How to Boost Your Child's Immune System

What you need to know to strengthen your child's health and prevent illness

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Introduction

Building a strong immune system right from the start can prevent many potential health problems. Not only can it reduce the number of colds, flu and other infections, but your children will more easily be able to recover from illness.

With a strong immune system, you can avoid antibiotics or other medications, and your children will be less likely to experience chronic issues such as asthma, allergies, and chronic ear infections.

Children are continually exposed to many different types of viruses such as colds and flu-like illnesses. They are also exposed to many forms of bacteria, all day every day. This can be healthy for the immune system, since immunity develops by being exposed to germs and dealing with illnesses. Recovering safely from childhood diseases helps to build immunity even stronger - so getting sick is not necessarily a bad thing. During an illness, you can help the immune system by boosting its ability to handle the disease rather than suppressing the symptoms with drugs.

Most Microbes (germs) are Beneficial

Microbes (germs) are everywhere in your children's environment, and there's no way to avoid most of them. But most microbes are not harmful; they are beneficial to health. In fact, the human body has a symbiotic relationship with the majority of microbes; it can't live without them! In addition to the bacteria that live on the things they encounter and touch every day, children have trillions of bacteria living inside their bodies and on their skin. These microbes are absolutely essential to children's immunity, development and health.

Although the vast majority of microbes are beneficial, some can cause harm when they multiply - ranging from minor infections to serious diseases. Bacteria, viruses, or any microbes that can cause harm to the body are called pathogens. Healthy people with strong immunity can have pathogens at low levels in the body and still remain healthy. It is when the pathogens multiply into greater numbers where trouble begins and they become infections. The immune system's main job is to keep the body in a constant state of balance between the good, beneficial microbes and the pathogens, and to prevent the pathogens from developing into infections.

Many people talk about a cold or a flu “going around” as if it were making the rounds infecting every child in its path. This is never the case. Exposure to viruses or other pathogens does not mean your child will get sick. The reality is that out of all the children exposed to the virus, only a portion of these
children will get sick to some degree, and others will not get the disease at all. Susceptibility, not exposure, determines whether a person becomes sick.

There is much more going on behind the scenes in your child’s body. The internal environment of the body determines whether a child will be susceptible to colds, flu or any other illness. Pathogens can lead to illness when the body is out of balance and immunity is weakened.

It is the strength of the immune system and overall health of the body and mind that determines frequency and severity of illness. A child with a weakened immune system will be more susceptible or vulnerable to frequent colds and flu, or more serious illnesses.

Don’t worry if your child occasionally gets sick, since that’s a normal process of immune development. The stronger the immune system, the easier it is to recover from the illness. And you'll usually find that after an illness your child seems stronger and more healthy.

In the following chapters, you will learn what it takes to build a strong immune system and keep your children healthy.
**How Immunity Develops**

Nature has a great plan for developing immunity from birth.

At birth, a baby's immunity is immature and undeveloped. In the first few months of life, babies depend on their mothers' antibodies, the immune-building components of breast milk, and the beneficial bacteria in their digestive tract. Several extremely important processes happen during pregnancy and right after birth that can jumpstart the building of the immune system. Without these factors, immunity may be jeopardized.

**Healthy Pregnancy**

Since a newborn's immunity depends on the mother, what mom ingests during pregnancy is very important. First, moms must have a healthy diet of nutrient-dense foods to nourish growing babies and make sufficiently healthy breast milk.

Supplementing with Vitamin D3 and essential fatty acids (EPA and DHA) during pregnancy is important, in addition to probiotics, since mothers need to have a good balance of beneficial gut flora to pass along to their babies. (you'll learn more about these supplements later in this e-book)

**Mother's Antibodies**

Mothers pass their antibodies on to their babies through the placenta during the last three months of pregnancy. These antibodies are cells that can protect babies against certain diseases. Maternal antibodies are temporary and will gradually diminish over a few months, while baby's own immunity is developing.

**Beneficial Microbes from Mother**

A very important process during and right after birth is the population of beneficial bacteria in the baby's digestive tract from the mother's birth canal and surrounding environment. This is one of the reasons why it's important to have a vaginal birth and avoid a C section, if at all possible. Your baby's digestive tract relies on exposure to beneficial bacteria and other healthy microbes during and after birth. A healthy balance of intestinal flora is important for digestion and absorption of food and for strong immunity. Without it, chronic health problems can arise. The birth canal is rich with beneficial bacteria that come mainly from the mother’s digestive tract. Mothers need to have healthy intestinal flora during pregnancy for optimal transfer to baby.
**Colostrum Immediately after Birth**

The milk produced during the first 48 hours after birth is called colostrum. Colostrum is thick, yellow-white milk that is rich in nutrients and potent immune factors, including antibodies. Colostrum is essential to jump-starting the immune system, so it's very important that your baby be allowed on the breast directly after birth to obtain colostrum and begin the flow of breast milk.

