



Episode 9: Pure Nutrition with Olivia Bates

Pure Nutrition

Introducing solid food to your baby.

Tiffany: Hi everyone. Today I'll be chatting with Olivia Bates, who is the founder of Nourishing Bubs. She also has a Bachelor of Nutrition and Dietetics and a certificate in Paediatric Nutrition. Olivia has worked as a babysitter and nanny for 13 years, and she's also very passionate about infants and their health.

Today's episode is all about introducing solids to your baby, plus other helpful nutritional information for the first 12-months of life. Thank you for coming on to share your expertise on this today, Olivia.

Olivia: Thank you so much, Tiffany. I'm so excited to be here and share what I know and what I've learned when it comes to introducing solids.

Tiffany: Wonderful! It's great to have you. It's been such a long time since I had my little babies and since they started solids, so I'm sure so much has changed in that time. So, let's get right into it today. I'm sure it's quite overwhelming for parents trying to determine whether the baby should start on solids and when. Do you find when you speak to parents that there's a lot of questions around that still?

Olivia: Yes, definitely. I think even more so now. There have been quite a few changes over the past 10 years, and as a result I think parents are feeling particularly overwhelmed. Obviously, they're also very sleep deprived at this point and they're getting information often from their GP, their paediatrician, their mother, their mother-in-law, their friends, or even just a good old Google search.

I think the information that they're getting from these various sources can be quite contradictory and confusing, and so these poor parents who are already you know just trying to navigate those early stages with their baby can find the whole thing quite overwhelming, when really we want it to be as enjoyable as possible.

Tiffany: Yeah, for sure.



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Olivia: So, I guess we will get started and we'll start on when to introduce solids. This is something in particular where there have been quite a few changes which have occurred over the past 10 years. Basically around research that has come to light regarding allergens and when to introduce allergens to baby.

New research that has shown that in fact allergens shouldn't be held back from introduction and should actually be introduced in that first year of life. This is resulting in quite a few changes around when we should be introducing solids. We do know definitely though that breast milk or formula provide 100% of baby's nutritional needs up until around six months of age. It is at that sort of six months of age point when their requirements change and in particular, it's their requirements for iron and zinc, which are no longer able to be met by just having the breast milk. So, basically then we know that we need to start to introduce those complementary foods so that they then can help meet those iron requirements.

Tiffany: Yeah, that's really important I think and really fantastic to know a bit more about that.

Olivia: The new recommendations state that we should be introducing solids around the six-month mark, but not before four months - and when your baby is showing signs of readiness. That four to six-month window really coincides with what the World Health Organisation (WHO) recommends and is basically what we say is the ideal time.

We do say that if your baby is approaching seven months of age and has shown no interesting starting solids, they haven't really reached what we consider to be the developmental stages. It is really important that you do check in with your paediatrician and make sure there's not something else going on. If they are not able to then get the additional zinc and the iron requirements, there can start to be some development delays as it's really crucial for the development of their brain in particular, that they are getting that iron source.



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Olivia: We do also say that if possible, and you are still breastfeeding, that you do try to maintain breastfeeding during solid introduction, because there is some suggestion that it might have immunological benefits to have you breastfeeding while you do introduce those allergens in particular. When it comes to allergens as I said, this is what the main changes to the recommendations of being around and basically, the updated recommendations state that you should be introducing all of the allergens in the first 12 months and before baby reaches that eleven months of age, so that get exposed to those allergens and are repeatedly exposed to it, so that they can develop a tolerance to it and hopefully not develop an allergy to it.

Tiffaney: Yeah, that's really interesting. So much just as changed. Listening to all of this it's really interesting for me, for sure. How do we know when the baby is ready? You spoke a little bit about looking for cues and things, but are there any key signs to look out for?

Olivia: Sure. So, we basically say that within that four to six-month window there are some real key signs that we are looking for. The first one would definitely be the baby has developed some good head and neck control and the ability to sit upright when supported. For example, you would put them in say a Bumbo or a highchair, and that they are able to sit there and actually hold their neck upright, because if they aren't obviously and their neck is still quite fluid, it represents a choking hazard. That's definitely the big key one.

The next thing would be definitely showing an interest in food. For example, if you were eating dinner or your partner was eating dinner, you might notice they start to reach for food or look particularly intrigued by what you're doing and that is another sign that they are interested. They might also be reaching out for your food as if to you know 'give it to me'.

Another thing would be the baby opening their mouth if you would bring a spoon near it. So, sort of being ready to take that first mouthful. The other key thing that you will notice is there will be a gradual disappearance of what we call the 'tongue push extrusion reflex'.



