



*Elaine Chong*  
*NZ Registered Dietitian*  
*Monash FODMAP Trained*  
*Australasian Society of Lifestyle Medicine*

# *The carbs affair*

## *Weight, IBS and GDM*

*Ms C*

**Gestational Diabetes Mellitus**

**G2P1**

**Gestation: 26 weeks 2 days**



# Ms C

Significant life events



## Childhood Trauma

Car accident  
Anxiety  
Depression



## Teenage Pregnancy

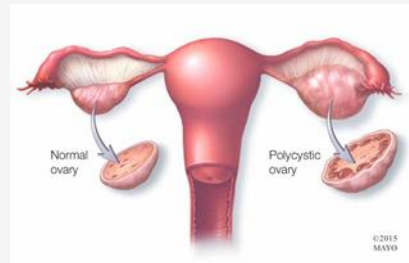
Fetal distressed  
Postpartum PTSD  
Single Mother  
Gained 30kg



## Gastroenteritis

(required hospitalization)

Ongoing abdomen  
pain  
IBS-C



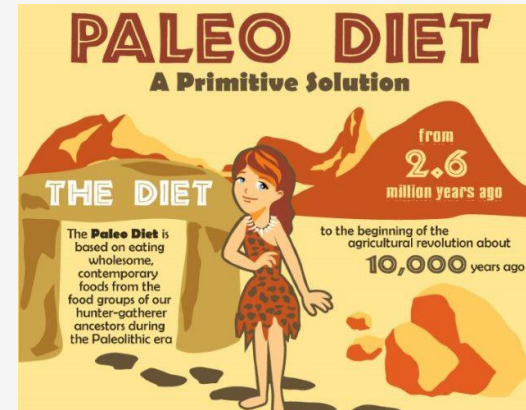
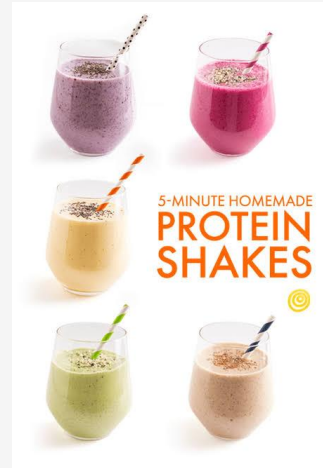
## PCOS

Irregular periods

# Diet tried

Weight management

Irritable Bowel Syndrome (IBS -C)



Small regular meals  
(Every 2-3 hours)

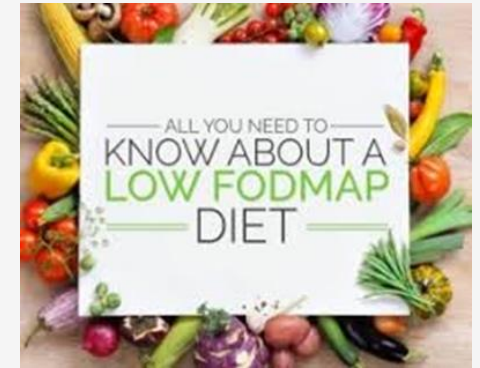
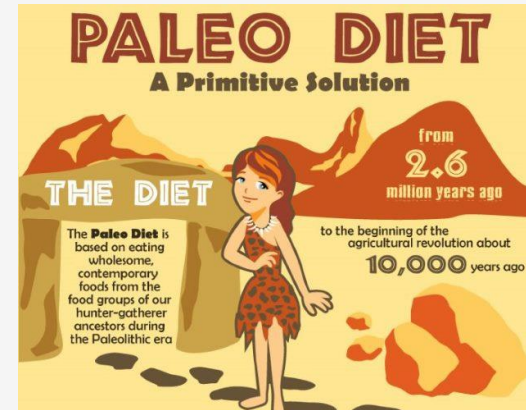
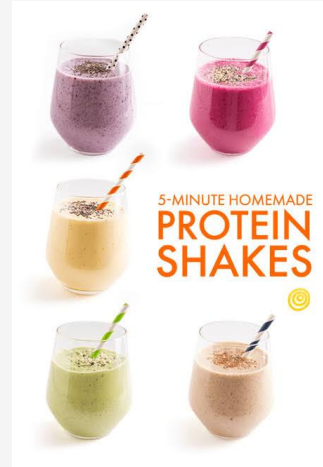
At least 2 litres of  
water daily