**Extended Breastfeeding**

Around 7-10 days after birth, colostrum ends and regular breast milk begins to flow. Breast milk continues to activate and stimulate the immune system. It contains many substances that help build immunity, such as antibodies, antibacterial enzymes, and sugar molecules that feed beneficial bacteria in order to prevent harmful bacteria from multiplying and causing infections. Breast milk contains both probiotics and prebiotics, which are essential to immunity. Babies who are breastfed also get beneficial bacteria from the mother's breast and skin.

Numerous studies show that breastfed babies are much less likely to develop infections than babies who are given formula. In addition, breastfed babies develop a healthier balance of intestinal flora than babies who are bottle-fed. No matter what manufacturers add to improve commercial formula, it will never come close to breast milk, since formula will always lack the natural immune factors contained only in breast milk.

The positive effects of breast milk on immunity are long-term. Immune protection continues throughout the duration of breastfeeding. The longer babies are breastfed, the stronger their immune system. Long-term breastfeeding and natural weaning (letting your child decide when to wean) is among the healthiest practices to provide strong immunity. This enhanced immune protection remains for years after breastfeeding is discontinued.

When children are breastfed into the toddler and preschool years (even if only once a day), their immunity continues to grow stronger. This is not only due to the immune factors in breast milk. Breastfeeding has very strong emotional benefits, and this healthy emotional connection between mother and child is also a potent immunity builder.
Digestive Tract is Key to Immunity

The key to healthy immunity is a healthy gastrointestinal tract, commonly called the gut. There are trillions of beneficial microbes in the gut, including bacteria, fungi and viruses. In addition to helping digest food and making key nutrients, these beneficial microbes, or gut flora, profoundly affect the function and strength of the immune system. In fact, 70-80% of immune function happens in the gut.

Gut flora has many purposes in the body. The most important, where immunity is concerned, is preventing the growth of harmful pathogens. One of the ways the good bacteria do this is by competing with harmful bacteria for food and space. When there are low levels of beneficial bacteria, there's an opportunity for the pathogens to take over and grow into infections.

In addition, the good bacteria help prevent the immune system from overreacting to non-harmful substances; thereby preventing allergies. Children who have allergies have a different makeup of gut flora from those who don't have allergies. Optimizing the gut flora with probiotics has been shown to prevent allergies.

Plenty of good bacteria and healthy, balanced gut flora is critical to immunity and has a profound effect on your children's health and development. There are many factors that can compromise and alter the balance of gut flora throughout childhood and contribute to sickness, and well as asthma, allergies, obesity, autoimmune diseases, and other chronic problems.

Optimizing Gut Flora

Optimizing your children's gut flora is not that difficult, once you know what to avoid and how to replenish and maintain beneficial microbes.

What to Avoid:

Processed Foods and Sugar

Bad bacteria thrive on sugar and starches, and there's a lot of starch and added sugar in processed food. Visit the Healthy Child Blog for more information on avoiding processed food and sugar and providing a healthy diet.

Antibiotics

Antibiotics do not discriminate; they will kill both the good and the bad bacteria and disrupt the balance of gut flora. Babies given antibiotics in their first year tend to have higher rates of asthma, and children who take frequent rounds of antibiotics are prone to further infections. Using antibiotics for minor infections is unnecessary and can create more frequent infections. But there are some bacterial infections that can be serious and require antibiotics. If you must use antibiotics, be sure to replace the beneficial bacteria by giving your child probiotics or fermented foods.
Antibacterial Soaps, Cleansers, Hand Sanitizers and Wipes

If you use these products frequently, you may be destroying the good with the bad. The skin is loaded with good bacteria necessary to immunity, and using antibacterial wipes and sanitizers could inadvertently disrupt the development of immunity by depleting the good bugs. Additionally, using antibacterial household products might lead to strains of bacteria resistant to antibiotics. This means more powerful bugs that antibiotics are no longer able to deal with.

Products that can be infused with antibacterial chemicals include furniture, mattresses, toys, plastic kitchen tools, cutting boards, highchairs, and bedding. None of this is necessary and could be harmful to health.

There’s no evidence that antibacterial products provide any health benefits. They have no effect on viruses such as cold or flu, and there’s no evidence that using antibacterial soaps or wipes are any better than simply washing hands with normal soap and water.

Two chlorinated antimicrobials - Triclosan and Triclocarban - are the most commonly used, and are associated with endocrine, thyroid, and reproductive changes. These chemicals are absorbed into the body, and also washed down the drain, into lakes, rivers and water supplies.

Dr. Stuart B. Levy, of the Tufts University School of Medicine, warns about antibacterial household products:

“The recent entry of products containing antibacterial agents into healthy households has escalated from a few dozen products in the mid-1990s to more than 700 today. Antibacterial products were developed and have been successfully used to prevent transmission of disease-causing microorganisms among patients, particularly in hospitals. They are now being added to products used in healthy households, even though an added health benefit has not been demonstrated. Scientists are concerned that the antibacterial agents will select bacteria resistant to them and cross-resistant to antibiotics. Moreover, if they alter a person’s microflora, they may negatively affect the normal maturation of the T helper cell response of the immune system to commensal flora antigens; this change could lead to a greater chance of allergies in children. As with antibiotics, prudent use of these products is urged. Their designated purpose is to protect vulnerable patients.”

