Module 1: Nutrition

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General Nutrition and Growth

General nutrition and growth can be different for premature babies because they did not spend enough time in the womb. They often are born with health issues because certain parts of their bodies may not have had time to develop. It is best to learn as much as you can about your own baby's nutrition needs because each baby is unique.

Most likely, you will need to provide extra nutrients to your baby to make sure that your baby grows in the best possible way. In fact, premature babies are actually known to grow faster than full-term babies. However, you will need to be sensitive to your baby's feeding needs because preemies do not have fully developed digestive systems and they may have some issues.

In the hospital, you may have already met a neonatologist. This is a doctor that focuses on caring for premature babies and full-term babies who are sick.

Because premature babies are so small, their weight is measured in grams not pounds and ounces. To give you an idea, premature babies can be as small as 500 grams (1 pound, 1 ounce) and as large as 2500 grams (5.5 pounds) depending on when they were born.

Breastfeeding Your Baby

Breast milk is very important for babies. It is considered to be the more nutritious than formula with a lot of additional health benefits.

If physically possible, it is always best to breastfeed your baby. Here are just some of the many benefits:

- It provides nutrients for your baby
- Easier than formula for your baby to digest
- Helps you bond with your baby
- Some women even say that it helped them lose weight after the baby



Even though you gave birth early, it does not mean that you can't breastfeed. Some moms may have trouble starting to breastfeed their baby because of all the stress and fatigue from a premature birth. If this is a problem, your community healthcare worker or doctor can connect you with a lactation consultant that helps women with breastfeeding.

There are some women who cannot provide breast milk, or enough of it, for their babies. When this happens, doctors may recommend giving the baby formula to make sure that he is getting enough nutrients.

<u>Click here</u> to find out more information about breastfeeding and watch videos about other mothers' experiences

Extra Nutrients

Because your baby is premature, he might need some extra nutrition. Most premature babies receive some form of additional nutrition. Here are the most common supplements:

Fortifiers: When your baby is first born, your doctor may want you to add fortifiers to the breast milk that you give your baby. Fortifiers have lots of extra protein, vitamins, and minerals for your baby so they can grow stronger. Be sure not to forget them at feeding time!

Extra Vitamins and Minerals: Some babies may need some extra vitamins and minerals. For example, if you only give breast milk to your baby, they may need more vitamin D. This could be vitamin D alone or a multivitamin. Iron is an important mineral that your baby needs. This is because premature babies may not have enough iron stored in their body to help them grow.

For more information about extra nutrients, click here



Here are a few other things to keep in mind:

- You know your baby is full when he or she stops sucking. You will notice he or she become more relaxed and most likely sleepy.
- Newborns often eat a lot-usually every 2 to 3 hours.
- Talk to your doctor or community health worker about any problems you have with feeding.
- As your baby grows older, the amount of time between feeding will become longer like 4 to 5 hours.

Find out more about how much to feed and when:

- <u>Click here</u> for breastfeeding information
 <u>Click here</u> for formula-fed information



Feeding for Newborn: 0-5 Months Old

Within a few minutes of being born, babies will automatically look to get milk from their mother's breast or a bottle. Their mouths open wide when their lips touch the nipple. They also know how to suck and swallow.

Your baby's tummy is tiny. At birth, your baby's tummy can hold only about one or two teaspoons. At one week old, your baby's stomach expands to somewhere around two ounces — about the size of an almond.

At such a young age, babies should only have breast milk or infant formula-NO solid foods!

Reflux

Because premature babies don't have fully developed digestive systems, they may have trouble keeping their foods down. This is called reflux.

Here are some general things to know about this issue:

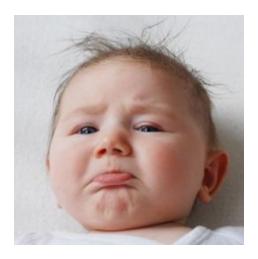
- The vomiting that happens with your premature baby can be very intense
- Reflux is more common among premature babies
- Reflux can sometimes cause a cough instead of vomiting
- If your baby has reflux, they may not want to feed at certain times or show discomfort

Tips on how to help reflux:

- Try to keep you baby sitting upright after feeding instead of laying them down
- Sometimes giving formula or breast milk in smaller amounts at a time can help. In this case, you would be feeding them more often
- You can also try burping them a few times during feeding

