

What Can Be Done to Prevent Autism Now?

It's a fact that more and more kids are showing signs of autism spectrum disorders (ASD) than ever before. What's causing this epidemic is still a mystery, but we now have some strong clues about prevention and treatment, based on emerging science and parents reporting the specific treatments that have created improvement (and, in some cases, recovery) in their children.

There are many theories about why the autism rate has exploded. Some think it's due to better diagnosis, rather than a real increase. Other people blame maternal age at the time of conception. Still others suggest that a mix of genetic predispositions and environmental factors (including a dramatic increase in the number of vaccines given before the age of 5) is a more likely cause. But while the experts debate these theories, more and more children are being negatively impacted by this condition. In the meantime, moms of affected children who want to have another child, and women who have never conceived, are asking what they can do to increase the chances of a healthy baby. Instead of waiting for the Centers for Disease Control (CDC) or the American Academy of Pediatrics to issue new guidelines or policy changes, savvy individuals are examining the published scientific research and listening to parents who have improved their children's conditions. They're coming up with new strategies for carrying, birthing and raising healthier children.

A Sense of Urgency

During the last decade, as the debate about the causes of autism has raged, the Autism Research Institute has been gathering experts from around the world to brainstorm and research the underlying metabolic dysfunctions associated with autism, as well as safe and effective interventions to treat this condition. The founder of the Autism Research Institute (and cofounder of Defeat Autism Now), Dr. Bernie Rimland, instilled a sense of urgency in the group. Its mission is to focus on solutions that will improve the lives of children right now, rather than conduct research that would only have relevance for future generations. As a result of Dr. Rimland's vision, many children diagnosed on the spectrum have improved and, in some instances, recovered from autism.

Research funded by ARI and other organizations revealed abnormal patterns and metabolic dysfunctions in the ASD population. They include: **gastrointestinal dysfunctions** (constipation, diarrhea, reflux, increased permeability, decreased enzyme production including DPP1V, abnormal microflora); **neuro-inflammation** (neuro-glial activation, decreased blood flow to certain parts of the brain, abnormal brain size); **hormonal disturbances** (including increased cortisol production, disorders of serotonin and dopamine); **immune dysfunctions** (including a shift from Th1 to Th2, and pro-inflammatory cytokine production); **oxidative stress** (decreased

methylation capacity indicated by lowered methionine levels and other markers, increased homocysteine, lower levels of glutathione, increased lipid peroxidation, decreased B-12 levels); and **mitochondrial dysfunction** (decreased carnitine level, increased lactate levels).

As parents and clinicians work feverishly to address these abnormalities by assessing each child's individual issues and attempting to normalize or correct their disturbances, children are improving in speech, behavior, cognition, attention and general health. In some instances, they are even recovering. But this is tremendously difficult and expensive work. Since some of these biochemical abnormalities may be preventable, more and more parents are working at optimizing their health prior to conceiving.

I've been a pediatric registered nurse for 33 years, during which time I've worked as a certified natural childbirth instructor, labor and delivery nurse, and had a private practice where I provided nutritional counseling. For ten years I coordinated the Defeat Autism Now! (DAN) conferences, interacting with hundred of parents of autistic children. These parents worked tirelessly to implement the biomedical approach (a combination of detoxification, nutritional supplements and dietary changes) to treating their children's autism symptoms. Many of them, exhausted (and often broke) from instituting various treatments, said to me, "If only I knew then what I know now. I would have made very different choices."

Autism can not always be prevented, of course, and no one should harbor guilt. We know there are genetic components. But we also now know that environmental toxicity and suboptimal nutrition play a role, as well. As a result of research and from parental reporting, practitioners like me have come to realize that we must build more awareness that autism can be prevented.

I believe we now know enough to encourage couples— whether they're contemplating pregnancy, are currently pregnant or already have an infant—to implement certain precautionary principles to minimize the risk of autism. These strategies involve minimizing exposure to environmental toxins; maximizing the nutrition and general health of the mother at all stages; providing superior sources of nutrition for the infant and child; and careful, strategic and individualized consideration and use of vaccines.