The following report from the National Coalition Against the Misuse of Pesticides goes into detail about common antibacterial agents in hundreds of consumer products. There’s a list of products containing these chemicals. The report also provides alternatives and the proper way to wash hands.
View the report here:

The Ubiquitous Triclosan: A common antibacterial agent exposed

You don’t have to try to kill the germs, just wash them away with nontoxic soap and water. This is the best way to prevent exposure while keeping your children’s environment healthy.
How to Replenish and Maintain Healthy Gut Flora:

It's important to eat a healthy diet with whole foods that are rich in fiber.

Prebiotics

Beneficial microbes (probiotics) thrive on nutrients called prebiotics, which are plentiful in a high-fiber, plant-based diet. Prebiotics are non-digestible food ingredients that help to increase immunity by stimulating the activity of beneficial bacteria. Here are some foods that are exceptionally high in prebiotics:

- Jerusalem Artichoke
- Dandelion Root
- Radicchio
- Frisee
- Endive
- Onions
- Leeks
- Asparagus
- Chicory
- Jicama
- Garlic

Probiotics

To optimize your children's gut flora, you can give them probiotics. Probiotics are the live, beneficial bacteria and other microbes that are needed in the gut to maintain immunity. Probiotics can be given through supplementation or by adding certain fermented foods to the diet.

Fermented Foods

Fermented foods are fairly easy to make and can be more cost-effective than buying supplements. You can also buy certain non-pasteurized, fermented foods in health foods stores. Non-pasteurized is important since pasteurization heats the product to high temperatures that will kill the good bacteria, cancelling out the probiotic benefits. Fermenting foods also improve digestion by breaking down the food into a more easily digestible form. Fermented foods keep for a long time without losing the nutrients.

Here are some foods that contain probiotics that you can make on your own:

- **Yogurt Made from Raw (non-pasteurized) Grass-fed Milk**
  
  If you don't want to make your own yogurt, you can buy whole fat, organic yogurt made from raw, grass-fed milk. Contact your local [Weston A. Price Foundation Chapter](#) if you can't find this
in stores. The commercial yogurt you find in most grocery stores is pasteurized and contains sugar. It typically does not contain enough live probiotics.

- Kefir
- Fermented Vegetables
- Pickled foods
- Homemade Sauerkraut
- Kombucha
- Natto
- Miso

Here is a great resource for learning to make your own fermented foods, purchasing live starter cultures and other equipment:

www.culturesforhealth.com

**Probiotic Supplements**

There are many probiotic supplements on the market that you can buy in health food stores, online, and from health practitioners. Probiotic supplements are considered safe to give to babies and children. They are available in powders, capsules, and liquids.

It's important that the probiotic supplement you use contains multiple strains and has adequate numbers of colony forming units (CFUs). 10-30 billion CFUs per day are recommended amounts for babies and children. The number of CFUs in a probiotic supplement can vary a lot between brands. Quality is a big issue and many preparations don't contain the number of viable CFUs claimed on the label. Probiotic supplements need to stay alive during processing and shelf life, and they are sensitive to oxygen, moisture and heat. Most probiotic supplements should be kept refrigerated. They must also survive stomach acid and digestion in order to colonize in the digestive tract and remain viable to do what they need to do.

Here are some good probiotics:

- Klaire Labs Ther-Biotic Children’s Chewable
- Klaire Labs Ther-Biotic Infant Formula
- UltraFlora Children's Chewable by Metagenics
- Orthobiotic powder by OrthoMolecular
Foods for Healthy Immunity

Optimal nutrition is essential to building and maintaining a healthy immune system. Your child needs whole food sources of vitamins, minerals, antioxidants, enzymes, amino acids, and other nutrients. Processed foods, sugar, and soda can weaken the immune system.

Whole foods nourish and cleanse the body while activating and supporting the immune system. It is important to buy organic foods as often as possible since conventionally grown foods contain pesticides that can damage the immune and nervous systems and are not as nutritious as foods grown organically in mineral-rich soils.

Sugar – The Immunity Destroyer

Sugar has been shown in studies to suppress the immune system and contribute to a weakened defense against infections. Refined sugar provides children with no nutritional benefits, and it actually robs the body of essential nutrients.

Nancy Appleton writes in Lick the Sugar Habit, “Refined sugar, as tempting as it may be in all those cakes, candies, and cups of coffee, is, in fact, more of a pharmaceutical drug than it is a nurturing food. The minerals needed to digest sugar - chromium, manganese, cobalt, copper, zinc, and magnesium - have been stripped from the sugar during the refining process. This, in turn, forces the body to deplete its own mineral reserves to process the sugar.”

Commercial Fruit Juice

Commercial fruit juice is not a whole food and adds little nutritional value to the diet. Juicing removes the fiber, and unless the juice is freshly squeezed and consumed immediately, most of the nutrients are lost. Without the fruit’s fiber, juice sends a rapid burst of fructose (sugar) into the blood stream. Commercial canned, boxed, or bottled juices are mostly sugar (even if you buy unsweetened, pure juice) and could contain a lot of pesticides. Regularly drinking a lot of juice can lead to chronic nasal congestion, blood sugar problems, yeast infections, and throat or ear infections. Rather than providing your children fruit juice, give them with the whole fruit.

