

# Blended Diet Our Guide to Getting Started



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# Introduction

Welcome! We are so excited to be able to support you on your blended diet journey. You are one step away from seeing the real benefits of feeding your loved one real food and seeing the impact on health, wellbeing and hopefully, reducing any gastrointestinal symptoms such as reflux, vomiting, and diarrhoea.

Starting out can seem daunting but it needn't be and you can take things as slowly as you need to gain confidence in including real food in the diet.

The first thing to know on your journey to blended wellness, is there is no one size fits all approach; you need to feel empowered to include blended diet in the best way that fits in with daily life and routine. Whether this be providing all nutrition as blended diet; using blends in combination with formula; using just blends at home but formula when outside the home – there is no right and wrong, just what works for you.

We have created this guide to help guide and support you with getting started – there is an overwhelming amount of information out there so let's break things down one aspect at a time, starting with sections 'could blended diet be for me?', 'what do I need to know to get started', 'equipment', and 'questions for my healthcare professionals'.

See our blog for more information: The Blended Diet Movement

# **Could Blended Diet Be for Me?**

Traditionally tube feeding starts out with feeding commercially made formulas or feeds (or in infants expressed breast milk if available) - this is normally instigated in a hospital setting under the guidance of a registered dietitian. Feeding is then managed thereafter by a community dietitian who can support with fine tuning and may recommend changing the feeding regimen based on tolerance, growth/weight gain, hydration needs etc. The majority of tube fed patients use a feeding pump to support delivering feed at a constant rate over a specified time.

For a lot of individuals there can be symptoms of reflux or retching; nausea and vomiting, diarrhoea or constipation which often lead trying many different feeds and regimens as well as starting certain medications. In severe cases medical professional may recommend surgical interventions like a fundoplication or trialling feeding beyond the stomach (jejunal feeding) without due consideration of trialling blended diet first.

Blended diet is not suitable for everyone and should be discussed with the dietetic and medical team initially to ensure this can meet the nutritional needs of the individual and



is realistic and practical to implement, however published evidence tells us that a lot of these gastrointestinal symptoms can improve by the feeding of real food.

It is likely that feeding blended diet helps due to the following:

It is naturally thicker so can be helpful in scenarios of reflux and vomiting

It contains fibre which support healthy bowels and bowel regulation thus improving diarrhoea or constipation

Real food supports a healthier microbiome which helps ensure a healthier gut overall.

Ongoing feeding challenges can sometimes mean the individual is not getting enough nutrition in to sustain weight or growth so can lead to faltering growth (or weight loss or inability to gain weight). Anecdotally I have heard time and time again how reducing intake of commercial feeds and formulas and introducing blended diet has been like a magic wand and suddenly these unwanted symptoms reduce or disappear enabling the individual to thrive again.

#### So blended diet could be for you if....

- There are gastrointestinal symptoms impacting daily life
- There are struggles gaining weight or growing sufficiently due to inability to tolerate the volumes of feed or formula needed
- You want to have a choice over how or what you are feeding
- You want to normalise feeding and be inclusive with family meals and social occasions
- You can support delivering the blended food via syringe feeding

So, you are probably already invested on this journey so let's get to the really practical bits as these are the most important to consider to ensure a successful start.



# What Do I Need to Know to Get Started?

Everyone's starting point may be slightly different according to the age of the tube-fed individual, whether they have ever eaten before or still eat a bit orally and what the main priorities are (e.g. getting in enough energy, protein and nutrients for growth or weight gain or the opposite, ensuring a lower calorie but nutritionally balanced diet for example)

However, no matter what the nutritional goals are the following should be considered before embarking on this journey:

Has the individual ever eaten before – could there be any risks of allergy or intolerance or is this risk low?

How would you like blends to feature in your day-to-day routine? Do you or others involved with feeding have the dexterity to syringe feed?

Are there any specific nutritional considerations? E.g. need a higher energy/protein diet, need nutrition within lower volumes, need a lower calorie diet or something else such as care with fibre intake.

Hydration – what are your daily fluid targets?

Have you got the right equipment or supplies on your enteral feeding account?