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Olivia: (cont...) That is basically where you might see when you first start solids, baby ends up sort of just pushing their tongue out and pushing it around their mouth and so the puree, for example, ends up all around them now then you don't think they've actually got any in but gradually, that will start to disappear and they'll stop pushing their tongue out as much as they start to really develop a proper swallow and actually taking that food.

Tiffaney: Yeah, they're great cues. I do remember a lot of those actually, now you're talking through them, and that's why I was laughing. Oh my goodness, it brings back so many memories for me actually.

What foods would you recommend to first introduce to a baby? I remember when I introduced solids to my children, it was all about the rice cereal! Do you really have to give them rice cereal now or is that a bit of an old wives tale? That was definitely the way that things were for me back when I had my kids.

Olivia: Yeah, so I think that's one of the areas I where people are really becoming quite overwhelmed, especially if they're speaking to say their parents or you know their mother in law. They are often the ones that are like 'are you going to start them on Farex or start them on rice cereal' and that's something that obviously, you know definitely our generation would have started on, and you know for you with your kids you would have started on, and still to this day a lot of people will still give rice cereal.

It is really dictated by culture and you know it's there's no real hard and fast rules when it comes to what you need to start your baby on. The thing with rice cereal I guess to know is that rice cereal is fortified with iron, and obviously, I mentioned that you know one of the reasons that it's important to be starting baby on solids is that they are getting sources of iron because their breastmilk and their formula no longer meet their increased requirements.

Just to touch on those increased requirements, the baby goes from requiring 0.2 milligrams of iron a day in that first six months, but then that actually jumps to 11 milligrams a day So it's actually quite a huge jump up there and so we know that while breastmilk or formula is formulated to meet those 0.2 milligram requirements, it is definitely not formulated to meet that 11 milligram requirements.



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Olivia: (cont...) That's where we're meant to be adding those complementary foods and our sources of iron. One of the easiest ways I guess food manufacturers think to do it is just by fortifying something like rice cereal, which acts as a really good vehicle to carry the zinc, and can be a really easy option for parents.

However, I will say there is absolutely no reason why you have to do rice cereal. If for example, your baby is reaching that six-month point and you need to start offering some iron options, definitely if you're going to give them things like beef or even if you're open to cooking something like liver, these are all excellent sources of iron and have more iron than a fortified rice cereal, for example. You might just naturally prefer to give them something that you would be otherwise cooking yourself anyway, rather than giving them a fortified product. But it really does rest in your hands and what's going to work easiest for you as a parent and for your family, and you can also maybe try making your own cereal.

Tiffany: Realising that it can be a struggle to know what to give them and I think when you spoke about as you are preparing your own food thinking about potentially mixing up some for them is a really great idea and really great tip I think.

Olivia: Yeah, definitely. I think that's the thing parents really need to know; you don't want to always be having to make a separate meal for your baby. Obviously you know, the format that they have it in those early days, often having it in a puree form might seem you know quite daunting, but in many cases you can just basically puree a little bit of what you're making or just pull a little bit of it out before you start to add seasoning and things like that for your family, so it shouldn't always be about buying separate baby food and making it extra hard for yourself. Ultimately, you're working to a point that by the time that they reached at one year of age, they are ultimately having a family meal it shouldn't be and doesn't need to be a separate meal by making extra work for you. So, I think the whole idea is just to make it as easy as possible for you and your family.

Tiffany: Yeah! I love that. You mentioned some foods that you could potentially offer to your child, what are some other things that you think might be really beneficial, other foods? You mentioned a bit of beef and liver, are there some other suggestions that you could take us through? Vegetables or other things.



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Olivia: Yeah, definitely. So, when it comes to iron and the best sources of iron, the best sources are going to be: First, liver is the key the sort of gold standard. I mean, personally I think I'll find it really hard to cook liver myself, and I know I'm sure some people feel the same way, but if you are open to cooking it and you think that maybe baby won't tolerate it just straight on its, own you could always do a tiny bit of liver mixed into something like a beef mince, almost like a little Bolognese. But also, other sources of meat, poultry, eggs and fish, they all contain some iron.

When it comes to different types of products, we know that our animal products so our meat or eggs for example, contain what is considered a more bioavailable or more easy to be absorbed source of iron which is called a 'haem' iron, if you ever see people write about that. There are definitely vegetarian sources of iron, they're not as readily absorbed by the body, but they definitely can be a great way to incorporated it in.

We recommend that when it comes to vegetarian sources that you do consume it with a source of vitamin C. Most fruit and vegetables contain vitamin C and so some of those vegetable sources of iron include things like your dark leafy greens, spinach, broccoli are good sources as well as things like legumes. So we're talking about chickpeas, navy beans and lentils - things like that are also other good sources and so if you combine something like a lentil with say, pumpkin or another well tolerated vegetable, something like that combines the source of iron with the source of vitamin C.