Antioxidants Provide Immune Protection

Antioxidants are compounds in foods that prevent or repair cell damage caused by environmental pollution and normal body processes. The antioxidant defense system includes vitamins A, C, and E and the minerals zinc, copper, manganese, sulfur, and selenium. It is best to obtain these vitamins and
minerals from food. Many antioxidants have been discovered in fruits and vegetables, which should be a large part of your child’s diet. Antioxidants work together in a synergistic way, so eating a variety of whole foods is the best way to get adequate and balanced amounts.

**Best food sources of antioxidants:**

These four fruits are considered to have the highest "total antioxidant capacity" of any food, according to a study published in the Journal of Agricultural and Food Chemistry:

Blackberries, Blueberries, Strawberries, and Plums

However, all fruits have some antioxidant properties, so it’s good to provide a variety of fruits.

**Vitamin A**

Vitamin A deficiency is associated with impaired immunity and increased risk of infections. A study by the National Institutes of Health discovered that a single virus infection depletes the vitamin A levels of healthy children for several months. So while dealing with an infection, it’s a good idea to supplement with vitamin A or provide foods rich in vitamin A.

Eggs, liver, fish, and butter are rich in vitamin A. Cod liver oil can also contain vitamin A. The vitamin A that comes from these animal foods is ready to be used by the body.

Carrots, spinach, apricots, sweet potatoes, winter squash, red peppers, cantaloupe, pumpkin, broccoli, and dark green leafy vegetables contain the precursor carotenes and carotenoids that can be converted by the body to active vitamin A. Zinc, iron, and vitamin E, as well as fats, are needed for this conversion.

Conversion of carotenes to vitamin A is not very efficient in children. On average, one-third of the carotenes in fruits and vegetables are converted into vitamin A. Less than one-fourth of the carotenes in carrots and other root vegetables is converted, and about one-half in leafy green vegetables is converted. So unless your child is eating a lot of fruits and vegetables with the precursor carotenes, they will need the animal foods that are rich in vitamin A.

**Vitamin C**

Vitamin C is well-known for its ability to prevent disease. The best sources of the vitamin C complex are rose hips, acerola berries, citrus fruits, tomatoes, strawberries, bell peppers, pineapple, guava, black currant, cabbage, turnip greens, broccoli, cantaloupe, kale, papayas, cauliflower, spinach, and cranberries.

The vast majority of vitamin C supplements on the market are synthetic and do not contain the natural bioflavanoids and co-factors necessary for an optimal nutritional effect. Most synthetic vitamin C (ascorbic acid) is made from GMO corn. If you need to supplement, a whole food supplement that contains vitamin C from food sources would be a much better choice. If you use a synthetic vitamin C supplement, it’s important to also supplement with bioflavanoids and provide fresh whole fruits (or mix the C powder in a fruit smoothie).
**Vitamin E**

Expeller-expressed wheat germ oil is an excellent source of natural vitamin E. Oatmeal and other whole grains, broccoli, sweet potatoes, alfalfa, sunflower seeds, hazelnuts, almonds, rose hips, lima beans, avocado, liver, egg yolks, and butter all contain vitamin E.

**Zinc**

Studies show that children with recurrent infections have lower blood levels of zinc and iron. Zinc is found in wheat germ, crabmeat, oysters, clams, liver, other meats, egg yolks, pumpkin seeds, sunflower seeds, sesame seeds, torula and Brewer’s yeast, peanuts, and almonds.

Liver is an excellent immune builder! It’s a great source of zinc, vitamin A, and other antioxidants, as well as iron. One ounce of beef or calf liver provides 10,000 units of vitamin A, 1 mg. of zinc, and 3 mg. of iron. All beef, but liver especially, should come from cattle raised organically and grass-fed, with no feed laced with hormones or antibiotics.

**Copper, Manganese, Selenium, and Sulfur**

Copper is obtained from fish, sesame seeds, and kidney beans. Sources of manganese are brown rice, oatmeal, split peas, almonds, peanuts, hazelnuts, pecans, walnuts, and blackberries. Sulfur is found in fish and other protein-rich foods, including meat and eggs.

Selenium produces an enzyme that helps the body use glutathione efficiently, and also enhances the effectiveness of vitamin E. Low selenium is linked to lowered immunity. You’ll find selenium in onions, garlic, broccoli, and the vitamin E foods listed above as well as in fish and shellfish.
Bone Broth

Grandma used to say that chicken soup is good for whatever ails you, and she was right. Soups made from gelatin-rich bone broths made in the traditional way are nourishing, healing, and immune-building.

The minerals and amino acids from bone, cartilage, marrow and vegetables provide many health benefits. Bone broth can strengthen the immune system, inhibit cold and flu viruses, and reduce inflammation and joint pain. It’s also very helpful for digestion and can help heal the mucosal lining of the digestive tract (leaky gut) and other digestive issues. And finally, it’s great for your skin, hair and nails due to its high collagen content.

