely accessible**





# LEVERAGING THE FINDINGS

- **Evidence to support food-based policy changes in aged-care**
  - **Promotion of health benefits (community and aged care)**
  - **Evidence to support dairy in dietary guidelines**
  - **Global promotion of outcomes**
- 
- Phase 1: drive awareness that increasing consumption of dairy foods in older adults reduces their risk fractures
  - Phase 2: increase provision / drive long-term benefit and uptake of dairy in the aged care setting and within the community through policy and engagement activity



# AUDIENCES

## CONSUMERS Adults 65+

Encourage older adults in the community and their carers to consume recommended levels of dairy



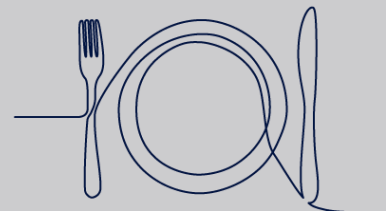
## HCPs GPs and Dietitians

Encourage HCPs to advocate / recommend increased dairy consumption in older adults



## KOLs NGO's, Aged Care

Ignite discussion about the importance of a food first approach to drive policy change in aged care facilities



# PHASE 3: ADVERTISING CAMPAIGN

## PAID MEDIA APPROACH

Health Care Professionals & Consumer 65+

REACH & FREQUENCY

EDUCATE & ENGAGE

Audio & Digital

Digital

Broadcast radio, news, masthead digital display

Podcast interviews and live reads, advertorial content, HCP interviews and advertorials



The Sydney Morning Herald

The Sydney Morning Herald



Afternoons with Deborah Knight



Healthy Living



# LIVE MEDIA – CONTENT | RADIO | PODCASTS



The Sydney Morning Herald

goodfood

The Guardian

**With 46% less chance of a hip fracture**  
It's easier to be unstoppable in old age.  
[daily.com.au/unstoppable](http://daily.com.au/unstoppable)

**The food group ageing Australians must have in their diet**

**Science stacks up**

**With 46% less chance of a hip fracture**  
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**A delicious recipe to help incorporate more dairy into your diet**

**Unstoppable our Fran.**

**PROMOTIONS**

- Cheese made
- 20% more protein than an egg
- 10 times calcium
- 10 times potassium
- 10 times iron
- 10 times zinc
- 10 times magnesium
- 10 times phosphorus
- 10 times selenium
- 10 times copper
- 10 times manganese
- 10 times iodine
- 10 times chromium
- 10 times molybdenum
- 10 times vanadium
- 10 times boron
- 10 times silicon
- 10 times nickel
- 10 times cobalt
- 10 times strontium
- 10 times barium
- 10 times lanthanum
- 10 times cerium
- 10 times praseodymium
- 10 times neodymium
- 10 times europium
- 10 times gadolinium
- 10 times terbium
- 10 times dysprosium
- 10 times holmium
- 10 times erbium
- 10 times thulium
- 10 times ytterbium
- 10 times lutetium
- 10 times hafnium
- 10 times tantalum
- 10 times tungsten
- 10 times rhenium
- 10 times osmium
- 10 times iridium
- 10 times platinum
- 10 times gold
- 10 times mercury
- 10 times cadmium
- 10 times zinc
- 10 times copper
- 10 times iron
- 10 times nickel
- 10 times cobalt
- 10 times manganese
- 10 times magnesium
- 10 times calcium
- 10 times phosphorus
- 10 times potassium
- 10 times sodium
- 10 times chlorine
- 10 times sulfur
- 10 times oxygen
- 10 times nitrogen
- 10 times carbon
- 10 times hydrogen
- 10 times helium
- 10 times neon
- 10 times argon
- 10 times krypton
- 10 times xenon
- 10 times radon
- 10 times francium
- 10 times actinium
- 10 times thorium
- 10 times protactinium
- 10 times uranium
- 10 times neptunium
- 10 times plutonium
- 10 times americium
- 10 times curium
- 10 times berkelium
- 10 times californium
- 10 times einsteinium
- 10 times fermium
- 10 times mendelevium
- 10 times nobelium
- 10 times lawrencium
- 10 times roentgenium
- 10 times darmstadtium
- 10 times tennessine
- 10 times oganesson

