



# Special Diets in Aged Care

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## Overview

- Diabetes and Diet
- Gluten Free Diet
- Lactose Free Diet
- IBS/ Low FODMAP Diet
- High Energy/ High Protein & Fortified Diet
- High Fibre Diet



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## Aims and Objectives

**Aim:**

- To increase general knowledge of nutritional needs for people on special diets in aged care

**Objectives:**

- To identify reasons for special diets
- To identify types of special diets
- To discuss components and nutritional requirements of special diets



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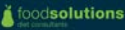
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## Diabetes Management in Aged Care



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### Goals of Diabetes Management

- No longer about avoiding sugar and a restrictive diabetic diet
  - Long term restricted diets not beneficial to long term control of BGLs
  - Need to prevent malnutrition & dehydration
  - Importance of QOL
- The priority is weight maintenance
- A balanced, standard diet is suitable for aged care residents with diabetes



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### Guidelines for healthy eating & diabetes in aged care

1. Provide regular meals and snacks with consistent amounts of carbohydrate included with each meal; aim for three meals and two to three snacks each day
2. Incorporate low Glycaemic Index (GI) carbohydrates into the menu on a daily basis, trying to include one low GI choice at every meal time
3. Sugar does not need to be avoided
4. Low fat diets are not recommended
5. Fortify the food for individuals identified at risk of malnutrition
6. Include high fibre products
7. Include at least three dairy serves each day
8. Provide a minimum of two fruit serves per day
9. Provide and encourage appropriate fluids



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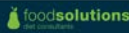
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### General Foodservice Guidelines

- No need for diabetic jam, artificial sweeteners, low-joule, diet or sugar-free products
- Desserts to be “diabetic friendly”, no need to make low sugar/ sweetener based desserts
- Some individuals may prefer sweeteners to sugar, if so allow for personal preference




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### About Glycemic Index



- The GI symbol is administered by the Glycaemic Index Foundation
- Ranks carbohydrate containing foods according to the effect on blood glucose (0-100)
  - Low GI ( $\leq 55$ )
  - Medium GI (56-69)
  - High GI ( $\geq 70$ )

GI incorporates type of starch, fibre, sugar, fat present in a food item, in addition to protein content, acidity and particle size.




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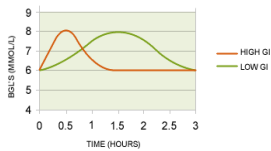
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### Low vs High GI Foods

#### Low GI

- Slowly digested and absorbed into the bloodstream
- Smaller rise in BGLs
- Longer sustained energy
- Feel fuller for longer

THE EFFECTS OF HIGH GLYCAEMIC INDEX FOOD ON BLOOD GLUCOSE LEVELS



- Breads & cake:** WM barley bread, fruit loaf, apple muffin, plain sponge cake
- Cereals:** All Bran, Special K, Guardian, rolled oats, porridge, rice bran, natural muesli
- Grains:** pasta, noodles, long grain rice, semolina
- Legumes:** chick peas, 3 bean mix, baked beans, haricot + kidney + butter beans, lentils
- Fruit:** pear, apple, most berries, under-ripe banana, plums, citrus, grapes, peaches
- Starchy Vegetables:** sweet corn
- Dairy:** milks, yoghurt, ice creams, custard, smoothies, Up and Go




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### Low vs High GI Foods

**High GI**

- Digested & absorbed quickly into the blood stream
- Fast, short burst of energy

THE EFFECTS OF HIGH GLYCAEMIC INDEX FOOD ON BLOOD GLUCOSE LEVELS

Time (Hours)	High GI BGLs (mmol/L)	Low GI BGLs (mmol/L)
0	6.0	6.0
0.5	8.0	6.5
1.0	6.5	7.5
1.5	6.0	8.0
2.0	6.0	7.5
2.5	6.0	6.5
3.0	6.0	6.0

**Breads and cake:** bagels, doughnuts, scones, Turkish bread, wonderwhite, dark rye, lamingtons  
**Cereals:** sultana bran, coco pops, rice bubbles, corn flakes, puffed wheat  
**Grains:** brown rice, jasmine rice, sushi rice, sticky rice  
**Fruit:** watermelon, lychees, dates  
**Starchy Vegetables:** frozen French fries, potatoes (other than sweet potato and new potato)

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### More on eating for Diabetes