# Diet tried

Weight management

Irritable Bowel Syndrome (IBS -C)

Gestational Diabetes Mellitus (GDM)



Small regular meals  
(Every 2-3 hours)

At least 2 litres of  
water daily

# *Diet adopted*

Weight management

Irritable Bowel Syndrome (IBS –C)

Gestational Diabetes Mellitus (GDM)

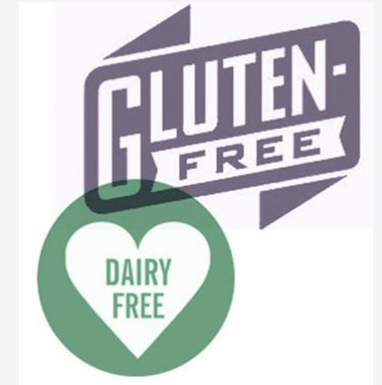
Gluten Free bread

Goat feta cheese

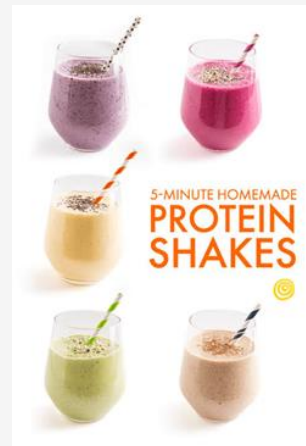
Almond milk



Small regular meals  
(Every 2-3 hours)



At least 2 litres of  
water daily



Frozen berries



No carbs at dinner

# Nutrition Management

Weight management

Irritable Bowel Syndrome (IBS –C)

Gestational Diabetes Mellitus (GDM)



## Weight Management

### Calories

Portion size:  
carbohydrate, protein,  
fats and alcohol



## IBS

### Intolerance to FODMAP

(undigestible  
carbohydrate in plant  
food)



## Gestational Diabetes

### Consistent carbohydrate portion

for blood glucose  
management

# *Diet adopted*

Weight management

Irritable Bowel Syndrome (IBS –C)

Gestational Diabetes Mellitus (GDM)

Gluten Free bread

Goat feta cheese

Almond milk



**IBS**

Small regular meals  
(Every 2-3 hours)

At least 2 litres of  
water daily



**Weight Management**

No carbs at dinner





# *The carbs affair*

*Weight, IBS and GDM*

# Weight Management

Keto diet

Paleo diet

Protein Shakes

Low Carbs, High Protein diet

How much Carbs?



Fats and Oil

Alcohol



What carbs?

# *IBS-C*

**F**ermentable

**O**ligossacharides - *wheat*

**D**issacharides - *lactose*

**M**onossacharides - *apple* (fructose + sorbitol)

**A**nd

**P**olyols - *avocado, mushroom*

# *Weight & IBS Management*

Keto bread

Paleo bread

Gluten-Free bread

**VS**

Wheat bread



\* Plant-based protein and fat

What carbs?

How much Carbs?



## Keto

### Nutritional Information Table

	per serve (serve size 70g) (2 slices)	per 100g
Energy	819kj	1170kj
Protein	6.2g	8.8g
- Gluten	0.0g	0.0g
Fat, total	14.2g	20.3g
- Saturated	9.4g	13.4g
Carbohydrate	4.8g	6.8g
- Sugars	0.1g	0.2g
Sodium	309mg	442mg
Dietary Fibre	7.6g	10.8g

Water, Coconut Oil, Resistant Starch [Tapioca], Free Range Egg, Green Banana Flour, Ground Linseed (4.6%), Hemp Seeds (3.9%), Almond Meal, Psyllium Husk, Apple

## Paleo

### Nutritional Information Table

	Average quantity per serve	Average quantity per 100g
Energy	737kj	1010kj
Protein	7.2g	9.8g
- Gluten	0g	0g
Fat, total	6.4g	8.8g
- Saturated	2.9g	4.0g
Carbohydrate	19.3g	26.4g
- Sugars	1.8g	2.4g
Sodium	343mg	470mg
Dietary Fibre	6.5g	8.9g

Water, Tapioca Starch, Free-range Egg, Almond Meal (11%), Linseed (5%), Coconut Oil, Kumara powder,

Gluten Free

### Nutritional Information

Servings Per Package: 7 (12 slices + 2 crusts)