More Information:

- If your baby's reflux is severe, it can lead to feeding or eating difficulties, poor weight gain or chest infections.
- Most babies outgrow reflux in the first year of life
- When your baby starts eating solids around 5 to 6 months old, their reflux can improve a lot
- If you get worried about how often your baby is having reflux, it's always better to talk to your doctor or community healthcare worker to make sure that you don't need to have your baby take medicine for it



Knowing When to Introduce Solid Food

You should only be breastfeeding or giving formula to your baby until they are between 5 and 8 months old. You can then start introducing solid foods in small amounts. You should combine either breast milk or formula along with solid foods until your baby is 1 year old.

Remember that every baby is unique and it's best to talk to your doctor about any special things you should be doing for them.

If you ever worry that something is not right, you should always try to contact your doctor. Some common issues that should be shared with your doctor include your baby losing weight or having trouble starting to eat with solid foods and getting off of breast milk by age 1.



Your Baby's Food Between 5 and 6 months Old

As your baby gets older, it will be time to feed them solid food. Before you start, it's good to know the physical signs that your baby shows so you know when they are ready to eat solid foods. It's also important to know what your baby can eat and how much. Every baby is different so make sure to notice what is unique to your baby. Here are a few things to keep in mind:

Physical Signs Your Baby is Ready to Eat Solid Foods:

- Your baby will not longer push foods placed on their tongue away to the front of their mouth-this shows they are able to eat non-liquid food
- They may open their mouth or start drooling when they see food
- You will notice chewing and maybe even bringing hands to mouth
- They can start handling objects in their hands

Foods Your Baby Should Eat at this Age:

• Small amounts of bland cereals that are rich in iron like rice or oatmeal. It's best to stick with rice cereal in case your baby has an allergic reaction to gluten

How Much Can Your Baby Eat at this Age?

- When your baby first starts to eat solids, your baby should only eat a little bit. An example might be 1 tablespoon of cereal combined with 3 tablespoons of breast milk or infant formula once a day.
- Slowly, every few days, you can give your baby more of this cereal like 3 to 4 tablespoons mixed with breast milk or formula
- Depending on how your baby responds, you can eventually continue the cereal mixture twice a day

Your Baby's Food Between 6 and 8 Months Old

Just like when your baby first begins to eat solid foods, there will be other signs that they are able to eat more. There will also be different foods and the amount of solid food will change. Here are some things to keep in mind:

Physical Signs Your Baby Can Eat More:

- Your baby can sit up with some help and support from behind
- They can pick up foods and grasp them with their hands
- Your baby can feed themselves small pieces of food

Foods Your Baby Should Eat at this Age:

- Start with one food at a time to make sure there aren't any allergic reactions
- The food should be blended into a smooth soup-like mixture (pureed). You can do this with fruits and vegetables
- Any juice should not have any sugar added to them and mixed with water. AVOID citrus (orange) juices!
- Your baby should still be getting breast milk or formula. If you are breastfeeding, do not substitute it for formula. Breast milk is still very healthy for your baby

How Much Can Your Baby Eat at this Age?

- Start with only 1 tablespoon of a fruit or vegetable once a day
- As your baby gets used to food, you should slowly try to increase the number of meals that have solid food. Keep increasing until you are giving your baby some sort of solid food 3 times a day
- Do not give your baby more than 4 ounces of the juice and water mixture per day.



Your Baby's Food Between 8 and 10 Months Old

As your baby grows older, even more physical changes happen which also affects the type of food he or she can eat. Overall, there will be more variety in food and the amount of food will be larger. Here are some things to keep in mind:

More Physical Signs for Food Changes

- Your baby will start being able to hold the bottle
- Your baby can sit upright on their own without support
- Your baby can reach out and grab food
- Baby can hold spoon

Foods Your Baby Should Eat at this Age:

- When your baby gets into this age range, you can start introducing breads and cereals (watch for signs of allergies with bread and crackers)
- You can start giving your baby whole pieces of fruits and vegetables but they should be cooked well enough so your baby can chew them
- Other options are pureed or very small pieces of meat
- More diary like yogurt or cheese
- Cooked egg yolks you can try
- Mashed beans, peas, or lentils
- As with every age, your baby should still be having breastmilk or formula until at least 1 year of age

If you decide to give your baby canned fruits or vegetables, make sure that they are all natural and don't have added salt or sugar

How Much Can Your Baby Eat at this Age?