Of course, there are no guarantees. However, countless parents, physicians and researchers are pooling their experience to learn what is contributing to autism, and those strategies are bringing about improvements in affected children. We now have a deep well of wisdom, science and common sense from which to draw the following safe, effective and practical recommendations for preventing autism, right now.

Prior to conception:

1. If you are considering becoming pregnant, one of the best things you can do is to spend six months to a year improving your diet and making better lifestyle choices. You should consume organically grown grains, vegetables, fruits, nuts and lean sources of protein. Laying the foundation for a healthy pregnancy by putting yourself in optimal shape prior to conceiving will do much to minimize the chance of miscarriage, or developing other complications of pregnancy and delivery.
2. Many intended mothers reduce or eliminate the “white foods” (sugar, white bread, pasta, pizza and bagels), along with chemical preservatives and other processed foods, before conceiving. But because gastrointestinal problems are so common in children with autism, some women I’ve been working with are choosing to address their own GI related conditions prior to conceiving. Women with a history of candida (yeast) overgrowth, for instance—or digestive problems, gluten intolerance, food allergies, bloating, constipation or parasites—are treating these conditions before becoming pregnant. Reducing sugar consumption, minimizing the use of antibiotics, taking probiotics and using specific diets and herbs for intestinal pathogens can all be helpful in optimizing your health. These steps increase the likelihood that your child won’t be prone to GI problems.
3. Reduce or eliminate your alcohol and caffeine intake, and eliminate tobacco.
4. Begin (or continue) an exercise routine.
5. Prior to conceiving, switch to using green cleaning and personal care products (e.g., shampoo, toothpaste, body lotion and facial cream). A 2006 report from the CDC found that Americans, on average, tested positively for 116 of 148 synthetic compounds, including dioxin, polycyclic hydrocarbons and organochlorine pesticides. These same substances were also found in human milk, placental tissue, umbilical cord blood, and the blood and body fat of newborns. The average American home contains 3 to 10 gallons of hazardous materials, and 85 percent of the chemicals that are registered have never been tested for their impact on the human body. (For more information on this, see the Green This! series of books by Deirdre Imus.)
6. If your toxic load has been high (for example, if you’ve taken many prescription or over-the-counter drugs, or you work or live in a chemical-laden environment), you might want to consider a detoxification or cleansing program, such as those found at BlessedHerbs.com.
7. If a detox program alone does not relieve fatigue, migraines or other symptoms associated with being toxic, you might want to consult a chiropractor or medical doctor familiar with

nutritional and chelation protocols for a more advanced detoxification process. Contact a local M.D., N.D., D.C. or D.O. affiliated with the American Academy of Advancement in Medicine. (For a list of physicians in your area, visit ACAM.com.)

8. If you have several mercury-based amalgam dental fillings, consider having them removed by a dentist familiar with safe procedure for the removal of dental mercury. A dentist associated with the American Holistic Dental Association (holisticdental.org) can safely remove mercury-based amalgam fillings at least 6 months before you becoming pregnant. Do not have them removed while breastfeeding.
9. Begin taking a comprehensive multivitamin mineral supplement. One of the most comprehensive and easily absorbed prenatal supplements is OptiNatal. Start by taking one, and work up to taking six per day.
10. Adding a source of animal-based omega-3s is also essential for optimal health. Krill oil is a popular option, as are mercury-free sources of fish oil, such as supplements like Nordic Natural or OmegaBrite.
11. Find a "green" dry cleaner. The chemical used in most drycleaning facilities, perchlorethylene, is a known carcinogen.
12. Drink filtered water. For more information about water filters, call NSF International at 800-673-8010, or see their website at nsf.org/Certified/DWTU. Also, visit the Natural Resources Defense Council's website at nrdc.org/water/drinking/gfilters.asp.
13. Use a stainless-steel water bottle to carry and consume filtered water. Whether they're heated or not, soft plastic bottles will release phthalates. Antimony can also be released from polyethylene terephthalate.
14. Limit your mercury intake by minimizing the consumption of large fish. For mercury levels of fish, visit gotmercury.org.
15. To build beneficial microflora, consume more fermented foods and take high quality probiotics. In addition to improving levels of beneficial intestinal flora, these have been shown to decrease intestinal absorption of certain chemicals by facilitating their excretion. See BodyEcologyDiet.com.
16. Improve indoor air quality in your home or office by opening the windows and creating cross ventilation.