Serving Size: 93 g (2 slices)

	AVERAGE SERVING SIZE	% DAILY INTAKE* PER SERVING	AVERAGE QUANTITY PER 100 G
Energy	1030 kJ (246 Cal)	12%	1110 kJ (266 Cal)
Protein	8.0 g	16%	8.0 g
- gluten	NIL DETECTED	-	NIL DETECTED
Fat, total	7.8 g	11%	8.4 g
- saturated	0.7 g	3%	0.8 g
Carbohydrates	33.6 g	11%	36.1 g
- sugars	4.7 g	5%	5.0 g
- lactose	NIL DETECTED	-	NIL DETECTED
- galactose	NIL DETECTED	-	NIL DETECTED
Dietary Fibre	4.3 g	14%	4.6 g
Sodium	391 mg	17%	420 mg

**Ingredients:** Water, Modified Tapioca Starch (1442), Rice Flour, Kibbled Soy, Linseed (6%), Canola Oil, Sugar, Chia Seeds, Soy Flour, Egg White, Iodised Salt, Dried Yeast, Vinegar, Vegetable Gums (412, 464).

**Contains:** Soy & Egg.



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(2 slices)

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Gluten Free

Wheat bread

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**Contains:** Soy & Egg.

## Nutritional Information

Servings Per Package: 8.5 (15 slices + 2 crusts)

Serving Size: 83 g (2 slices)

	AVERAGE SERVING SIZE	% DAILY INTAKE* PER SERVING	AVERAGE QUANTITY PER 100 G
Energy	769 kJ (184 Cal)	9%	926 kJ (222 Cal)
Protein	12.5 g	25%	15.1 g
Fat, total	6.0 g	9%	7.2 g
- saturated	0.7 g	3%	0.8 g
- trans	Less than 0.1 g	-	Less than 0.1 g
- polyunsaturated	3.7 g	-	4.5 g
- monounsaturated	1.6 g	-	1.9 g
Cholesterol	NIL	-	NIL
Carbohydrates	17.5 g	6%	21.1 g
- sugars	2.2 g	2%	2.7 g
Dietary Fibre	4.6 g	15%	5.5 g
Sodium	357 mg	16%	430 mg
Folate	166 µg (83% RDI**)	-	200 µg
Iron	1.9 mg (15% RDI**)	-	2.3 mg

**Ingredients:** Wheat Flour, Water, Kibbled Soy (10%), Linseed (10%), Wheat Gluten, Kibbled Wheat (5%), Baker's Yeast, Canola Oil, Vinegar, Iodised Salt, Milk Solids, Cultured Dextrose, Vitamin (Folic Acid).

**Contains:** Wheat, Soy and Milk.



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per 2 slices	Keto	Paleo	Gluten Free	Wheat
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Protein	6.2	7.2	8.0	12.5
Fat	14.2	6.4	7.8	6.0
Saturated	9.4	2.9	0.7	0.7
Carbohydrate	4.8	19.3	33.6	17.5
Dietary Fiber	4.8	6.5	4.3	4.6
+Cost per loaf	\$ 10 -12	\$ 10 -12	\$ 5-7	\$ 4-5

+ Estimated cost taken from website – Feb 2020

# Nutrition Management

Weight management

Irritable Bowel Syndrome (IBS –C)

Gestational Diabetes Mellitus (GDM)



## Weight Management

### Calories

Portion size:  
carbohydrate, protein,  
fats and alcohol



## IBS

### Intolerance to FODMAP

(undigestible  
carbohydrate in plant  
food)



## Gestational Diabetes

### Consistent carbohydrate portion

for blood glucose  
management

What type of bread is best for her?



Weight management

Irritable Bowel Syndrome (IBS –C)

Gestational Diabetes Mellitus (GDM)

**Can she have Wheat bread ?**

Yes.

IBS is food intolerance not food allergy.

**How much wheat bread can she have?**

1-2 slices or 20 -30g/meal.

**Will this make her put on weight?**

Depend on her total daily calories intake from other food – protein, fat, other carbs and alcohol (not drinking alcohol while pregnant).

**Will this make her blood glucose out of control?**

No. It can help to ‘even out’ her blood glucose over the day.

**How often can she have wheat bread?**

Need to find out her tolerance level by using the elimination diet approach.