Your baby should be having small sizes (baby's hand) of different foods each day (about 1 teaspoon) for 3 solid meals a day. You can include a little bit (1 to 2 tablespoons) of meat each day.



Your Baby's Food Between 9 and 12 Months Old

Your baby will start to use spoon the right way between 9 and 12 months of age even though there may be some spilling

Foods Your Baby Should Eat at this Age:

- Each solid food meal should have iron-fortified cereal, a fruit or vegetable and some finger foods
- Your baby should still be getting breast milk and formula

How Much Can Your Baby Eat at this Age?

- You should try to give your baby different types of solid food on a regular basis. An example might be to have 1 tablespoon of each food group at each meal. This would be 1 tablespoon of grain, 1 of veggies, 1 of fruits, and 1 of either meats or beans.
- Your baby should be able to have 3 solid meals a day and each meal should be around the size of your baby's hand



Extra Tips for Feeding Your Baby Solid Foods

Use a spoon:

- This is a helpful tool for you and to also get your baby used to using utensils
- In the beginning you should only put small amounts in the spoon like less than half of a teaspoon of food per bite

Interact with your baby:

- Make sure you show your baby that they are doing the right thing when they are eating. You can do this by showing enthusiasm and being expressive. You can say "good job" and "yummy!" Make sure to smile and show a positive face.
- You can even show you eating the food. By showing your baby what to do, they are more likely to follow along with you

Make sure your baby is comfortable. Eating food should be an enjoyable experience for your baby to create lasting food habits. It's important that they be comfortable throughout the process.

- Try to find a place where you and baby can both be comfortable
- You can use a high chair if your baby is ready to sit on their own
- You can have your baby on your lap
- You can use a carrier or swing
- If your baby is not fully upright and straight, make sure your baby is supported enough not to choke



More Tips for Solid Foods

Introduce New Foods Slowly

This is important for both finding out allergies and helping your baby be more comfortable with new foods. Wait 4 to 5 days to introduce a new food. Wait a few days between new foods

Give the Right Size of Food to Your Baby

You want to make sure to give your baby the right amount of food at right times. Generally, when your baby reaches 6 to 8 months of age, you can start giving your baby 3 meals a day. Each meal should be no larger than their fist. You also want to offer all types of food like vegetables, fruits, and meats. But all should be cut in small pieces to prevent choking.

Notice When Your Baby is Full

- It's important to not give your baby more food than they need so they don't create a pattern of overeating throughout their childhood.
- Your baby will show you certain signs that they are full like turning away from the food or bottle
- Your baby may also try to lay back away from the food or bottle and start to get fussy if you try to force more food
- Your baby will have behavior signs of both underfeeding and overfeeding



Prevent Choking

Choking can be very scary for a parent and very dangerous for the baby. The best thing you can do is to try your best to prevent choking from happening at all. Keep all small objects away from your baby. Look around your living space and pick up anything that your baby might come across.

In addition to cleaning up around the house, here are some foods you should avoid feeding your baby:

- Large pieces of food that have not been cut -> all foods should be broken down into smaller pieces or mashed
- Peanut butter
- Popcorn
- Whole beans
- Raw vegetables
- Hot dog pieces
- Marshmallows
- Nuts
- Whole grapes
- Raisins
- Cherries
- Gum
- Hard candy

This list does not share all of the foods that can cause your baby to choke. Use your best judgment to know what to feed your baby. Even when your child gets older, children under 4 years old shouldn't be given whole foods that are round and firm.

It's also good to become familiar about what to do if you baby starts to choke. <u>Click</u> <u>here</u> to find out more information about the signs of choking and what you can do if it happens.

More Information About General Nutrition

March of Dimes is an organization that helps families with preemies and offers a lot of information about nutrition. Click here to visit their website.



The Baby Centre also helps parents understand nutrition and how it impacts their baby. Click here to learn more.



The US Department of Health and Human Services offers a comprehensive guide for breastfeeding. <u>Click here</u> to download a copy for yourself.

Great job! You're one step closer to finishing the CHECK Prematurity Online Program. Hopefully you now know more about general nutrition for your baby.

Now you can move onto the next topic and learn all about how your baby develops from month to month!