17. Test your vitamin D levels, and add additional vitamin D3 if necessary. Many studies support higher levels of Vitamin D than what was previously recommended. This boosts your immune system, cardio and neurological function.
18. Eat a diet rich in colorful, organically grown vegetables. This will provide an adequate intake of antioxidants to fight off the damaging effects of free radicals. Juicing organic vegetables is a great alternative if you find it daunting to consume the daily recommended 4 1/2 cups of veggies and fruit.
19. If anticipating pregnancy, I would also suggest you avoid the flu shot and any other vaccine for a year prior to conception.
20. Minimize your exposure to electromagnetic fields (EMFs). Computers, TVs and cell phones emit electromagnetic radiation, so do not sleep with these in your bedroom. Use cell phones only when necessary, and keep your phone in your pocketbook, rather than in your pocket.
21. Do what is reasonable to green your home and minimize exposure to EMFs and toxins in your food, water and cleaning products. If you're planning to remodel your house, or are building a new home, try to select no-VOC paints and sustainable wood instead of composites or resin-based products. Minimize your exposure to building materials, and allow outgassing of new materials.
22. Begin regular chiropractic care with a family wellness practitioner. The specific adjustments will begin optimizing your nerve and immune system function and balancing your pelvic muscles and ligaments.

During Pregnancy:

1. Continue a high-quality organic diet that eliminates, or greatly reduces, sugar and other processed foods.
2. Continue to take a comprehensive, natural and easily absorbed multivitamin with at least 1,800 milligrams of calcium and 800 mg of folic acid. You might want to consider adding 2,000 IU or more of Vitamin D. Continue (or begin) taking a mercury-free source of omega-3, fish oil and probiotics.
3. If possible, avoid dental work while pregnant—especially the removal or insertion of amalgam fillings.

4. If possible, avoid antibiotics and other over-the-counter and prescription medication. There is no pharmaceutical drug on the market that has been proven safe for pregnancy. A new study, published in the Archives of Pediatric and Adolescent Medicine, shows that antidepressants are especially dangerous to take during pregnancy.
5. Continue an exercise program to improve circulation and stimulate peristalsis. Intestinal motility slows as a result of pregnancy hormones, so, in order to continue having good bowel movements, daily exercise is essential. In addition, take good sources of fiber, such as ground flaxseed, psyllium husks, bran, nuts, whole grains and seeds.
6. Eat a diet that contains at least 80 grams of protein per day. High-quality, organic, lean sources of protein include turkey, chicken, nuts, meat, eggs and whey protein powder for smoothies. Divide them up into four or five 2-ounce servings.
7. Always have a protein-rich snack on hand for any dips in blood sugar.
8. Avoid the flu vaccine or any other immunizations. If you're RH negative and require Rhogam, ask to see the package insert to make sure there is no thimerosal in the vaccine.
9. If you get sick, rest. Drink lots of hot water with lemon; take extra vitamin C, and possibly use echinacea drops. (Do not use goldenseal during pregnancy.)
10. Interview midwives and or obstetricians until you find one who makes you feel comfortable and empowered. Home birth is an option that is not right for everyone. However, a 2005 study published in the British Medical Journal found that natural birth, at home, with certified practicing midwives is safe for low-risk mothers and their babies. The study followed 5,000 mothers in the U.S. and Canada, and found that these home births with low-risk mothers had much lower rates of medical interventions when compared to the intervention rates for low-risk mothers giving birth in hospitals.
11. Avoid unnecessary ultrasounds—which may include all ultrasounds. There are no conclusive studies showing that ultrasounds are safe in pregnancy. Of greater concern are the studies showing how prenatal ultrasound affects brain development. Even standard, routine ultrasounds are not medically necessary and have not been shown to improve birth outcomes. Issue No. 22 of Pathways has an informative article on the potential relationship between ultrasound and autism.
12. Minimize intrusive procedures during labor (such as induction with Pitocin, pain meds, epidurals, forceps, C-sections and early cord clamping) by researching them and

discussing with your midwife or doctor which procedures you wish to avoid, if possible, and which ones you wish to have be part of your labor and birth experience. Pathways No. 21 has an article that relates many of these often unnecessary procedures to an increased risk of autism.