Blenders – do you have what you need to get going?

Many people need a little more support when they introduce blended diet as it's new territory so having a plan of how you are going to transition from commercial feeds to blends can be useful.

### Here are some options:

1. Swap one feed a day for blended diet – if your tubie has never eaten before then perhaps you wish to keep things simple and use baby pouches of fruit or veg introducing one new food at a time and building up to a pouch or homecooked meal which has a range of ingredients. You may wish to give 20-50ml of a pouch followed by the feed (lesser 20-50ml) as baby pouches tend to be quite low calorie and build up the blended amount and gradually reduce the commercial feed daily. If you are confident your tubie does not have any food sensitivities then you can introduce a variety of blended ingredients slowly across many days. Introducing



blends this way allows the gut to adjust to receiving real food so can be an easier way to transition without causing too much wind, bloating or constipation for example.

- 2. **Introduce blends in 25% increments** day one 25% feeds are given as blended diet, day two, 50%, day three 75% and day four 100% of feeds are blends. If things are not going as smoothly as you anticipate there is no harm staying on the last percentage that was well tolerated and working up more slowly.
- **3. Start with snacks –** some thing like a pouch or a smooth yoghurt or custard or pureed fruit will work well.
- **4.** How quickly to bolus/plunge the blend this will be very individual, especially if there are tolerance issues but if you imagine if you were eating a meal this could take 20-30 minutes so a slow push every 5 minutes is recommended. You can speed things up if blends are well tolerated.
- 5. **Timing** some people prefer to introduce blends when they are able to monitor how these are tolerated or to do when they are not time pressured (for example during a school holiday, weekend or later afternoon), this helps build confidence.
- 6. Identifying where commercial feed or formula fits in

For some people having an overnight feed is a supportive way of meeting nutritional and fluid requirements and supplementing what they perhaps can't tolerate during the day (some people's tolerance is improved during periods of sleep). Having this combination of blends in the day and feed overnight is an initial strategy that can be considered and takes some of the pressure off 'getting it right' in the day as you explore and experiment with blends. Once blended diet is going well this can be reviewed to see if there is additional scope to fortify daytime blends with make them more calorific to allow the dropping of any night feeds. Another option is using commercial feed as the liquid when making homemade blends, this can act as a nutritional blanket while you fine tune the rest! These conversations are best discussed with a dietitian who can tailor this to the individual and their medical and social circumstances.

7. Using commercial blended pouches to support

Where time or access to the right equipment is challenging, ambient food



pouches can be a useful tool. Certain UK manufacturer's such as Food Untethered (Food Untethered - Real Food for Tubies) or Wilbo's blends (Wilbos Blends, blended diet) make blended meals in a pouch which is the right consistency to minimise any tube blockages and contains more nutrition than a baby food pouch will. These can be a great addition when starting out, travelling, needing a food option when waiting for appointments for example or feeding in a school or respite setting. These usually have allergen-friendly options supporting choice for all.

8. **Hydration** – what will this look like when introducing blends?

If you do not know your daily fluid target, please check your feeding regimen as it should be clearly stated. As commercial feed or formula is liquid this counts as fluid as well as any water flushes. Initially it is best to stick to your usual feeding regimen with regards with water flushes until receiving more nutrition as blends. As fluid is added to food when blended this can be counted towards the daily fluid intake and recommendations vary that blends can be considered between 50 and 70% fluid. For example, if you have a fluid target of 1000ml and are feeding 4 x 200ml blends a day this could contribute 400-560ml towards total fluid intake meaning you'd need at least 440ml of additional water a day.

Hydration is best measured by monitoring urine output aiming for fairly light / straw coloured urine of normal appearance. If it becomes dark or strong smelling, this may be an indication that your child needs some additional fluid in their diet or if they have reduced wet nappies. Additional signs of dehydration can be dry skin or lips, increased level of constipation, increased risk of urinary tract infections. Always give more fluids in hot weather or if there are additional losses (e.g. increased bowel losses or sweating).