Making bone broth (stock) is easier than you might think and also inexpensive. It’s a great liquid to have on hand to nourish a sick child, even when there is no appetite. The warm liquid is calm and soothing to the stomach, provides minerals and electrolytes, and is the best healing remedy you can provide.

If you are wondering – the terms broth and stock are interchangeable – they mean the same thing.

Make Your Own Bone Broth

The following recipe is adapted from Nourishing Traditions by Sally Fallon:

Ingredients

1 whole turkey carcass  – or – 1 whole free-range chicken cut up  – or – 2 to 3 lbs bones

2-6 chicken feet (optional)

4 quarts cold water

2 tablespoons apple cider vinegar

1 large onion

2 peeled carrots

3 celery stalks

1 bunch parsley

Directions

Place the carcass, bones or whole chicken (and feet) in a large stock pot with the cold water and add the vinegar. The vinegar is important, since it helps to leach the minerals out of the bones into the water. Let it sit for about a half hour.
Coarsely chop all the vegetables, except the parsley, and add to stock pot. Bring to a boil and remove the scum that rises to the top. You may need to remove the scum a few times; there will be more of it (hormone residues and other impurities) if not using pasture-raised poultry.

Reduce heat, cover and simmer on low for 12 to 24 hours. If using a whole chicken, you can remove the meat after it separates from the bone (about 1-2 hours) and use this meat for other purposes. Then continue to simmer the bones and veggies for the remaining time. The longer it cooks, the better. About 10 minutes before turning off the heat, add the parsley. This gives it additional minerals.

With a slotted spoon, remove the large pieces of bone, meat and skin. Strain the broth into a large bowl to remove all the pieces of bones and vegetables. After cooling, put the liquid into containers in fridge or freezer. You can store broth in the fridge for up to 5 days.

The bones should make your stock into a gelatin consistency. It should thicken (preferably gel completely) when chilled. If you find your stock is not turning to gel, you may want to think about adding chicken feet next time, or break the bones with a mallet or knife to release more marrow into the broth. Or try using less water.

When making bone broth, make sure you use high quality bones from pastured chickens or turkey, grass fed cows or wild caught fish. The animals need to be healthy in order for their bones to have healthy substances without hormones or other impurities.

You can use your bone broth to make soups, gravy, stews, sauces, etc. But the best way to get all the nourishment and healing is to simply drink it every day as a healthy, warm drink. You can add salt, crushed garlic, and natural spices for flavoring. During the fall and winter months, you can give your children bone broth to drink every day to keep them healthy.

As you can see, providing a diet high in antioxidants and other nutrients is essential to building and maintaining healthy immunity. Healthy Child’s e-book on Healthy Whole Foods and Nutrition has comprehensive information on feeding your kids a healthy diet and getting them to love to eat healthy.
Immune System Supplements

In addition to a healthy diet, there are a few supplements that are important:

**Vitamin D**

Vitamin D is extremely important to your child’s health, and it’s impossible to get enough from food alone. Unfortunately, many children and adults are vitamin D deficient. If your child is not getting a sufficient amount of daily sun exposure (without sunscreen), vitamin D needs to be supplemented.

A high blood level of vitamin D enhances immunity and prevents many diseases. According to the Vitamin D Council, a level of at least 50 ng/ml and below 100 ng/ml is a good level to aim for to lower the risk of colds, flu, and many other diseases. A simple blood test can check the vitamin D level.

Scientists have discovered that Vitamin D is crucial to activating the immune response. Without sufficient levels of vitamin D, the killer cells of the immune system – T cells – are not able to fight off serious infections. Vitamin D helps produce natural antibiotics called antimicrobial peptides. Production of these antimicrobial peptides goes down when vitamin D levels are insufficient, and this lowers immunity to diseases.

A randomized, double-blind, placebo controlled trial of school children shows vitamin D prevents the flu. They also found that asthmatic children on placebo had six times more asthma attacks than did children on vitamin D.

**What’s a sufficient amount of sun exposure to get enough vitamin D?**

This depends upon the time of day, time of year, your skin color, and where you live. It could be just 15 minutes if you are fair-skinned or a couple of hours if you have very dark skin. You need to expose a large portion of your skin (not just arms and face) for around half the time it takes for your skin to turn pink and begin to burn. Frequent and moderate sun exposure is healthy, but overexposure and sunburn can cause skin damage and cancer. Avoid sunburn, as this is dangerous and painful.

**Vitamin D Supplements**

If your children are not getting enough sun exposure, the Vitamin D Council recommends that infants take 1,000 IU of vitamin D per day. Studies have confirmed that this level is safe for infants. Older children can take 1,000 IU per 25 pounds (11 kg) of body weight.

Cholecalciferol (vitamin D3) is the naturally occurring form of vitamin D and is the only safe form to supplement. Do not use vitamin D2 Ergocalciferol or any other form. Fortunately, it’s very is easy to give vitamin D3 to children via cod liver oil or supplemental drops.
How much Vitamin D is too much?

