



Solid and Their Effect
on Sleep



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Why Do Solids Effect Sleep?

- ▶ The introduction of solids for your baby is the first time their bodies suddenly have to produce a range of new enzymes to digest food.
- ▶ Combined with the production of new gut flora (bacteria), this can be a strange time for your baby. Their tummies feel weird, their bowel motions change, they might struggle temporarily, they might have more gas. All of this is not conducive to good sleep!
- ▶ Add to this some children's tendency to favor solids, especially those who don't drink a lot of milk, and you can have children who suddenly eat too much volume wise, and this can create an uncomfortable situation which also disturbs sleep.

- ▶ Get the timing wrong, and all these events occur right in the middle of a nap, or when you baby is trying to sleep at night.
- ▶ I'm not here to put you off starting solids, its an awesome milestone, but this explains a lot of why we see sleep go a bit hey wire once solids start, and why starting solids early isn't usually the solution to a sleep problem.



Which Meal Should I Start With?

▶ I see a lot of people starting with breakfast, which makes sense right? First meal of the day? I don't agree. Usually a baby is interested in breakfast because they are not interested in morning milk. This is usually due to having several feeds over night. Ideally the first milk feed of the day will be your biggest, and breakfast solids won't be needed until 7/8 months. I find offering breakfast first can be the start of the solids/milk imbalance which can lead to your baby needing to wake at night for milk, to make up for lost milk feeds in the day.

▶ I suggest you start with "lunch", which doesn't usually occur at lunch time, but 11am after your morning milk feed (10/10.30/11am).

▶ This gives you plenty of time for solids to be over and partially digested by the time your baby needs a nap (12.30pm), and it gives your baby several hours to react to the food group before their night sleep starts! (if they are going to react).



Case Study 1

▶ Bobbie was 6 months old when I went to see her. She had been waking 4-5 times a night for feeds and mum couldn't understand why. Bobbie was having two meals a day, breakfast and dinner, and mum was curious how she could be so hungry at night, when she started solids at 4 months.

▶ Bobbie napped ok, although her lunch time nap was often a little disturbed and mum struggled with her third nap like many of us do.

▶ It was apparent once I looked at Bobbies day records, she didn't get enough milk in the day, and was making up for this at night.

▶ But Bobbie wasn't interested in feeding much in the day, she barely went on the breast before 11am, and then her next feed was 3pm, followed by a small feed at 7pm before bed.

▶ I actually dropped Bobbie back to one meal a day, as well as using sleep training at night to gradually wean her night feeds down to one. I needed to move her breakfast as this needed to be a milk feed. I moved Bobbies bed time feed back to 6.15pm, and we cut her dinner solids back a little too, as once we moved her feed to 6.15pm it was evident her dinner was too big and putting her off her bed time feed.

▶ We had to use sleep training to gradually wean the night feeds, but an important part of Bobbies success was understanding solids and their relationship to sleep.

Which Foods Should I Avoid?

- ▶ When you first start solids there are a couple of foods which have the potential to disturb sleep. These are things like raw banana which is incredible hard to digest and better saved as a stage 2 food.
- ▶ Avocado, again an amazing food, but full of complex fats which are tricky to digest, so best reserved as a stage 2 food.
- ▶ Quinoa is gaining traction as a trendy food, but is very fibrous, so not ideal as a stage one food in large amounts either
- ▶ Older children can have their sleep disturbed by bowel motions while sleeping. This can happen when your child's diet is rich in fibrous foods. Limit foods like bliss balls, dried fruit and green smoothies.

► Don't rush your way through the list of first foods, take your time, enjoy the process and think about how tricky something might be for your little one to digest.



Which Foods Aid Sleep?

- ▶ Foods rich in tryphophan and B vitamins aid the production of the sleep supporting transmitters serotonin and melatonin. Poultry, natural nuts, bananas, kidney beans, eggs and dairy products are all sources of tryptophan.
- ▶ Ensure your child is eating plenty of protein over the day. Protein is broken down slowly by the body which helps to maintain blood sugar levels and prevent night time wake ups.
- ▶ Mineral deficiencies can lead to restlessness. Zinc, iron, calcium and magnesium are responsible for hundreds of processes in the human body. Their activity is linked to one another, so a deficiency in any of these will affect sleep to varying degrees.
- ▶ Zinc is needed for muscle and nervous system relaxation. Zinc deficiencies have been shown to increase muscle tension, irritability and restless leg syndrome

- ▶ Good sources of zinc include; seafood, lean beef & lamb, spinach, pumpkin seeds, sunflower seeds, sesame seeds (or tahini), cashews, and beans.
- ▶ Iron deficiency can prevent a child from falling asleep and staying asleep.



Which Foods Aid Sleep?