Anecdotally it is said that giving a water feed 30-45 minutes before a feed is due can improve stomach emptying therefore priming the body to be ready to receive the blend and improving tolerance. The amount given can vary from 60ml -200ml of cooled boiled water or freshly drawn tap water (according to your local policy). This can also be a great way of meeting your fluid targets.



# **Equipment**

What equipment is needed to support a blended diet is one of the most common questions and can feel quite daunting. The good news is that there is a lot of choice and price points to suit everyone – here are the 3 main types of blenders people tend to use:

#### 1. Stick blenders



A low cost and simple to use hand blender – best for blending soft foods like cooked/stewed or naturally soft fruit and veg (think stewed apple, ripe banana, strawberries, ripe avocado, cooked broccoli, sweet potato), dairy & plant-based alternatives (e.g. milk, cream cheese, yoghurt), cereals like oats/Weetabix and cooked fish (e.g. flaked white fish or salmon or tinned tuna).

Pros – inexpensive, portable, easy to clean

**Cons** – hard to batch blend, can't blend tougher or more fibrous foods such as nuts, seeds, meat/chicken, potato skins, harder raw fruits and vegetables. If used a lot may not have a long shelf life unless under warrantee. May need to sieve to ensure no lumps/pips which may block the tube.

**Recommended brands –** this Bosch Clever Mixx has come recommended Bosch CleverMixx MSM2610BGB Hand Blender, 600 W - Black & Anthracite: Amazon.co.uk: Home & Kitchen £26.99



# 2. Medium size blenders







A staple in many households – able to blend most foods within reason. Harder to blend items like meat may need to be blended in smaller batches or for longer due to the wattage. Always check the wattage of the blender – ninja can be up to 1000W but some are much lower, around 500 Watts.

**Pros** – good for most budgets, manages most foods, good for blending as you need it. **Cons** – may still need to sieve (depending on ingredients), more time needed to blend batches due to volume limitation of jug, warranty may be less years, may need to replace the blades.



# 3. Larger blenders



Blendtec Classic 57 5 incl. FourSide Jar - Blendtec UK



E520 - Vitamix UK



<u>Ninja Foodi Blender &</u> <u>Soup Maker - HB150UK -</u> <u>Ninja UK</u>

Blendtec and Vitamix are the most well-known blenders in this range coming in around the £500 mark (basic models) but the Ninja range is growing in popularity and more affordable ~ £200.

Ideal for batch cooking and for blending whole meals with confidence of obtaining a smooth texture due to their wattage of ~1200-1500W. Deals easily with hard to blend foods like nuts, seeds, meat e.t.c taking the fuss out of blending.

**Pros** – can blend pretty much anything, easy to batch cook **Cons** – more expensive but good quality so likely to last, can be noisy (especially vitamix) – if noise is an issue you may wish to blend in another room!



# 4. Blending on the go

Many families find portable blenders useful for blending on the go. Usually USB-chargeable so you can renew their charge. Good for blending softer foods/well cooked foods and families have taken on holidays, on cruises, camping, car journeys e.t.c,

#### Examples include:





Blendjet ~£50

Nutribullet

# Is the financial aid to support equipment?

Families have found the following supportive:

REACT Children's Charity - Giving Depth to Short Lives

**Family Fund** 

Enquiring of there is medical discount from manufacturers

Looking into reconditioned blenders e.g. <u>Vitamix Certified Reconditioned - Vitamix UK</u>
Local charities

# **Equipment from your enteral feeding provider**

You will be familiar with what you currently receive from your enteral feeding provider in terms of giving sets, extension sets, syringes, flexitainers or sterifeed bottles for example however it is useful to consider how this will look if feeding blends.

A lot of parents recommend the following:



For button gastrostomies – right angled extension sets

**Syringes** – O ring syringes (easier to plunge) see video here for extending the shelf life of your syringe **Bing Videos** 

**Syringe caps** – helps prevent leaking of blends in pre-filled syringes **Sterifeed bottles** – these range in size from 130ml to 250ml (some manufacturers do 500ml), great for storing blends made in bulk either in the fridge or freezer.

