

# MY BLENDED DIET TOOLKIT





## HOW TO GET STARTED

### **How to include Blended Tube Feeds (BTF) into your feeding routine**

1. Add a BTF to a commercial enteral formula.
2. Use the BTF as the main feed, with commercial formula used when travelling or during hospital stays.
3. Use BTF for all tube feeds.

### **Essential equipment**

- A high-powered blender (>1000 watts)
- A metal large sieve/strainer
- Measuring cups, spoons and weighing scales
- Airtight containers for storage (non-porous plastic or glass) Ice cube trays or containers for freezing
- Syringes (60mL size with plunger)
- Insulated bags/ice packs to use when travelling

### **How do I know what to put in a blend?**

A healthy blended diet is made up of protein, healthy fat, carbohydrate, fibre, vitamins, minerals and fluid.

Include a variety of foods from each of the core food groups.

Your dietitian can help you with understanding the nutrients you/your child need using these guidelines:



## HOW TO GET GOING

### How to give BTF?

- Bring the blend to room temperature before giving
- Increase the volume of each bolus as tolerated.
- Draw BTF into a 60mL syringe. If your BTF does not flow through by gravity, gently push the syringe with small slow pushes.
- The length of a bolus feed should follow the normal time for a meal (15–30 minutes). If there's any discomfort during the feed, slow the feed rate by lowering your arm with the syringe or pushing through more slowly.
- Flush the tube with water after each BTF to reduce risk of tube blockages. The amount of water needed to flush the tube may change depending on your/your child's hydration needs. Your dietitian will let you know how much water to use.

**Decide how you want to make up the blended tube feeds (in a batch or a single feed).**

### Design your recipe:

- A nutrient rich base – commercial formula, milk or yoghurt
- A protein rich food – meat, fish, eggs, tofu, beans or legumes
- A variety of fruits and vegetables
- A variety of whole grains – oats, rice, pasta, noodles, wholemeal bread
- Healthy fats – oils, nut butters and avocado

Tip: Consider Compleat Blended Diet recipe builder

(<https://www.compleat.com/blend-from-scratch>)



## HOW TO BE FOOD SAFE

### **Preparing the BTF recipe**

- Start with a clean kitchen and clean equipment.
- Wash hands with warm soapy water before you start, after touching raw food (such as meat or
- eggs) and after touching hair or face.
- Wash fruits/vegetables and the outside of cans/jars of food before use.

AuSPEN Australasian Society of Parenteral and Enteral Nutrition

- Use separate cutting boards, knives and utensils (or wash after each use) for fresh produce and raw meat, poultry, or seafood.
- Cook food thoroughly before use with a method that brings food quickly to a high temperature – boiling, stewing, frying, grilling, baking and roasting are suitable.
- Avoid using deli meats, soft cheeses, raw foods (e.g. sashimi) in BTF recipes.
- Use a high-powered blender to reduce risk of tube blockage, this will also reduce the need to dilute the blend
- For best sanitation, dishwashers should be used for cutting boards, dishes, utensils and equipment. For blenders that are not dishwasher safe, a food safe detergent and hot water should be used.
- Do not prepare BTF if you are unwell, or for 48 hours after your symptoms disappear.
- Use rubber gloves if skin has cuts/grazes.



## HOW TO STORE BTF

### Storage of BTF

- BTF can be stored on the top shelf of the fridge (below 5 degrees) for 24 hours.
- BTF may be frozen (below -18 degrees) for one month.
- Defrost BTF in a refrigerator or cooler bag with ice bricks, do not defrost on the sink/bench.
- BTF should be at room temperature at the time of feeding.
- To warm a blend that has been refrigerated, run the container under warm water and stir well before feeding. If using a microwave, stir adequately to make sure food heats evenly. Make sure the temperature is not too hot to prevent discomfort and burning.
- BTF cannot be left out for more than 2 hours, which includes warming and feeding time.
- Once BTF has been warmed, any remaining or unused food must be discarded if not used
- within 2 hours.
- Store in a labelled (name, date, ingredients), airtight and reusable container.
- Use insulated bags (with a cool pack/ice brick) during travel for no longer than 4 hours.