Vitamin C will help increase the absorption level in baby's body. I definitely think it's important not to think 'oh I have to be feeding my baby liver every single day', that's definitely not necessary, but just making sure you are trying to offer a variety and where possible, trying to offer those haem sources, so those animal sources of iron.

Tiffany: Yeah, that makes so much sense. It's so good to have a list of ideas to introduce to your baby as well because it can be really tricky to work that out and if you're not typically having some of those foods it's good to have lots of different suggestions.



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Tiffany: (cont...) You keep mentioning a lot about iron and what the baby needs in that first six months or the up into the first six months of age. Why is it so important? I know you have touched on it a little bit, but if you could go through a bit more detail around iron so everyone understands why iron plays such a huge part in the in the body and development of the child.

Olivia: Yes, absolutely. I guess you know iron is the one that we do really harp on about and that is why the introduction of solids is so important, but it just plays such a key role in baby's growth and development. In particular, it is responsible for transporting the oxygen around the body to all of the organs, so we want them to all remain you know well oxygenated so that they are functioning at their best. It is also involved in those normal growth and development processes and, in particular, in the brain development. We do find in children that have iron deficiencies that it often actually gets picked up because there might be some delay in meeting their educational milestones - that's how it often gets picked up.

Another thing it's involved in is manufacturing energy. So, for example, even in adults you might know that if yourself for someone you know ever been every found themselves being particularly lethargic or tired, the first thing the doctor usually checks for is an iron deficiency. The reason is that you could be eating plenty of energy and meeting your energy requirements, but if your body is not actually able to utilise that energy, then it's almost like defunct in a way and so your body actually requires the iron to utilise the energy it's taking in and it's exactly the same with babies. If they notice that baby is quite lethargic, they again might consider testing for an iron deficiency.

The other thing that's also obviously very important is that it's involved in the production of the happy hormones and obviously you know we want happy babies. We definitely want to make sure that they are getting enough because it's involved in that serotonin and dopamine production and releasing those hormones so that we have a happy, joyful, little baby.

Tiffany: That's what we all want! I know myself and my kids over the years have had issues with iron deficiency just here and there, and yeah, that totally makes sense that that would be the same thing happening with your baby. That's really interesting, thank you so much.



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Tiffaney: (cont...) What are some of the best tips to have your baby accept solids? I think that's something again that we all want for them to accept the food when we do offer it. We want them to be able to transition from going from breastmilk and formula to taking on that that new change, that food, that they're going to have to start getting used to. So, do you have some tips around that?

Olivia: Absolutely! So, obviously it is a really new change and a completely different food then going from having the breastmilk or formula then to having solid foods which have a completely different make up, depending on what they are. Things like your vegetables you know, might just be carbohydrates and vitamins and minerals, whereas you also have your proteins in the way that they get digested and processed in the body will be quite different. It is a big thing for them to take on, but also for you. But, hopefully some of these tips will help make it as easy and enjoyable as possible.

The first thing that I always say to people and I really can't encourage this enough is to make sure that you introduce solids in a really positive and happy environment and part of this might be, for example, if you've been up all night and baby hasn't slept and you're just feeling really exhausted and tired - that day, it's just not the day to start solids. The reason is that babies can really pick up on your mood and how you're feeling and how you're reacting to them, and so if they perceive that you're quite frustrated or anxious or overwhelmed, they can create an association between feeding time and mum or dad's mood. So, we really don't want to create any anxiety or negative connotations with that feeding time. So, it's a positive environment that I really can't encourage enough and really fostering the enjoyment of starting solids.

The next thing is that I'm a really big advocate on is offering vegetables before fruits. Part of this is because there are no long term studies at this point that actually prove that having vegetables before fruit is crucial, but there are studies that really show it is what you are giving your baby in that you know those first initial months and even during pregnancy that can really dictate their taste preferences into adult life. We want to be fostering and encouraging the enjoyment of vegetables and those more savoury tastes.



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Olivia: (cont...) Baby is going from having breastmilk or formula, which is naturally quite sweet itself, so you want to get them used to having more savoury options. It's best to start with something like a more flavour neutral vegetable - I always recommend something like pumpkin that is quite good, zucchini and cauliflower can be quite good options because they're not particularly sweet or savoury, then you might want to move to more savoury vegetables so something like broccoli, which can be a little bit more bitter, and then move to your sweet vegetables, then onto your fruit. It's just about encouraging baby to get used to as many vegetables as they can before you move to those sweeter foods.