Vitamin D toxicity can happen if you take 40,000 IU a day for a couple of months or longer. The Vitamin D Council recommendations are well below this level so you don't need to worry about toxicity with these doses. However, when you are giving the drops to your children, make sure you read the label so you know how much is in one drop. Some vitamin D supplements have 5,000 IU or more per drop and there are also 50,000 IU caps available, so pay attention to the amounts in the supplements you use.

For more information and research on vitamin D

http://www.vitamindcouncil.org

Probiotics

Probiotics are a crucial element of healthy immunity. See the chapter: Digestive Tract is Key to Immunity to get more information on probiotics via supplements or fermented foods.

Omega-3 Essential Fatty Acids

In addition to proper brain development and neurological function, essential fatty acids (EFAs) are very important to immune function. They are called essential because we need them to be healthy and our bodies cannot make them. They must be supplied by the diet or by supplementation.

There are several types of EFAs:

Omega-6 is found in evening primrose oil, borage oil, black currant oil, safflower, sunflower, corn, canola, soybean, and cottonseed oils (poly-unsaturated vegetable oils). Most people get too much of these oils since they are in a lot of salad dressings and processed foods.

Another type of EFA is omega-3. Most children (and adults) are deficient in the omega-3 fatty acids, which are more difficult to obtain from diet. Cod liver oil and other fish oils are rich in omega-3 EFAs.

An excess of omega-6 fats and not enough omega-3 fats can create an imbalance, contributing to many health problems, including depressed immune system function.

Children need between 400-500 mg. of omega 3 Fats (both EPA and DHA) in the form of fish oil. Breastfeeding transfers omega-3 fats to your baby, so if you are taking adequate omega-3 fats and exclusively breastfeeding, your baby does not need to be supplemented.
Other Supplements

Here are some other supplements that are great for boosting immunity:

Astragalus

Astragalus root is an herb that boosts immune function and protects the body from stress. It's used to prevent colds and flu and to restore immune strength once an illness is over. Astragalus is known to reduce the frequency and duration of colds and flu by boosting the immune system rather than by directly killing the viruses. It is safe for long-term use and can be taken consistently throughout the cold and flu season.

Astragalus can be taken as an extract, or you can make a tea from the root. Sliced, dried astragalus root looks like a wooden tongue depressor. To make a tea, simmer 6 slices in 3 cups of water for 1 hour and then strain. You can serve this tea alone or mix it with chamomile tea. You can also add the “tongue depressors” directly to your soup, stew, or rice pot and let it cook into the dish. Discard the astragalus before serving. It does not change the taste of the dish and your family can receive the immune boosting properties directly from their food. Astragalus is sometimes available in a dried, shredded form. For tea, simmer 3 tablespoons of shredded astragalus and 3 cups of water in a covered pot for 30 minutes and strain.

Elderberry (Sambucus Nigra)

Elderberry is an herb that is loaded with antioxidants, including vitamin C. It stimulates the immune system and has anti-viral, anti-bacterial, and anti-inflammatory properties. It boosts immune cytokines at the time of illness in order to fight it off faster. Elderberry has been studied extensively and is safe for children.

Many people take elderberry every day during cold and flu season, and a teaspoon a day is fine for this. My suggestion is to only take it when needed. It's great for when immunity seems to be weakened. The best time to take it is at the very first sign of a cold or flu or if you believe you or your child has been exposed to something. The trick is to catch it as soon as you know something is going on. That's when you can give it in frequent doses for several days.

At first sign of illness:

children under 6: 1 teaspoon 4 x a day for 3-5 days as needed

older children and adults: 1 tablespoon 4 x a day for 3-5 days as needed

Since elderberry works best at the first sign of illness, it's crucial to always have it on hand.

Elderberry syrup is a popular way to take elderberry since kids love the sweet taste. Raw, unfiltered honey is the best way to sweeten it. Here's a recipe to make elderberry syrup yourself:

http://holisticsquid.com/elderberry-syrup-recipe/
Hint: since most kids love elderberry syrup, you can use it as a mixer or a chaser for herbs or supplements they don't normally like to take.

You can also buy elderberry extract (suggested brands):

**ImmunoBerry Liquid by Designs for Health** (an excellent immune booster containing elderberry combined with astragalus and medicinal mushrooms)

**Organic Sambucus for Kids** by Nature's Way

**Gaia** makes a black elderberry syrup for kids and also black elderberry capsules

**Raw Garlic**

Garlic is one of the most effective antimicrobial plants available. It works to stimulate the immune system and directly destroys pathogenic bacteria, viruses, fungi, tumors, and parasites. The great thing about garlic is that it eliminates the pathogenic bugs (the bad guys), while allowing the development of the beneficial bacteria (the good guys).

Garlic is safe to use long-term and frequently. Use as much fresh garlic as you can get your children to eat - for stimulating immunity and for treating disease. The garlic must be fresh and raw. Drying and cooking garlic leads to the loss of a large portion of the active antimicrobial constituents. The immune stimulating and disease fighting compounds are released with juicing, crushing or chewing of the raw garlic, so swallowing a whole clove is not as effective. Garlic pills or capsules are not as effective when it comes to antimicrobial activity.