## HINTS AND TIPS

### Helpful Hints

<b>Dilution</b>	<ul style="list-style-type: none"> <li>Always use a nutrient rich fluid to thin feeds (such as commercial formula, milk or yoghurt) instead of water or juice.</li> </ul>
<b>Foods that can cause tube blockage</b>	<ul style="list-style-type: none"> <li>Berries (especially blueberries), stringy or fibrous vegetables (e.g. string-beans, spinach), flax/chia seeds can stick to the tube – they need to be blended for longer.</li> <li>Eggs, spinach and congee must be well cooked before blending.</li> <li>Brown rice blends better than white rice.</li> <li>Acidic foods (e.g., orange, lemons, tomato) can cause milk to curdle if feed is uncooked.</li> </ul>
<b>Foods that thin BTF</b>	Watery vegetables (e.g. cucumbers, tomato, leafy greens), enzyme containing fruit (e.g. pawpaw, mango, kiwifruit, pineapple), oils that are liquid at room temperature.
<b>Foods that thicken BTF</b>	Rice, pasta, wheat products, oatmeal, bananas, potatoes, amaranth flour, almond/almond meal/almond paste, avocado, sesame seeds/tahini.

### Preparation tips

To achieve a smooth consistency, the following tips can help to keep the nutritional content of the feeds:

- If fluid is needed, using a commercial enteral formula, dairy or alternative milks.
- Add small amounts of liquid at a time to prevent over-diluting the nutritional value of feeds.
- Steam fresh fruit and vegetables instead of boiling before pureeing, as this reduces the loss of nutrients in the water. If boiling, use the water that the foods were cooked in as it contains some of the nutrients (e.g. water-soluble vitamins) that were lost in the cooking process.

# AUSTRALIAN DIETARY GUIDELINES FOR CHILDREN



Vegetables and legumes/beans

Serves per day

	2-3 years	4-6 years	9-11 years	12-13 years	14-18 years
Boys	2 1/2	4 1/2	5	5 1/2	5 1/2
Girls	2 1/2	4 1/2	5	5	5

A standard serve of vegetables is about 75g (100-500kJ) or:

- 1 cup: cooked green or orange vegetables (for example, broccoli, asparagus, cauliflower or pumpkin)
- 1/2 cup: cooked, sliced or canned beans, peas or lentils
- 1 cup: green leafy or raw salad vegetables
- 1/2 cup: sweet corn
- 1/2 cup: potatoes or other starchy vegetables (baked potatoes, tarran or cassava)
- 1 medium: tomato



Fruit

Serves per day

	2-3 years	4-6 years	9-11 years	12-13 years	14-18 years
Boys	1	1 1/2	2	2	2
Girls	1	1 1/2	2	2	2

A standard serve of fruit is about 150g (250kJ) or:

- 1 medium: apple, banana, orange or pear
- 2 small: apricots, kiwi fruits or plums
- 1 cup: dried or canned fruit (with no added sugar)
- Or only occasionally:
  - 120ml: 100% fruit juice (with no added sugar)
  - 30g: dried fruit (for example, 4 dried apricot halves, 1/3 tablespoons of raisins)



Grain (cereal) foods, mostly wholegrain and/or high cereal fibre varieties

Serves per day

	2-3 years	4-6 years	9-11 years	12-13 years	14-18 years
Boys	4	4	5	6	7
Girls	4	4	4	5	7

A standard serve (250kJ) is:

- 1 slice (30g): bread
- 1/2 medium (30g): roll or flat bread
- 1/2 cup (75g): cooked rice, pasta, noodles, barley, buckwheat, semolina, polenta, bulgur or quinoa
- 1/2 cup (75g): cooked porridge
- 1/2 cup (30g): wholemeal wheat flakes
- 1/2 cup (30g): muesli
- 1/2 cup (30g): cereal
- 1 small (30g): English muffin or scone