We know that from the stats and even the most up-to-date nutrition studies have shown that only around 6% of children are getting enough vegetables and are hitting five serves a day. It's where we're really lacking and we then see it in growing adults that are getting obese etc. So, we really want to create as much enjoyment around vegetables as we can, and I think one of the best ways to do this is by starting on vegetables before fruit.

Tiffany: Yeah, great idea!

Olivia: The next thing is just to make sure you're offering age appropriate food. Remember when babies start solids, most of them won't have any teeth so offering a smooth puree is always the best option so they're going from having just a liquid form, even quite a liquid-y puree will be the best option. If you find that, for example, you're making some purees at home, some of them might be thicker than others depending on the natural water content of that fruit or vegetable and so you might need to thin it out a little bit and this is often best done with something like breast milk or formula which babies are already quite familiar with. If you add a little bit of that and thin out that puree, it will also help to increase that familiarity with it when they're starting out.

It is important to make sure that as baby gets into their process of having solids, that you do start to develop the textures. Don't remain on a smooth textured puree for say three months, because developing upper resistance in the puree is actually involved in baby's oral development and their speech development as well.



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Olivia: (cont...) We basically say they'd stay on say a smooth puree for approximately a month, and then you'll start to add a bit of resistance -whether that's making it slightly lumpier, in terms of not pureeing it as much or adding things like you know quinoa or a grain and adding that into a smooth puree to help add a little bit of texture to it, is also another way.

Tiffany: Yeah, great.

Olivia: The next thing to remember is to be persistent and patient - I can't encourage this enough! Obviously, when you're first starting out it can be quite a slow burn. We generally recommend trying things one at a time, just to help watch for allergies and usually doing a new food for two to three days and some people do it even more. You might, you know, start on pumpkin for example and do pumpkin on day one, pumpkin on day two and then on day three, you might mix pumpkin with say, cauliflower, because by then you'll know that baby is familiar with the pumpkin, so if there was any reaction it's potentially from the cauliflower. It is important that you are trying it you know one at a time and obviously initially in that first month it will be quite slow, but it will get faster and you'll obviously work out things are all going quite fine and there's no issues, whereas you know some people where they might pick up some kind of intolerance or allergy they might be particularly slow and more diligent with one at a time.

Tiffany: Makes sense.

Olivia: Yeah. You'll work out what works for your baby and what's the best way to handle it and you know don't worry about what anyone else is doing it really is about doing your baby and what is going to work best.

I guess another tip is remember it's a messy affair! So, I always recommend like a bib or a splash mat. You can also get mats that you put underneath the highchair and it can help contain the mess, which can be really good and you can just throw that in the wash afterwards. A highchair is also really good, you might want to start with something more like a Bumbo and then move to a highchair and just make sure when it comes to getting your highchair that it has a foot rest because it's really important that babies are able to rest their feet so that they don't have to use their core strength to try and keep them stabilised in the chair.

Olivia: (cont...) That's a really important thing. You can even consider something like a smock, where you put it underneath the chair, but it covers their whole arms, depending on what they are eating. Things like beetroot, for example, you might want to go all out! Or, as we are now coming into summer, you might have baby going nude for mealtimes - whatever works best for you, but some things obviously got particularly messy.

The next thing would be just to make sure that once baby does get into, you know, the real run of eating solids and they're gaining good momentum with it, make sure that you start to offer a range of foods and between food groups as well. So, not always for example giving them pumpkin and chicken, making sure you giving different vegetables, different coloured vegetables, different meats, different types of meats, cuts of meat, it's really important because obviously each of these has a different nutrient profile, each of the different fruit and vegetables for example each colour tends to associate with a different nutrient that they have in them.

Carrots and pumpkin and sweet potato, for example, that all that orange hue they are all particularly rich in vitamin A, which is really good for baby's eye development. So, that's just one example, but it is really important to make sure you are covering different food groups and different foods within those food groups.

Tiffaney: Yeah that's really good to know and point out because it can you can get in a bit of a rut with what you're offering your baby sometimes, or you know you might forget that there's these other things that you could potentially be introducing.

Olivia: Yeah, definitely and I think that's also where like the freezer becomes your best friend. You can try a whole lot of different things and sort of you know pick and choose you know you might do a cube of pumpkin and a cube of beetroot one night, and then the next night do cauliflower and broccoli or whatever and just have some batches on hand or whatever works for you, just so you can mix and match them and not feel like, 'well I don't want to be making a batch of this one night and then next night', you don't want to be cooking every night as it can be quite overwhelming.



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Tiffany: Yeah, definitely.