- High + Low GI = Moderate GI
  - eg. consuming watermelon in a fruit salad containing apple, orange will result in overall Moderate GI effect on BGLs
- Recommended alcohol intake
  - Preferably  $\leq 2$  standard drinks/day
  - Excessive alcohol intake ( $\geq 3$  SD/day) can cause hypoglycaemia
  - Encourage food to be consumed with alcohol

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### Gluten Free Diet

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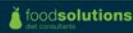
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### Gluten Free Diet

- The cereal protein GLUTEN is eliminated
- Required for Coeliac Disease or diagnosed wheat intolerance
- A life-long, gluten free diet is the *only* treatment for CD
- Gluten is in Wheat, Rye, Oats and Barley – these cereals must be avoided




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### Coeliac Disease

- 1 in 70 Australians (up to 80% undiagnosed)
- Immune system reaction to GLUTEN
- Damage to villi in Small Intestine
- Malabsorption (calcium, iron, folate, Vitamins A,D,E,K)
- Untreated CD can lead to:
  - OP, Depression, Lymphoma, GI Cancers, Autoimmune Thyroid Disease, Anaemia and chronic poor health
- Other symptoms:
  - Easy bruising, recurrent mouth ulcers and/or swelling of tongue, dermatitis herpetiformis, fatigue, weakness, lethargy, alopecia, dental enamel defects, unintentional weight loss




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### Gluten Free Products

Four groups of food suitable for a GF diet:

- **Naturally gluten free foods**  
Fruit & vegetables, meat, eggs, nuts, legumes, milk, fats/oils, GF grains
- **Products labelled 'gluten free'**
- **Products that use the Coeliac Australia Endorsement Logo**
- **Products that are gluten free by ingredient**  
Ingredients derived from wheat, rye, barley or oats, must be declared on food labels. Cross contamination must be declared as 'may contain gluten'




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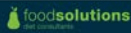
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### Cross Contamination

- 50mg gluten (1/100th of a slice of bread) can cause damage
- Avoid cross contamination by:
  - Store GF food separately
  - Avoid dusting meats/fish/cake tins with flour
  - Use fresh oil in deep fryers (crumbed/battered foods contain gluten)
  - Use separate equipment/cutting boards/containers
  - Hidden sources of gluten in food additives eg. thickeners, icing sugar, stocks, gravies, vinegars, sauces and dressings
- Provide Gluten Free Medications




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### Sample GF Menu

- Breakfast:** GF cereal eg. Freedom Cornflakes + milk OR boiled/scr eggs + GF bread + spreads (no vegemite) + fruit juice
- MT:** GF cake/biscuit OR fresh fruit + tea/coffee
- Lunch:** Grilled/fried/roast meats, fish, poultry or eggs (NOT BBQ chicken, crumbed, battered or marinated meat)  
Massells GF gravy, mashed potato/rice/GF pasta + veggies
- AT:** GF rice crackers + cheese OR GF muffin + tea/coffee
- Dinner:** Similar meat to lunch + quinoa/rice/GF pasta + veggies OR fresh salad (no dressing) with meat (GF on deli meat packaging), poultry, eggs, cheese, salmon/unflavoured tuna
- Dessert:** yoghurt + fresh fruit/GF custard/jelly OR GF ice cream OR GF creamed rice




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### Low Lactose/ Lactose Free Diet




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### What is Lactose Intolerance?

- Inability to digest milk due to little or no lactase enzyme (lactase deficiency)
- Lactose is the sugar molecule present in milk & milk products, and consists of 2 molecules: galactose + glucose
- Lactase enzyme is needed for proper absorption of lactose
  - Undigested lactose passes into the large intestine where it is fermented by gut bacteria
  - Symptoms can occur within an hour or two after ingesting lactose




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### Sources of lactose

As ingredients, milk or lactose may appear as:  
*Milk, Milk solids, Whey protein, Casein*

- Many with lactose intolerance *can* have small amounts of milk or dairy
- Some dairy products are low in lactose, eg. hard cheeses, small amounts of butter & cream and may be tolerated

Dairy Food	Lactose Content (g)
Regular Milk (250ml)	11.8
Cheddar Cheese (40g)	0.0
Swiss Cheese (40g)	0.1
Parmesan Cheese (40g)	0.1
Brie Cheese (40g)	0.1
Ricotta Cheese (20g)	0.24
Cream Cheese (20g)	0.6
Natural Yoghurt (200g)*	9.4
Ice Cream (50g)	2.8
Butter (1 Tablespoon)	0.1
Cream (1 Tablespoon)	0.6