**5 questions to ask older loved ones to avoid falls and fractures**

**Unstoppable our Fran.**

**PROMOTIONS**

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- 10 times xenon
- 10 times radon
- 10 times francium
- 10 times actinium
- 10 times thorium
- 10 times protactinium
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Maggie Beer 30"



Live Read



Unstoppable Fran 30"

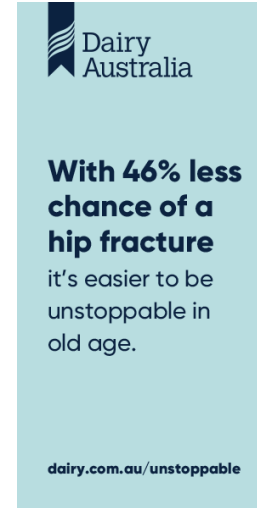


Maggie Beer Interview

# LIVE MEDIA – DIGITAL DISPLAY



## CONSUMER ADVERTISING



## HCP ADVERTISING





# STAKEHOLDER ENGAGEMENT STRATEGY – PROMOTING THE BENEFITS OF DAIRY IN AGED CARE

**To determine policy opportunities to best drive uptake of milk, cheese and yoghurt within aged care services and more broadly in the ageing population within the community**

1/ scope the aged care/older adult space including key stakeholders

2/ develop a stakeholder engagement strategy and associated resources.

**The aim is to deliver policy reforms that support the increased uptake of milk, cheese and yoghurt within older people living in both aged care, and within the community.**

**The current aged care environment and the focus on food and nutrition is hot!**

# DRIVING THE UPTAKE OF DAIRY IN AGED CARE SERVICES STRATEGY

## Stakeholder groups

- Aged care providers
- Catering companies
- Consumer advocates
- Farming industry bodies

## The strategy

- **Phase 1:** Build awareness through dissemination of communication materials and what the research means
- **Phase 2:** Targeted engagement to build connections, promote key messages and encourage behaviour change
- **Phase 3:** Creating behaviour change, imbedding messages and lobbying for government policy change

Strategy still under development

# WHAT CAN SADA DO

## Creating behaviour change, imbedding messages and lobbying for government policy change

- Engage SA government Ministers and policy makers
- Get the key messages on the agenda of government Ministers and bodies
- Build and foster relationships with government and advocacy bodies
- Targeted communication – letters to government Ministers, see meetings

**DA would develop messaging, tools, letters etc and be available to support SADA**

### **Sample key messages for farmer groups may include..**

- the need for a coordinated approach to address the deficits in food and nutrition in aged care as highlighted by the Royal Commission
- the value of fresh, whole foods in meeting both meeting aged care consumer nutritional requirements and food enjoyment
- the strong linkages between food and quality of life in aged care and government's keen focus in this area
- the strength of Australia's agricultural industry and how this could be leveraged to support the aged care industry to provide appetising, fresh, whole foods to consumers.

# TAKE HOME MESSAGES

1. **Cow's milk is an affordable nutrient powerhouse, naturally containing an array of nutrients in a unique matrix that are well absorbed by the body and deliver positive health benefits, most households continue to purchase milk regularly**
2. **Milk, cheese and yoghurt have well established health benefits and are recognised as an integral part of a healthy, sustainable eating pattern due to their contribution to the health and wellbeing of Australians**
3. **Increasing dairy in aged care (from 2 to 3 ½ serves a day) delivers reductions in falls and fractures, is affordable, widely accessible and increases residents meal time enjoyment .**

**Keeping these messages on the agenda of SA government leaders and decision makers is critically important**