If storage space is an issue using freezable pouches to put blends into can be useful – e.g. smaller bags like breast milk storage bags or reusable pouches.

These fit the Nutricia bolus adapters to allow easy syringe filling: <u>BUZIO Baby Reusable Food Pouches</u>, 12 Packs Toddlers Food Storage Pouch, Double Zipper Squeeze Pouches <u>Freezer Safe for Kids Homemade Organic Puree</u>, 148ml: Amazon.co.uk: Baby Products

Here are some 250ml sizes <u>Squeeze Pouches – Nom Nom Kids</u>

These go up to 500ml TUPARKA 26 Pack Plastic Drinks Flasks, Reusable Drink Pouch Concealable Drink Pouch Drinking Storage Pouch Flasks with Plastic Funnel for Halloween Christmas Party Beverage Water: Amazon.co.uk: Home & Kitchen Also compatible with the Nutricia bolus adaptor.



Wilbo's blends also do accessories with reusable pouches up to 700ml

Accessories — Our Meals - order now - blended diet - Wilbo's Blends — Wilbo's

Blends



# How Do I Know What to Blend?

Unless it is advised from your dietitian or medical team to calorie count or pay specific attention to certain nutrients in the diet it is my opinion that if you provide a healthy balanced diet of age-appropriate portions you will be getting in everything you need.

A simple but effective way of sense checking portion size is to plate up the meal before blending.

The Eatwell guide illustrates what is considered to be a healthy balanced diet and represents the ratios of food groups that should be consumed in a typical day.



<u>The Eatwell Guide - NHS</u> (Ignore the energy targets at the bottom right-hand side of the image – these are for an average healthy adult in the population).

If you plan your blends around the following you will be off to a good start:

• 1/3<sup>rd</sup> of our intake should be based around our carbohydrate foods so starchy foods like potatoes, rice, pasta, breakfast cereal, grains. If you have something starchy at breakfast, lunch and dinner this will meet this need.



- 1/3<sup>rd</sup> of our intake should be fruit and vegetables think 'rainbow' of colours to ensure a diverse range of vitamins and minerals. Aiming 5 portions of fruit and veg across the day (e.g. a portion with breakfast and lunch, 2 portions with dinner and a portion as a snack). Try to ensure the ratio is more veg than fruit within the day.
- Protein foods include these a minimum of 2 times a day, 3 for older children or adults. Pulses are a good inclusion as they offer a low fat, fibre-rich protein source. If eating fish, the recommendations are to include twice a week, one portion being oily fish like mackerel, trout and salmon which provide an excellent source of omega-3 fats.

A palm-sized portion of starchy food, vegetables and protein is a handy measure.

 Dairy food – aim 3 portions a day or the equivalent plant-based fortified alternative. Examples include milk with breakfast, yoghurt for snack or pudding and cream cheese within a lunchtime meal. A portion is around 150ml of milk, 1 pot of yoghurt or a matchbox-sized piece of cheese.

# How do I know what a portion is?

For some people, especially first-time parents who have never had an orally-fed child knowing what a 'usual' portion of food is for their child may feel a foreign concept.

Using the Eatwell plate for guidance you can consider the proportions of food that need to be on the plate and access some pictorial guides for portion sizes across different age groups here <u>Publications | The Caroline Walker Trust</u>

As an example, for a 5-11yr old for breakfast this could be an average meal.





# What if my child needs a higher calorie and/or protein diet?

It is best to get fully established on a blended diet before adding in higher calorie/protein foods into blends, that way you can play around with combinations that you know suit your tubie.

High calorie/protein additions can include: smooth nut or seed butters, avocado, ground almonds or other seed or flax seed mixes, oils, cheese, tahini for some ideas.



# **Storing and Reheating of Blends**

# What is the guidance on storing and reheating blends?

The BDA blended diet toolkit is a great starting point for information on safe preparation, handling, storing and reheating of blends <u>Contents</u>

#### Food prep

- 1. Clean hands, clean work surface when preparing food
- 2. Ensure food is fresh & within use by dates
- 3. Once blended food should be used within 2 hours or refrigerated/frozen.
- 4. Clean all equipment in warm soapy water, rinse and leave to air dry.