(Dairy Australia & The Girl Foundation 2005)




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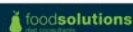
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### Alternatives to Lactose products

- Ensure these contain enough calcium ( $\geq 100$ mg per 100ml)
- Rice, soy or almond milks and products
- Lactose free milk, ice cream, cream, custard, yoghurt




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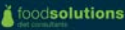
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# IBS/ FODMAPS



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## Irritable Bowel Syndrome (IBS)

- Functional gastrointestinal disorder affecting 1 in 7
- The cause is unknown
- Most common symptoms:
  - lower abdominal pain/discomfort, gas (wind), bloating, abdominal distention, variable bowel habits (diarrhoea and/or constipation), urgency of opening bowels
- Dietary manipulation can assist in reducing symptoms
  - Low FODMAP diet
  - High Fibre diet



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## Low FODMAP Diet



- Fermentable Oligosaccharides, Disaccharides, Monosaccharides and Polyols (FODMAPs) are sugars found in common foods
- FODMAPs are poorly absorbed in the small intestine, and rapidly fermented in the large intestine
- Fermentation produces gases hydrogen and methane → IBS symptoms
- Reducing dietary FODMAPs found to significantly reduce symptoms in 50% of IBS sufferers



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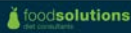
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### Low FODMAP Diet

- A strict Low FODMAP diet should never be permanent
- A dietitian can
  - Reduce high FODMAP foods and then reintroduce to pinpoint problem foods
  - “FODMAP suspects” eg. onion, cabbage, garlic, pear, apple, cauliflower, mushrooms, legumes, watermelon, apple juice, artificial sweeteners and lactose containing foods
- Aim to reduce GIT symptoms to an acceptable level




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### Low FODMAP Supplements

**Supplements and Tube Feeds for a low FODMAP diet**

**Oral Supplements**

Suitable	Unsuitable
✓ Resource® Fruit Beverage	✗ Resource® 2.0 Fibre (contains FOS & GOS)
✓ Resource® Plus	✗ Sustagen® Hospital Formula (contains lactose)
✓ Resource® Diabetic	✗ Sustagen® Hospital Formula Plus Fibre (contains milk)
✓ Resource® Protein	✗ Build Up (contains FOS)
✓ Novasource® 2.0	✗ Resource® Dessert Fruit (i.e. contains apple which is high in fructose)
✓ Peptinax® 1.0, Peptinax® 1.5	
✓ Impact® Advanced Recovery	




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### High Energy High Protein Diets




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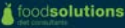
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**HEHP Diet**

- Management of
  - malnutrition,
  - poor appetite or
  - recent significant weight loss
- Maximizes food intake by
  - high caloric foods for energy requirements
  - protein to prevent muscle breakdown



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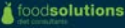
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**Sources of High Energy (calories)**

- Butter, cream, sour cream
- Creamy dips and mayonnaise
- Cheesy or creamy soups and casseroles
- Desserts and sweet foods
- Cakes, biscuits, ice cream
- High calorie fluids eg. cordial, soft drink, juice, smoothies
- Fried foods



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**Sources of High Protein**

- Meat, Poultry, Fish
- Yoghurt, milk, cheese, custard
- Eggs
- Legumes (eg. baked beans)
- Nuts including nut butters



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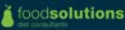
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High Energy, High Protein and fortification

- ✓ Cream based soups
- ✓ Add milk powder/protein powder to soups, cereal, desserts
- ✓ Scrambled eggs, poached eggs, omelettes for breakfast
- ✓ Offer seconds for dessert
- ✓ Fortify meals with cream, margarine and milk powder
- ✓ Use enriched milk: 5 Tabs skim milk powder + 400ml FC milk



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High Energy, High Protein

- ✓ Serve small, regular snacks and drinks
- ✓ Minimise low calorie drinks eg. tea, coffee, water in favour of juice, cordial, milo
- ✓ Use commercial nutrition supplements if poor intake
- ✓ Mid meal snack ideas eg. yoghurts, scones, muffins, fruit cake, crackers and cheese



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High Fibre Diet



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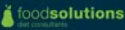
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**High Fibre Diets**