The big challenge is to get your kids to eat raw garlic. Here are some suggestions:

You can juice or crush a clove of raw garlic and add it to other more palatable fresh juices or foods. You can crush it through a garlic press, then add it to mashed potatoes, soups (at the last minute) or your child’s favorite food. Another trick is to crush it and stir it into softened butter as a spread for rice, potatoes, bread, or anything you want to spread it on. Fresh, pressed garlic can be added to salad dressings and many other dishes. You can also use garlic oil for ear aches.

A potent remedy is to mix crushed raw garlic with some apple cider vinegar and raw honey. A tablespoon of this several times a day can go a long way in preventing illness.

Or if you're really adventurous, chew a piece of raw garlic clove prior to swallowing with a little juice or water. I know, that's really hard to do, but remember the chewing releases the immune compounds. You can chew the garlic with almonds or other nuts to mask the taste. It's best not to do this on an empty stomach.
Garlic has no toxic effects, even in large doses, although some people may have sensitivities to garlic. It may cause heartburn or flatulence in a few people, and of course the odor can be a real drawback. Chewing on fresh parsley helps to relieve the odor of garlic on your breath.

**Medicinal Mushrooms - Reishi or Shiitake**

Reishi and shiitake mushrooms have antibacterial, antiviral, and antifungal properties, and they are effective immune boosters. You can add these mushrooms to your child's diet, however the mushroom extracts seem to be more effective.

I'm only referring to reishi and shiitake mushrooms. The common button or white mushrooms probably don't have much health benefit. It's important to buy only organically grown mushrooms since they absorb and concentrate whatever they grow in, including soil, air and water pollutants.

Most people can tolerate mushrooms, but digestive stress or allergic reactions can occur. So be cautious with a mushroom extract supplement or adding a lot of mushrooms to your child's diet. However, if your child can easily tolerate them, reishi or shiitake mushrooms are a safe and effective way to enhance their immunity.

**Coconut Oil**

Coconut oil has antioxidant properties and is also an antimicrobial, antibacterial, and antifungal. The lauric acid in coconut oil can help increase immunity. It's a great food and can be used in cooking and in smoothies.

**Colostrum**

Remember how powerful colostrum is in building healthy immunity in a newborn? If your child needs additional help in boosting immunity, a bovine colostrum supplement that supplies lactoferrin and immunoglobulins can be helpful. Bovine means it comes from cows so be cautious if there's any milk allergy concerns. The colostrum should come from grass-fed cows.
Chronic Stress Affects Immunity

Stress is a big factor in the cause of many diseases. Everyone experiences stress, and a certain level of stress is a healthy, normal part of life. It's when the stress becomes unmanageable or chronic that health begins to deteriorate. Chronic stress, if not well-managed, can produce a continual flow of hormones and other physiological substances that can suppress or over-stimulate the immune system.

Common Stressors in Children

Children experience stress when they become overwhelmed or they perceive something that threatens their sense of security. It's important to be aware of things that can cause stress in your children so you can take steps to reduce the impact. Some situations can't be avoided, but it's important to recognize when children are having difficulty and support and teach them effective ways to deal with it. Life gets difficult sometimes, so go easy on yourself, let go of guilt or self-blame, take deep breaths, and do the best you can to reduce your own stress.

Here are some common stressors in children:

- Big life changes (divorce, loss of a pet, death of family member or friend, moving, birth of sibling)
- Overstimulation
- Lack of attention from a parent or caregiver
- Separation from parents
- Excessive noise levels
- School pressure
- Social pressure (trying to fit in)
- Excessive parental demands
- Sensitivity to parents' anxiety and stress
- Too many activities - overscheduled
- News events - disturbing images on TV
- Violent or scary movies or video games
Recognizing Signs of Stress

Here are some common signs and symptoms that could be an indication of stress:

- Behavior or temperament changes (acting out, bedwetting, nail biting, mood swings)
- Physical ailments (headaches, stomach aches, frequent colds and infections)
- Problems sleeping or nightmares
- Lack of concentration
- Not wanting to go to school
- Trouble in school
- Withdrawal from usual activities

Reducing Stress

Here are important ways to reduce emotional stress and promote strong immunity and good health:

Make Time to Listen

The most important thing you can do is to make time for your children every day. Make yourself available. Let them know you are there to listen. Let them know they are important and encourage them to express their feelings in a healthy way. Sitting together at dinner, making time to read and/or walk together creates the space for them to share.

Manage Your Own Stress

Be aware of and manage your own stress. Children are sensitive to parent anxiety, and they may hear you talking about your troubles and worries. If you are dealing with a lot of stress, do what you need to do to take care of yourself. Children pick up on parents' emotions and may take on the worry themselves.

Provide a Nurturing Environment

A daily period of quiet, focused relaxation can relieve anxiety and stress. Provide your children with some quiet downtime during the day. You can make your home a sanctuary from the outside world by creating a safe, calm and peaceful atmosphere.

Nurturing touch stimulates the immune system. Providing lots of cuddle time and giving regular massages to babies and children of all ages can relieve stress and anxiety. You can learn to do baby

Babies and toddlers need to be breastfed, held, carried, rocked and cuddled on a continual basis. You can reduce a lot of stress in your baby or toddler by frequent breastfeeding. In addition to the tremendous immune-building effects of breast milk, the comfort children receive from nursing can ease the sometimes stressful situation of being a little person in a big world.