#### Storage of blended diet

- 1. Ensure fridges are <5°C
- 2. Store in an airtight container situated above any raw foods to avoid cross contamination
- 3. Use refrigerated blends within 24hrs.
- 4. Blends can be frozen and used within 3 months (label with expiry date for ease)
- 5. Frozen blends should be thoroughly defrosted in the fridge prior to use.
- 6. Defrosted blends stored in the fridge should be discarded after 24-48 hours as with freshly prepared blends.

#### **Reheating of Previously Prepared Blends**

The content of the blends will dictate whether it should be reheated or not. Ingredients posing a low food poisoning risk such as fruit and cereals do not need reheating whereas blends containing meat, fish or chicken for example would. Rice & pasta also fall into this category due to the potential presence of Bacillus cereus spores.

#### Reheating blends stored in the fridge

### Blends containing meat, poultry or previously cooked foods:

• Remove from the fridge, transfer to a suitable container (if not already in one) and microwave until 'steaming hot' or 'piping hot' throughout.

If using a food thermometer reach a minimum of 70°C for at least two minutes.

• Allow to cool before administering, until at a temperature that could be safely eaten orally.



Blends not containing meat, poultry or previously cooked foods or a blend made from foods that could be eaten cold (e.g. sandwiches, yogurts, jarred baby food):

- Option 1 remove blend from the fridge and stand on a work surface for 30 minutes to allow this to come to room temperature.
- Option 2 remove blend from fridge and place the container in a jug of hot water for no more than 10 minutes. Shake or stir before administering.

# Reheating blends which are frozen and then defrosted

The blend will need to be reheated. It needs to be heated through until it reaches 70°C for at least two minutes (a food thermometer may be useful), or the food needs to be 'piping hot' or 'steaming hot throughout.

# How should I transport blends?

Blends should be maintained at temperatures less than 5°C during transport until ready to be given (e.g. if stored at school or outside the home)

Cool boxes with ice packs help keep the temperature cool during transportation.

# **Questions to Ask My Dietitian or Healthcare Professionals**

- 1. Risk assessment are you happy I/we can start blended diet? If we need to complete a risk assessment what does this look like?
- 2. My gastrostomy or PEG tube is new how quickly can I start blends?
- 3. What do I do if I think my feeding tube is blocked?
- 4. There are quite a few medications prescribed for gastrointestinal issues how will I know if these are needed if some of the symptoms resolve on blended diet?
- 5. What happens if I need to go to hospital? What will feeding look like then?

  Our useful blog may be helpful here <u>Blended diets in hospital settings</u>
- 6. What is the local policy for feeding equipment and supplies when feeding blended diet? Can I access O-ring syringes? What can my monthly syringe



allowance be? Can I have any sterifeed bottles to support storage if blends? What about bolus adapters?

- 7. Should I be monitoring weight during the changeover to blended diet and if so, how often? Nb it is likely there may be a small amount of weight loss in the initial phase while building up volumes and content.
- 8. What if my tubie becomes unwell? What should I feed?

  This is best agreed in advance with your dietitian as you may wish to stock up on some back up items such as dioralyte and flexitainers for those just in case scenarios. Many dietitians will provide you with a feeding regimen that can be used when poorly or when feeding tolerance is affected. It maybe you have some rest from feeding and feed dioralyte for 24-48hrs depending on the symptoms and then slowly reintroduce blander blends or feed. Some people using the BRAT diet (banana, rice, apple sauce, toast) BRAT Diet: Food List, Efficacy, and More which are low fibre, easy to digest foods. Please do ensure you feel well prepared should this scenario crop up to reduce any stress in the moment.

We hope you have found our starting out guide useful. We would love to hear how your journey has been - including any blended whoopsies! Please do follow and share with us on socials (Instagram and facebook @oxfordpaediatricdietitians) so we can continue learning together ©

For further support you can access 1-2-1 consultations, more information can be found on our website <a href="https://www.oxfordpaediatricdietitians.com">www.oxfordpaediatricdietitians.com</a>