13. Choose your birth care providers wisely. Rather than selecting a provider or place of birth because of insurance coverage, select providers who will support your philosophical core beliefs about birth. Decisions made about “necessary treatment” vary drastically between home birth midwives, birth center midwives and obstetricians. Define your values and beliefs, and then seek a provider accordingly.
14. Start childbirth classes early. Seek classes outside of the hospital, with independent groups that offer support and knowledge about natural birthing. Additionally, finding a birth-support doula is essential for a better birth outcome. The perceived need for medication can be eliminated with proper breathing and relaxation techniques and adequate support during birth. Additional information on natural labor and birth procedures is available in Pathways No. 24.
15. There is a higher risk of autism in cesarean-delivered babies. So, although it’s tempting to think of skipping labor, labor is actually mother nature’s way of preparing the child for life outside the womb. The baby’s neurological function is enhanced by naturally passing through the birth canal and through cranial molding.
16. Walk during labor, and stay in an upright position or on all fours for pushing and delivery. This will greatly maximize your pelvis’ ability to easily open and birth, minimizing the need for doctor assisted pulling, the forceful use of forceps, and vacuum extraction. Any form of pulling and rotation to the baby’s delicate spine in labor may have a lasting affect on her future nerve system function.
17. Interview several pediatricians during your pregnancy to find one who accepts your views on health and is open to discussing and giving careful consideration to invasive care with drugs and vaccines. Today, many parents are seeking providers outside of the typical allopathic model, choosing instead holistic practices that offer safer, more natural options to achieve health and well-being.
18. Continue regular chiropractic care on a weekly basis with a doctor who caters to pregnant women. This will optimize both your nerve system function and your pelvic biomechanics in preparation for an easier, safer birth.

During the newborn and infant stages:

1. Bond with your baby as much as possible. You will need your sleep, so rest when you can. But be sure to hold and talk to your infant as often as possible. Co-sleeping is an option many parents are adopting to ensure continued contact with their babies.
2. Breastfeeding is one of the best ways to not only provide optimal nutrition, but to ensure there is a good amount of bonding time between mother and child. While breastfeeding, keep up your excellent dietary habits of 6 to 9 servings of colorful, antioxidant-rich veggies and fruit, 80 to 100 grams of high-quality protein sources (divided into four or five 2-ounce servings) and plenty (6 to 8 glasses) of filtered water per day.
3. Wear your baby as often as possible, utilizing various baby carriers. Having your baby held close allows them comfort, emotional ease and, very importantly, constant motion. These factors all strengthen and enhance neurological development in your baby.
4. Because birth is strenuous on both the mother and baby, you should both be checked by a qualified chiropractor shortly after birth. Spinal alignment is essential for your healthy recovery and continued stamina. Your baby's cranial and spinal development will affect her nerve system function for the rest of her life. Early care supports strong nerve and immune system function.
5. Consume extra fiber to ensure a good bowel movement each day.
6. Purchase an organic crib and or bed mattress. Be aware of bedding and clothing treated with flame retardants, as they contain high levels of antimony and other toxic substances.
7. Continue taking multivitamin and fish-oil supplements with extra vitamin D if your blood work shows a deficiency.
8. Unless you are positive for hepatitis B, there is no need for your newborn to receive the hep B vaccine in the nursery or within the first few months of life.
9. I would suggest you avoid all vaccines until the child is older, and then make an informed decision about each one based on its potential affects to your child's immune, digestive and neurological systems. This issue of Pathways has an outstanding article on informed choice by Barbara Loe Fisher, cofounder of National Vaccine Information Center. [See page 52.]

