

Back to the Basics for Healthy Children—The First Things to Go **By Julia Volkman**

When Dr. Montessori first began to practice as a physician, she was assigned to a home for “defective children.” What a statement those words make about the culture in Italy at the turn of the last century. Her first work with those children was to tend to their health: good food, proper rest, clean surroundings. Only then could she move on to the brilliance that followed.

Today it seems our society is also impoverished but our deficit is one of time. We have created spectacular ways of drinking our coffee because we literally need it to stay awake and alert in our perpetual state of sleep deprivation. We have delectable frozen foods or hot and ready-to-go meals that we can buy because we often do not have time to prepare our own food. Sleep and food—the first things to go.

But what do we have in abundance? Diagnosed learning disabilities. There is a debate about that, you know, a chicken and the egg debate. Are we diagnosing more because we just didn’t call these things learning disabilities in the past? Or, are we diagnosing more because there is more to diagnose? This page is too small to engage deeply in that dialogue but I will point out one tiny piece of evidence towards the latter. A study published in 2007 in the prestigious medical journal the *Lancet* found that artificial colors and/or sodium benzoate (a food preservative) increase hyperactivity in children.¹ Look at the ingredient labels on a few processed foods (like cereal or cookies) and you will most likely find those two ingredients. They are ubiquitous...and so is hyperactivity. Maybe mother nature is telling us something. Maybe we need to go back to basics and take a look at the first things to go—sleep and food.

How is the child sleeping?

One of the most significant physiologic needs of the developing body and brain is sleep. If the child’s sleep is compromised, his behavior will deteriorate. In fact, *the symptoms of sleep deprivation can mimic those of ADHD.*² Dr. Montessori knew this. She included sleep as part of the standard biographical information she would collect about her pupils.³ She also recommended that the environment include a garden with structures because “the children can play or sleep under them, and can also bring their tables out to work or dine.”⁴

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Children from ages 3 to 6 generally need a total 10-12 hours of quality sleep per day (including nap if they take one). Quality sleep means deep, uninterrupted sleep. If there is something that is getting in the way of a restful night, addressing that problem can produce impressive changes in the child’s behavior. For example, 60% of children with a certain type of eczema lose sleep or have poor quality sleep because of itchiness and soreness.⁵ If the itchiness and soreness are addressed, the sleep can improve.

So, when you observe your struggling children, check for bags under their eyes. If they fall asleep on top of the buttoning frame, it’s time to speak with the family. If the family confirms

that the child is not sleeping long enough or has disturbed sleep and a specific cause is unknown, there are a few simple, evidence-based strategies you can recommend to parents:

- Play actively with the child during the day/evening (to satisfy the child's need to be with the parent so the child can let the parent leave when it's time for the lights to go out)⁶
- Reduce evening stress
 - Turn off the TV long before bedtime since it can affect a child's sense of safety/need to be vigilant (or better yet, never turn it on)
 - Start getting ready for bed 30 minutes before lights out time
- Have a calm/predictable bedtime routine; for example, a bath, applying lotion/giving a back or foot rub, and then cuddling/singing/reading together⁷
- Have a calm, quiet, dark bedroom
- Give the child melatonin⁸

Whether the situation at home shifts or not, in the Children's House we have can be flexible and allow the child to rest. You may not have structures in a garden, but hopefully you can make a quiet space in your environment where any child is free to take a nap or just lie down, watch the world unfold, or process what has already unfolded. As it turns out, brain studies show that we all need time to process/reflect in order to actually internalize and learn whatever we just did.⁹ So a down-time space will benefit the learning of all the children, not just the sleep deprived ones.

How is he eating?

In her early works, Dr. Montessori wrote in detail about the soups and other foods offered to the children in their daily regimen. It seems we may have lost this aspect of the pedagogy over the years...the research indicates that it is time to reclaim it. (As an aside, if you are interested in addressing the issue of nutrition in public school meals, visit the website www.twoangrymoms.org.)