Olivia: Avoid shelf stable options where possible. Obviously as a dietitian and the founder of baby food company, this is probably no surprise! But, the thing with shelf stable baby options is most of them are heat treated and to be sitting on the shelf, they do have to be heat treated. A lot of the nutrients in them that we want to be getting into baby are actually sensitive to heat, so you end up losing quite a lot of them, which we definitely don't want.

Also, often ones that say that they, high protein for example, often only have around 5 to 10% of a meat in them anyway and they also often have water in them and fillers and things like that, so just you know, be really careful. If you are occasionally opting to use the shelf stable option, I do really encourage you to make sure you read the back really carefully and know actually what's in it. It's really important with little babies to make sure that we are making each mouthful count and we want it to be a high nutritional quality mouthful that we are giving to our babies.

The next thing is just to make sure that when you are introducing a new food, make sure that you introduce it in the mid-morning or just after they have had a nap so their morning sleep, for example. The reason is that you want them to be awake for around two hours to watch for any adverse reactions. If there is going to be an allergic reaction, that will happen within 5 minutes to two hours, so you want to be able to obviously be observing them quite closely. Obviously, if you then put them down for a sleep although you can probably see through a monitor, you're not watching them as closely. Also, if it's more of an intolerance like for example, things like cauliflower or broccoli might make baby a little bit gassy, you would prefer that to pass through them during the day rather than disrupt their sleep. So, it is important to try new foods in the first half of the day and just watch for watch for any adverse reactions that might take place. Obviously, once we've tried it with them and know that there's no issue you can then start to introduce it as a night time meal, but I always recommend making that first solid meal that you start and make it in the first half of the day.

Olivia: (cont...) The next thing is just when you do start solids you can actually start using a very clean little finger. The reason is that babies if they're breastfeeding are familiar with body temperature and the nipple, or if they are drinking from a bottle the shape of the teat on the bottle represents the nipple, so you know a little finger is quite familiar for them and is that nice temperature for them. Then, once you've moved on from giving a little finger with puree, you would then move on to just a little spoon just make sure that it has a little shallow bowl and use one of those silicon edged spoons and not a metal spoon. The reason is that if you use a metal spoon, for example, it will pick up the temperature of the food so if the food was heated up a little bit it can become quite hot and it also creates quite a weird sensation on baby's tongue. We want them just to be taking the food for what it is and not to be distracted by the feelings of the actual spoon.

The final point to cover is to remember that when you do start solids not to be concerned about how much or how little that baby is eating. Basically, we know that some babies might start off and gobble food straight away, whereas others might only take 5 to 10ml so one to two teaspoons, and it can take up to even six weeks for them to have around half a cup. So, don't be too concerned and don't compare with the mothers in your mother's group, for example. Just let your baby got their own pace, particularly if you start your baby on solids closer to the four month mark, you might find it takes a little bit longer for them to build up to taking more, just because they don't have those hunger levels yet.

Tiffany: Yeah, I think that's really great to sort of be aware of those things. I think that when you hear a lot of what other people are doing and you start to question yourself too much, I think that that's when some problems can come into it or into your mind at least, so, that's really great advice.

Olivia: Yeah, definitely and I think it's really important for parents to try and be relaxed as possible and I think we do have a natural tendency to go, 'oh what's your baby doing?' especially in a mothers group where they are all approximately the same age, so you can have expectations based on what's going on in the mothers group, but you know each child does develop at a slightly different rate and don't be too worried about what's happening in the group. Just make sure you know you're comfortable with where your baby is at.



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Olivia: (cont...) I think a mother and also a father's intuition and what you feel about your baby is often really spot on. If you feel like there's something wrong, maybe there is, and then check with the doctor and don't worry too much about what is happening with other people with the same age babies can because it can vary quite greatly.

Tiffany: Yeah. Thanks, so much thanks for coming on, Olivia. It's been really interesting. I'm sure that everyone has taken something away, a helpful tip or two, to assist with introducing solids for their little ones, thank you so much. You clearly have had a lot of knowledge built over the years and you have a lot of passion in nutrition from what you spoke about today and a really interest in looking after little ones and their nutrition so thank you so much. We really appreciate your time and insight today!

Olivia: My absolute pleasure. It's so nice to share something that I am so passionate about and hopefully make it a little bit easier because I think sometimes these poor parents are so overwhelmed and it really should be a really enjoyable and exciting milestone for both them and their babies. So, hopefully those tips to make it a little bit more that way.

Tiffany: Yeah, thank you so much. For more information about baby nutrition you can visit www.nourishingbubs.com or follow them on Instagram [@NourishingBubs](https://www.instagram.com/NourishingBubs)