10. To minimize the possibility that your child will develop food allergies, postpone the introduction of solids until at least 6 months. When it is time to introduce solids, only use organic vegetables. Steam them and purée them in a blender. You can make batches of these and freeze them in ice cube trays. Introduce each new food no sooner than 4 days apart to make sure there is no reaction. After a few weeks, you can begin introducing fruits. Grains should not be introduced until the baby has teeth. Before teeth appear, babies do not have the digestive enzyme to assimilate grains. If you have a history of eczema, food allergies, celiac or autism, avoid dairy, soy and gluten grains (such as wheat, barley, oats, rye and Kamut).

11. Continue breastfeeding for at least one year (preferably two). A child's own immune system does not kick in until they are about 18 months of age, and your breastmilk offers the best immune system support available. Contact your local La Leche League for support and knowledge before and during the breastfeeding period.

Regarding Vaccines

Almost every article about autism and vaccines printed in the mainstream media states that all studies have shown there is absolutely no link between vaccines and autism. This is simply not true. There is good science pointing to a connection, including studies published in *Toxicological & Environmental Chemistry* and *The New England Journal of Medicine*. More important, there are thousands of parents of sick children who can tell you they had a normal child until he or she received several vaccines in one day, or that their child was vaccinated despite being ill. More research needs to be done, but these accounts by intelligent, observant parents cannot be discounted. To me, these reports are of equal or greater importance to any scientific study.

Parents are choosing which vaccines to give after careful consideration of their child's history and genetic background. If a child was born prematurely, for instance, or has had recurrent ear infections, or if the parents have a history of autoimmune disorders or allergies—these are all indicators that the infant or toddler may not respond well to a vaccine (and certainly not when several are given at one time). I'd like to suggest discussing all of this with your pediatrician, but, unfortunately, most would not agree to postpone, spread out, or avoid vaccines based on a family history or current illness. As a matter of fact, I have heard several respected pediatricians say that a child's immune system can handle hundreds of vaccines in one day. Honestly, what are these people thinking? And where are the studies proving their theory? They don't exist!

If you do decide to give a vaccine, make sure your child has not been ill recently, or is not coming down with something. You also shouldn't give a vaccine if the child is (or recently was) taking

antibiotics. Ask for single-dose vials of the vaccines, and give them one at a time. There are no long-term studies showing that giving multiple vaccines at once is a safe practice. I also suggest, prior to vaccinating, that you prime your child's immune system with immune-protective nutrients. Give 250 mg of vitamin C, 2 or 3 echinacea drops and 1/2 teaspoon cod-liver oil each day for a few days, before and after the vaccine. For more information, please download the pdf "A Safer Way to Vaccinate," at sokhop.com/pdf/a_safer_way_to_vaccinate.pdf.

If you decide not to vaccinate, know you are among a growing group of parents who are shifting their paradigm of health from a fear-based, disease model to a vitalistic, trust-based wellness model. Although you may sometimes feel isolated, there are many parents making this shift, and support and updated information are available. On the International Chiropractic Pediatric Association (icpa4kids.org) and Holistic Pediatric Association (hpakids.org) websites, you can find listings of providers who have committed their practices to be a resource for vitalistic family wellness options. There you can find information, support and holistic care congruent with your choices.

We don't have all the answers. No one does. But we should consider the research that has already been done, and the stories of improvement and recovery told by parents who have already traveled this difficult path. Let's apply common-sense precautionary principles as we prepare for and enter motherhood. If we wait for all of the research to be conclusive, or for public health policy makers to issue new edicts and catch up to what many smart and observant parents, researchers and physicians already know, how many more children will be unnecessarily affected by autism? The time to prevent autism is now.

About the Author:

Maureen McDonnell has been a registered nurse for 33 years in the fields of childbirth education, clinical nutrition, labor and delivery, newborn nursery and more. Since the late 1970s, she has been a vocal advocate and promoter of whole foods, green living and preventative health measures as the most logical and cost-effective methods for minimizing complications associated with pregnancy and birth and reducing chronic illnesses in children. From 1998 to 2008, Maureen coordinated the Defeat Autism Now! conferences. In 2008, she cofounded Saving Our Kids, Healing Our Planet (sokhop.com), and established the blog Raising Healthy Kids Naturally. Visit her online at RaisingHealthyKidsNaturally.blogspot.com.