Traditionally, we associate malnutrition with weight. If we see a thin child who doesn't eat much, we worry. But did you know that even children who are not underweight and who have diets that appear healthy can have underlying nutritional deficiencies? These deficiencies may express themselves in unexpected ways, including maladaptive behaviors. So if a child's behavior is troubling, consider what his body might be missing.

Certain vitamins, minerals, and fats are essential to optimal brain function. The big ones to keep in mind are folic acid, iron, magnesium, the B vitamins, Vitamin D, and zinc. If the brain needs folic acid to function and it's not getting enough, it is going to malfunction. And what does a malfunctioning brain look like? Irritable, unable to concentrate, short temper, inattentive, restless...see what I'm getting at?

Ask the family about the child's nutrition. If he is a picky eater or even if his diet seems healthy, encourage the parents to give him a multi-vitamin and omega-3 (fish) oils every day. Nutrient supplementation has been shown to decrease antisocial and violent behavior and improve mental performance, brain function, visual acuity, and mood.^{10,11} For example, children with autism are more

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likely to have certain nutritional deficiencies¹² and digestive problems.¹³ Treatment of these underlying issues can have positive effects on behavior.¹³ Another example is of prisoners whose violent behavior dramatically decreased after receiving a few weeks of vitamin, mineral, and fatty acid supplements.¹⁴

Of course you can't give the children vitamins without parental consent but you certainly can encourage it. You can print out more information on specific vitamins, minerals, and fatty acids, their dosing range, and allergies from www.mbhe.org. Share the data with them and let them make their own choice. If the challenges continue, keep encouraging them. Patience and perseverance are incredibly powerful tools.

We're coming full circle. Maria Montessori began her work as a physician, tending to the physical needs of children before approaching their educational needs. Today's brain research shows that the physical needs necessarily overlap with the cognitive ones. First, care for the body. Then, the mind and the heart can open to all the possibilities that may unfold.

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² Paavonen, E.J., Raikkonen, K., Lahti, J., Komsu, N., Heinonen, K., Pesonen, A., et al. (2009). Short sleep duration and behavioral symptoms of attention-deficit/hyperactivity disorder in healthy 7- to 8-year-old children. *Pediatrics*. 123, e857-e864.

³ Montessori, M. (1913). *Pedagogical anthropology*. Frederick A. Stokes Company: New York. 427.

⁴ Montessori, M. (1914). *Dr. Montessori's Own Handbook*. Frederick A. Stokes and Company: New York. 10.

⁵ Schmitt, J. and Romanos, M. (2009). Lack of studies investigating the association of childhood eczema, sleeping problems, and attention-deficit/hyperactivity disorder. *Pediatr Allergy Immunol*. 20, 299-300.

⁶ Reid, G.J., Huntley, E.D., and Lewin, D.S. (2009). Insomnias of Childhood and Adolescence. *Child Adolesc Psychiatric Clin N Am*. 18, 979-1000.

⁷ Mindell, J.A., Telofski, L.S., Wiegand, B., and Kurts, E.S. (2009). A nightly bedtime routine: impact on sleep in young children and maternal mood. *Sleep*. 32(5), 599-606.

⁸ Garstang, J., and Wallis, M. (2006). Randomized controlled trial of melatonin for children with autistic spectrum disorders and sleep problems. *Child: care, health and development*. 32(5), 585-589.

⁹ Gusnard, D.A., Akbudak, E., Shulman, G.L., and Raichle, M.E. (2001). Medial prefrontal cortex and self-referential mental activity: relation to a default mode of brain function. *Proc Natl Acad Sci USA*. 98(7), 4259-64.

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- ¹² Arnold, G.L., Hyman, S.L., Mooney, R.A., and Kirby, R.S. (2003). Plasma amino acids profiles in children with autism: potential risk of nutritional deficiencies. *Journal of Autism and Developmental Disorders*. 33(4), 449-454.
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- ¹⁴ Gesch, C.B., Hammond, S.M., Hampson, S.E., Eves, A., and Crowder, M.J. (2002). Influence of supplementary vitamins, minerals, and essential fatty acids on the antisocial behavior of young adult prisoners. *British Journal of Psychiatry*. 181, 22-28.