- Up to 80% of residents suffer from constipation
  - Reduced fibre intake
  - Reduced fluid intake
  - Medication
  - Reduced gut motility
  - Inactivity
  - Diseases such as Parkinson's, MS
  - Disorders such as IBS
- A high fibre diet (>30g fibre per day) provides insoluble fibre for constipation and soluble fibre to prevent diarrhoea



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**High Fibre Diets**

- 50% of daily fibre from fruits & vegetables
  - 2 serves fruit = 5 – 6g fibre
  - 5 serves veg = 10 – 15g fibre
- Choose high fibre cereals/breads eg multigrain, wholemeal, All Bran
- Fibre supplements eg. Benefiber, Psyllium husks, Normafibre
- Increase dietary fibre gradually (eg. over a few days) as sudden increase can cause wind and abdominal pain
- Fluid intake 1.5-2L/day



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**High Fibre Diet**

- A high fibre diet is recommended for everybody, as well as:
  - Prevention and treatment of constipation
  - Diverticular disease (when not in a flare up)
  - Non-acute irritable bowel syndrome
  - Haemorrhoids



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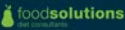
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**Example**

<p><b>Low fibre day...</b></p> <ul style="list-style-type: none"> <li>Instant porridge + milk</li> <li>Coffee + 1 slice regular toast</li> <li>Ham, cheese, tomato sandwich on brown bread</li> <li>Cup tea + 2 rice cakes &amp; jam</li> <li>Grilled salmon, rice &amp; steamed broccoli</li> </ul> <p>Total fibre = 18g Total energy = 6205kJ</p>	<p><b>High fibre day...</b></p> <ul style="list-style-type: none"> <li>Instant porridge + banana &amp; milk</li> <li>coffee + 1 slice <u>wholegrain toast</u></li> <li>Ham, cheese, tomato, grated <u>carrot</u>, <u>baby spinach</u> sandwich on <u>wholegrain bread</u></li> <li>Cup tea + <u>1 apple</u> &amp; 1 rice cake with jam</li> <li>Grilled salmon with baked <u>sweet potato</u>, broccoli &amp; <u>eggplant</u></li> </ul> <p>Total fibre = 32g Total energy = 6219kJ</p>
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**Summary**


By the end of this session, have you achieved the following.

Increased general knowledge of nutritional needs for people on special diets in aged care?

Identified reasons for special diets and types of special diets?

Identified components and nutritional requirements of special diets?

To test your knowledge, please refer to the quiz questions on the handout provided.



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**References**

- American Diabetes Association (2008). Nutrition Recommendations and Interventions for Diabetes – A position statement of the American Diabetes Association. Diabetes Care: 31 (Suppl. 1) S61-78.
- Government of South Australia and SA Health (2012). Healthy eating and diabetes: A guide for aged care facilities. Diabetes Centre, Woodville, SA.
- Kirkman S, et al. (2012). Diabetes in Older Adults: A Consensus Report. Journal of the American Geriatrics Society, 60 (12) 2342-56.
- National Diabetes Services Scheme. (2<sup>nd</sup> Ed, June 2016) Diabetes Management in Aged Care: A Practical Handbook.
- Coeliac Queensland (2015). "Eating Gluten Free" and "Coeliac Disease." Accessible from <http://cid.coeliac.org.au/gluten-free/?r=E057935214618AEE8490408A11DDAC95>
- The Monash University. (2012) Low FODMAP diet (ed 3). The Monash University.
- Swain A, Soutter V & Loblay R. (2011) RPAH Elimination Diet Handbook with food and shopping guide. The Allergy Unit, Royal Prince Alfred Hospital.
- Digestive Health Foundation (2013). Information sheet: Information about Low FODMAP Diet to improve Irritable Bowel Syndrome (IBS) symptom control. (2<sup>nd</sup> Ed.) Digestive Health Foundation, Mulgrave, VIC.
- Gibson PR, Shepherd SJ (2010) Evidence-based dietary management of functional gastrointestinal symptoms: The FODMAP approach. Journal of Gastroenterology and Hepatology 25; 252.
- Digestive Health Foundation (2009). Information sheet: Information about Diverticular Disease. (4<sup>th</sup> Ed.) Digestive Health Foundation, Mulgrave, VIC.
- Decher, N & Krenitsky JS (2012). Medical Nutrition Therapy for Lower Gastrointestinal Tract Disorders (chapter 29) in Krause's Food and the Nutrition Care Process (13<sup>th</sup> Ed.); Elsevier, St. Louis, Missouri; p 610-644.



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