- ▶ Good sources of iron include; Lean red meat, liver, green leafy vegetables, beans, tofu, sesame seeds, pumpkin seeds and fortified cereals.
- ▶ Calcium is a natural muscle relaxant and has a calming effect on the central nervous system, both of which are essential for restorative sleep.
- ▶ Good sources of calcium include; dairy products, tinned salmon or sardines (leave the bones in), leafy green vegetables, tofu, broccoli and almonds
- ▶ Magnesium is also a muscle relaxant. Its activity is linked directly with zinc and calcium.
- ▶ Good sources of magnesium include; Leafy green vegetables, nuts and seeds, beans and lentils, brown rice, quinoa, avocado, bananas, and dairy products.

► Higher intakes of Omega-3 Fatty Acids, specifically DHA, have been associated with less bedtime resistance, and lower sleep disturbance. Fatty fish such as salmon, sardines and tuna are good sources of DHA Fatty Acids. Flaxseeds, walnuts and soybeans are also good sources of Omega-3 Fatty Acids.



How Timing of Solids Affect Sleep?

- ▶ Having solids too close to a nap or bed time can mean the body is trying to digest food not sleep.
- ▶ This is DIFFERENT than having milk right before bed, this is much easier to digest and doesn't cause issues at all.
- ▶ But having lunch solids at 12pm and a nap at 12.30pm does not encourage great sleep.
- ▶ No does having a bowl of dinner solids at 6pm which is one of the reasons I suggest dinner first in my routines, and milk second.
- ▶ Try to ensure you START your solids at least ONE hour before you know you will put your baby to bed.

No Diet Food!

- ▶ If it would be considered diet food for you as a mum, its diet food for your baby.
- ▶ Babies don't need low carb, no carb diets, and they certainly won't sleep well if they are on a low carb diet.
- ▶ So consider each "meal" and ensure it contains carbohydrates. At first this might be baby rice, or sweet potato, and later on this might be oats, quinoa, rice, pasta, potato's etc.
- ▶ Common mistakes are having an entire "meal" of pears, or pumpkin, or courgette or carrots. Yes your baby is getting amazing nutritional content from those foods, but we don't want him to be hungry and not able to sleep.

Why I Love Home Made Food

- ▶ Offering ONLY commercially prepared baby foods can lead to a number of issues and can have huge consequences for your child's eating habits as they grow older. A reliance on commercially prepared baby foods can lead to:
 - ▶ A reduction in variety of taste, nutrients and textures: This reduction in available nutrients can also lead to other problems such as sleeping issues and minor illness. Store bought baby food is often high in water and low in protein (sometimes as low as 5%). Relying solely on commercially prepared baby food can increase your night waking as baby is genuinely hungry.
 - ▶ Exposure to hidden sweeteners: Just because it states 'no added sugar' it doesn't mean that manufacturers haven't added fruit juice or skim milk to help sweeten a product.

- ▶ A preference for a softer and smoother texture: An extended reliance on soft food can slow the progression to eating meals with the family and increase the chances of ‘fussiness’ later on.
- ▶ Confusion about how much to feed: Using the quantity in each jar or pouch as a guide to how much to feed may lead to night waking due to genuine hunger.



Case Study 2

- ▶ Zoe was 12 months old, and still woke at night for at least 2 bottles. Mum was tired and over it!
- ▶ Zoe did rely on bottles for her naps during the day, and thus had developed a bit of a feed to sleep association.
- ▶ But she also loved the ready made food pouches her mum bought. She had one at each meal throughout the day, as well as chopped up fruit as finger food.
- ▶ But she also loved the ready made food pouches her mum bought. She had one at each meal throughout the day, as well as chopped up fruit as finger food.
- ▶ As well as needing sleep training to gradually drop her night feeds and change her feed to sleep association, Zoe needed her diet overhauled to support her sleeping through the night.

▶ She needed more protein and carbohydrates, she needed more volume and variety. Within a week she was sleeping through the night with these changes. It was evident as we dropped the bottles over the week, Zoe was ready for some real food! She now loves slow roast chicken and even sushi!



Solids or Milk First?

- ▶ You can move to all food first at 8 months. Most health care providers agree on this.
- ▶ The issue with sleep and this change is when we accidentally end up offering the milk feed too late after the solids and we might start a feed to sleep association.
- ▶ Or we space out food and milk to the point that baby is eating more frequently at 8-10 months than they did as a newborn, and they start to wake hungry at night, as they are never taking a proper feed throughout the day.
- ▶ I suggest dinner before milk from any age, but you need to keep an eye on milk intake before bed, and ensure it doesn't drop. If it does, then you need to cut back your solids volume.

What is Solids/Milk Imbalance?