Lean meats and poultry, fish, eggs, tofu, nuts and seeds, and legumes/beans

Serves per day

	2-3 years	4-6 years	9-11 years	12-13 years	14-18 years
Boys	1	1 1/2	2 1/2	2 1/2	2 1/2
Girls	1	1 1/2	2 1/2	2 1/2	2 1/2

A standard serve (500-600kJ) is:

- 80g: cooked lean meats such as beef, lamb, veal, pork, goat or kangaroo (about 80-100g meat)
- 80g: cooked lean poultry such as chicken or turkey (100g meat)
- 100g: cooked fish (about 110g raw weight) or one small can of fish
- 2 large (100g): eggs
- 1 cup (100g): lentils or canned legumes/beans such as lentils, chick peas or split peas (preferably with no added salt)
- 1/2 cup (30g): tofu
- 30g: nuts, seeds, peanut or almond butter or tahini or other nut or seed paste (no added salt)



Milk, yoghurt, cheese and/or alternatives, mostly reduced fat

Serves per day

	2-3 years	4-6 years	9-11 years	12-13 years	14-18 years
Boys	1 1/2	2	2 1/2	3 1/2	3 1/2
Girls	1 1/2	1 1/2	3	3 1/2	3 1/2

A standard serve (500-600kJ) is:

- 1 cup (250ml): fresh, UHT long life, reconstituted powdered milk or buttermilk
- 1 cup (250ml): evaporated milk
- 2 slices (30g): cheese
- 1/2 cup (100g): ricotta cheese
- 1/2 cup (100g): yoghurt
- 1 cup (250ml): soy, rice or other cereal drink with at least 100mg of added calcium per 100ml

- To meet additional energy needs, extra serves from the Five Food Groups or unsaturated spreads and oils, or discretionary choices may be needed by children who are not overweight but are taller, more active or older in their age band.

- An allowance for unsaturated spreads and oils for cooking, or nuts and seeds can be included in the following quantities: 4-5g per day for children 2-3 years of age, 7-10g per day for children 3-12 years of age, 11-15g per day for children 12-13 years of age and 14-20g per day for adolescents 14-18 years of age.

- For meal ideas and advice on how to apply the serve sizes go to:

[www.eatforhealth.gov.au](http://www.eatforhealth.gov.au)



## SERVE SIZES

Food Group	Foods	Serve size	Calories
<b>Grains and Cereals</b>	Cooked oats, iron fortified infant cereal, wild rice, barley, buckwheat, millet	½ cup	70-100
	Cooked brown/white/red rice, quinoa, pasta, noodles, amaranth, couscous, polenta, bread	½ cup	100-150
<b>Meat and meat alternatives</b>	Cooked chicken, turkey breast	80g	~130
	Salmon, herring, tuna	100g	~120
	Cooked lean beef or turkey mince, pork loin, lamb	65g	~150
	Well cooked egg	2 large	~140
	Cooked lentils, soft tofu	1 cup	~150
	Chickpeas, kidney/cannellini/fava beans, edamame	1 cup	~200
<b>Dairy and dairy alternatives</b>	Almond/cashew/macadamia and peanut butters	30g	~180
	Almond milk, skim milk	1 cup	~80
	Rice milk, oat milk, reduced fat milk	1 cup	~150
	Full cream milk – cow, goat, soy, lactose free	1 cup	~170
	Full fat yoghurt – Greek, natural, soy, coconut	1 cup	~200
<i>Almond, rice and oat milks must contain 100-120mg calcium per 100 mL</i>			
<b>Vegetables</b>	Cooked broccoli, cauliflower, carrot, green beans, spinach, capsicum, onion	½ cup	~25
	Cooked parsnip, green peas	½ cup	~50
	Cooked potato, sweet potato	½ cup	~100
<b>Fruits</b>	Nectarine, watermelon, grapes, honeydew melon, apple, blueberries, rock melon, raspberries, guava, apricots, pineapple, plum	1 cup	~60
	Orange, mango, pear	1 cup	~90
	Banana (mashed), fruit puree canned apricots	1 cup	~200