Children can be taught to practice yoga and meditation. Meditation is a valuable tool that kids can learn to help them to relax and become more aware of their feelings. Deep breathing is also important. Children can be guided to take deep breaths when they are stressed.

Imagery or guided visualization is a fun and powerful technique that allows children to use their imagination to influence their health. They can use guided imagery to calm themselves down, relieve pain, promote healing, and increase immunity.

**Provide Opportunities for Fun and Laughter**

The opposite of stress is joy, fun, and laughter. Find ways to incorporate lots of play and fun into your daily family life. Laughter and positive thoughts and feelings stimulate the cells of the immune system. The more children laugh and enjoy life, the better their immune function. Laughter is contagious. One thing you might want to try is to simply begin laughing for no reason. Or do something silly that will surprise your kids in a delightful way. It's amazing how fast everyone around you will break into pure, uncontrollable belly laughs. You may even be able to find a laughter yoga group in your area ([www.laughteryoga.org](http://www.laughteryoga.org)).

**Exercise and Fresh Air**

Plenty of fresh air and exercise can make a big difference in the health of your children. Exercise relieves stress and stimulates the immune system. Limit television and video games and encourage your children to get involved in sports that they enjoy, and other activities in which they can move their bodies while having fun. Go for walks, play
in the woods and let your children climb, jump, run, and dance. Let them hug trees and run barefoot in the grass. Mother Nature can be an excellent immune stimulator.

**Sleep is Essential**

Plenty of sleep is also essential to a healthy immune system. Your child’s body regenerates and renews itself while sleeping. Older children, especially teens, are likely to be sleep-deprived, and this can be a big factor in a depleted immune system.
Environmental Toxins

Frequent exposure to toxic chemicals may compromise the immune system and increase the risk of infectious disease. Infants and small children are especially vulnerable because they absorb substances faster and have more difficulty eliminating them.

Environmental toxins are everywhere, but there is a lot you can do to avoid unnecessary exposures and reduce the overall amount of chemicals your children take into their bodies. There are non-toxic alternatives to lawn and garden pesticides, household cleaners, toys, personal care products, mattresses, furniture and other toxic products. In addition, buying organic foods will greatly decrease your child's overall exposure to pesticides.

Visit the Healthy Child Blog for more information on reducing chemical exposures in your home.

If your child is frequently sick or has a chronic illness, see this article on how chemicals or allergens in your child's environment may be causing symptoms: Allergies and Environmental Illness
Checklist for Building Healthy Immunity

Here’s a checklist of steps you can take to strengthen your child’s immunity:

- Ensure that your diet during pregnancy is a healthy diet of organic whole foods.
- Consider supplementing with EFAs, vitamin D3 and probiotics while pregnant.
- Reduce your own emotional stress while pregnant. Send loving thoughts and nurturing touch to your baby while in the womb.
- Avoid environmental toxins while pregnant.
- Put your baby to your breast as soon as possible after birth. Ask for help from your midwife or a lactation consultant if necessary. Make sure your baby receives the colostrum from your breast before your milk comes in.
- Have plenty of physical contact with your baby by holding, carrying, touching, and breastfeeding.
- Breastfeed your baby for as long as possible – even into the preschool years if that works for you and your child.
- Research all aspects of childhood vaccinations before determining whether or not to vaccinate your children. Vaccines may create temporary antibodies to a specific disease, but they can also impede healthy long-term immunity and cause chronic health issues.
- Avoid repeated rounds of antibiotics, unless absolutely necessary. Talk to your child’s doctor about the necessity, the effectiveness, and the side effects of any prescribed drugs, and obtain as much information as possible about the drug before accepting it for your child.
- If using antibiotics, supplement with probiotics, and try to find and resolve the underlying cause of infection.
- As much as possible, give your children organic, whole foods and avoid processed foods.
- Give your children a variety of fresh fruits and vegetables as much as possible.
- Make sure your child’s daily diet includes foods that contain omega-3 essential fatty acids or supplement with fish oil or cod liver oil on a daily basis.
- Use whole food supplements and probiotics when necessary.
- Make certain your children get enough vitamin D
- Use immune-building herbs and supplements, especially in the fall and winter months.
- Pay attention to your children’s emotional health. Listen to them, honor their feelings, and encourage self-expression. Give them nurturing touch and massages on a regular basis.
- Ensure your children get plenty of sleep and rest.
- Ensure your children get plenty of exercise.
- Ensure your children drink plenty of pure water. Filter your tap water with a good carbon block filtering system.
- Reduce exposure to chemicals and other toxins as much as possible.
- If still experiencing chronic immune dysfunction, consult a health practitioner.
I truly hope you found this e-book helpful and are able to incorporate some of these suggestions into your family's lifestyle. Wishing you and your family vibrant health! - Jane

About Jane Sheppard

For more information about keeping your child healthy and preventing illness, visit the Healthy Child Blog and subscribe to Healthy Child Newsletter.