- ▶ This is a problem I see quite frequently and it is caused by solids increasing too quickly, possibly at inappropriate times (i.e. breakfast first), or because your baby prefers solids, and they start to have an imbalance between solids and milk, and wake more frequently at night to achieve their daily milk intake.
- ▶ We usually need to gently and gradually reduce night feeds with sleep training, while addressing the day feeds and milk feeds.



Your Questions

▶ 5 moth old boy just started baby rice - how often should he have it? Morning /night - lunch / night? Or More or less? I'm giving him 100mls of formaula then solids twice a day - So far he's having 1 1/2 teaspoons with formula - the solids have settled the wake ups in the night

▶ A- Start with lunch and then ad in dinner as he seems hungry. 1.5 teaspoons is a good start, you can slowly over time increase that and offer a variety of foods. Let his hunger guide you so you don't rush and ruin his sleep.

▶ Interested to find out how to keep my little man fuller for longer. He is 11months and still has atleast one bottle during the night - have tried resettling but will only wake again and want milk. Normally 100-150mls but in the last couple of days he has been smashing his food and milk and then drinking 300mls during the night?!

Your Questions

▶ A - Possible food and milk imbalance? Or needing more protein and carbohydrate content in his food? There could also be a residual sleep issue over night which some sleep training could quickly fix. 100ml is not a big night bottle.

▶ My almost 6 months old is up to 2 meals a day. Milk 1st then food. Having Lunch and dinner ATM. Not sure if she's started teething or if its her solids that may hav effected her sleep, she's just taking a lot longer to settle and sometimes waking more. Feel lik I can't seem to get timings right. She eats pretty well unless she's tired. But sometimes not so keen on boob when she's due her boob feed.

▶ A- Sounds like possibly a timing issue - we have spoken about this, and also making sure the volumes are not putting bubs off their milk feeds as these are still super important.

Your Questions

▶ Have 5.5 month girl having 2 feeds of solids a day approx 2 teaspoons per feed and usual milk feeds. She has 5pm milk feed not always having full feed here then approx 45 mim later has feed of solids veges/baby rice at mo then bedtime routine then bed by 7 with top up milk feed but lately been waking up between half an hr and hr later after gone to bed wanting more milk. Feel like she not having a full feed earlier. Any ideas? Thank you

▶ **A - I think your timing is off a bit. Try swapping to a small dinner at 5pm and a full milk feed before bed.**

▶ When is it time to start with a 2nd meal? 5 month old on one meal at dinner time, having about 1-2 teaspoons.

▶ **A - When your baby seems hungry between milk feeds (more so than usual) ie. Not content to wait 11am-2.30pm anymore.**

Your Questions

▶ When would you suggest introducing snacks? 8 month old on 3 meals a day, just looking ahead.

▶ A- snacks can ruin sleep too, and contribute to more milk/solids imbalance. 3 meals and 3 milk feeds a day is awesome for most children under 1. You might find your toddler starts to become interested in snacks between 1-2 years.

▶ Healthy lunch options please. Offering my 6.5 month old baby rice & fruit puree for breakfast, vege mix for dinner. He is currently eating avocardo & banana mashed for lunch (which he loves, probably because its sweet), but I need to start mixing it up! Thank you.

▶ A- Meat casseroles!

▶ Hey there, my little man (5 months old) loves solids. He will often refuse a bottle for 30 mins but then happily eat solids. Do I ditch the solids or keep preserving with the milk and then solids?

Your Questions

▶ Definitely keep offering milk, and try to avoid a solids/milk imbalance developing.

▶ My 8.5 mth old likes to feed herself finger food, but doesn't eat much. She is growing well, but not sleeping through the night without a feed. Any tips on getting her to eat more solids and not require a night feed, plus how much do they need to be eating in order to cut out the night feed?

▶ A - I would be happy to cut a night feed if bubs =is thriving and on 3 meals a day of ½ a cup each and not hungry in the morning after having a night feed. Can you make sure your finger food is still meeting her needs? Steamed root vegetable sticks? Meat? Carbohydrates?

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- ▶ Solids and Sleep is just ONE of the topics we cover in our Coffee Group Sleep Catch ups!
- ▶ Organize one with your group, just \$20 per mum!
- ▶ We'll bring the coffee (thanks Jeds!), plus freebies from eco store and water wipes.
- ▶ You'll get our age appropriate sleep booklets to take home.
- ▶ Relax in your own home or a friends! Learn about nap routines, sleep training techniques, sleeping through the night, cat napping, toddler sleep dramas, newborn difficulties, you name it we cover it for you!

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Remember sleep is a biological necessity, not a luxury!



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Emma is the owner and founder of Baby Sleep Consultant, she is a Certified Infant and Child Sleep Consultant, Lead Educator for Baby Sleep Consultant Training, Happiest Baby on the Block Educator, has a Bachelor of Science and Diploma in Education, she is a Gentle Sleep Expert and Mother of 3.