Have plenty of  
vegetables and fruits

Eat protein foods

Make water  
your drink  
of choice

Choose  
whole grain  
foods

## WHAT MY CHILD NEEDS IN THEIR BLENDS DAILY?

**Fruit** \_\_\_\_\_

**Grains** \_\_\_\_\_

**Vegetables** \_\_\_\_\_

**Dairy** \_\_\_\_\_

**Meats/ Protein** \_\_\_\_\_



## EGGY PANCAKES

SERVINGS: 1-2

PREPPING TIME: 5 MIN

COOKING TIME: 5 MIN

### INGREDIENTS

- 2 eggs
- 1 cup milk
- 1 tsp nut butter
- 1/4 cup oats
- 1 tblsp nut butter
- 1-2 tsp fat (butter/oil)
- 1 banana

### DIRECTIONS

1. Blend egg, banana, oats, nut butter together
2. Add 1-2 tsp of fat of choice to pan on medium heat
3. Pour ingredients onto pan and allow to cook for 2 minutes or until golden
4. Flip to other side and add butter as needed
5. Once both sides are cooked replace pancake into blender and add 1 cup of milk
6. This will provide 600 kcal

### NOTES

Ensure final consistency is equivalent to drinking yoghurt or pancake batter  
Consider with younger child offering a half serve - your dietitian will direct you



# OVERNIGHT OATS

SERVINGS: 1

PREPPING TIME: 15 MIN

COOKING TIME: 30 MIN

## INGREDIENTS

15 g oats shredded  
50 mL milk  
Honey to taste  
1/2 pear  
1 tblsp nut butter  
1-2 tsp fat (butter/  
avo/oil)  
a pinch of salt

## DIRECTIONS

1. Combine milk and oats
2. Add honey and fruits
3. blend with Vitamix or other  
blended for 3-4 minutes
4. Consider adding more milk to make  
desired consistency
5. If you do not have a Vitamix you will  
need to sieve the recipe
6. This should make 2-3 60 mL  
syringes
7. Recipe provides 280 calories

## NOTES

Ensure final consistency is equivalent to drinking yoghurt or pancake batter



## SPAGHETTI BOLOGNESE

SERVINGS: 1

PREPPING TIME: 10 MIN

COOKING TIME: 30 MIN

### INGREDIENTS

- 1/2 cup mince
- 1/2 cup rice/ pasta
- 1 tsp tomato paste
- 2 tblsp of tinned tomato
- 1 cup frozen/ diced  
vegetables of your  
choice
- 1/2 tblsp oil
- 1 cup stock of choice

Total calories= 300

### DIRECTIONS

1. Boil pasta or rice until al dente
2. Cook mince in oil until browned (+/-add garlic)
3. Add tomato paste and tinned tomatoes and cook for 1-2 minutes
4. Add vegetables of choice to meat and tomatoes
5. Add stock and allow to reduce to half of original volume (10 -15 minutes)
6. Mix in blender pasta and meat and vegetables to desired consistency
7. Further water or milk might need adding to reach desired consistency

### NOTES

Or simply cook your usual family spaghetti bolognese and set aside a portion for your child and add stock/ milk/ water to final blend to desired consistency (pancake batter/ drinking yoghurt).  
Also you can double the portions to batch cook the recipe



## PUMPKIN SOUP

SERVINGS: 2

PREPPING TIME: 15 MIN

COOKING TIME: 30 MIN

### INGREDIENTS

Diced pumpkin bag OR

1/2 pumpkin

1 tin of lentils

Olive oil

1/2 cup Full fat yoghurt

1/2 cup milk

2 cups Vegetable stock

1/2 tsp cumin/ paprika

1/4 tsp

cinnamon/nutmeg

2 slices of bread

**Total calories** = 740

**Total Protein** = 48

### DIRECTIONS

1. Boil pumpkin until tender (10-15 mins)
2. Add to medium heat pan olive oil (+/- garlic to taste)
3. Add spices and stir until fragrant
4. Add boiled pumpkin and mix and combine with spices
5. Add 2 cups vegetable stock and simmer for 10 minutes
6. Add yoghurt and milk and bring to boil
7. Add soup and 2 x bread slices into blender and mix until smooth

### NOTES

Blend to consistency of pancake batter

Consider using this as a family recipe that can be then blended for tubie - double portions



## QUICK RED LENTIL SOUP

SERVINGS: 1

PREPPING TIME: 15 MIN

COOKING TIME: 20 MIN

### INGREDIENTS

- 1 cup vegetable stock
- 1 cup of lentils
- Olive oil
- 1 cup of diced carrot, onion and celery
- 1/2 - 1 cup formula
- 1/2 tsp smoked paprika
- 1/2 tsp cumin
- 1 cup rice or cous cous
- Lemon juice
- Total calories** = 600
- Total Protein** = 20

### DIRECTIONS

1. Heat olive oil in pot. Add the carrots, onion, and celery (1 cup). Stir and saute until the onion is translucent, about 5-6 minutes.
2. Add the garlic to the pot and stir until fragrant, about 30 seconds. Then, add the smoked paprika, cumin and lentils (1 cup).
3. Boil 1 cup of rice or cous cous to later blend
4. Add 1 cup vegetable stock and 1/2 - 1 cup commercial formula vegetable stock and pepper to the pot. Stir and bring to simmer and cook for 10 minutes then add lemon juice
5. Add extra water/ formula to desired thickness and aiming for pancake batter consistency and blend

### NOTES

Blend to consistency of pancake batter

Simply double portions or triple for multiple days worth or cook as a family meal and use above portions when providing portions for your tube. If you, halve this portion it would be appropriate for children



## SICK DAY IMMUNITY BOOST BLEND

SERVINGS: 6

PREPPING TIME: 30 MIN

COOKING TIME: 30 MIN

### INGREDIENTS

- 4 cups vegetable stock
- 2 x 400g can chickpeas
- 1/4 cup extra virgin olive oil
- 600 g carrots
- 1 x brown onion
- 2 x red capsicum
- 2 garlic wedges
- 2 tsp cumin seeds
- Juice of 1/2 lemon
- 100 - 150 mL milk/formula
- 2 tblsp greek yoghurt
- 1/4 cup tahini

### DIRECTIONS

1. Preheat oven at 200 degrees and combine carrots, capsicum (deseeded and sliced) with oil and cumin seeds for 45 minutes
2. Once finished add to pot and combine with chickpeas, garlic, diced onion and tahini and stock. Bring to boil then simmer for 30 mins.
3. Add all ingredients to blender and add lemon juice
4. Portion out meal for family and then add 2 tblsp of yoghurt to blender and add 1-2 slices of bread to blend and add formula to create desired consistency (100 - 150 mL).

**Calories:** 500 - 600/ serve

**Protein:** 30 g/ serve

### NOTES

Onion, lemon, garlic and capsicum are all rich in vitamin C for immunity. Carrots are a strong antioxidant. Chickpeas, tahini and greek yoghurt are also a rich protein source that is easily digestible on a sick day.



## PUTTING IT ALL TOGETHER

Consider

If you are going to batch blend

- Consider Compleat Recipe Builder (Nestle) as it will make your meals nutritionally complete for a full 24 hours
- Ensure your portions are as per the plate model - Serve of protein, serve of carbohydrates and 2-3 serves of vegetables
  - Then double or triple everything depending how many days you want to batch blend

If you are going to blend on the go

- Again consider the healthy plate model -> Serve of protein, serve of carbohydrates and 2-3 serves of vegetables
- You might do the healthy plate model at lunch and dinner to get your 2 serves of meat, 3-4 serves of carbohydrates and 4-5 serves of vegetables
- Breakfast might include carbohydrate, fruit and dairy
- Use a nutritionally dense fluid to combine: such as commercial formula or milk

Other Clinicians to support with Tubies

Children's Nursing QLD - support with stoma cares

<https://cnqld.com.au/>