

Creating Healthy, Sustainable Infant and Toddler Environments

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Educating parents and early childhood educators on the importance of creating safe, sustainable environments is imperative in our modern world today. While there is no doubt that many childhood maladies, such as cancer, developmental disabilities, asthma and autism, have a genetic component, only recently have we come to realize that possible contaminants in our environment can have a devastating affect on children. Since the dawn of the industrial revolution, the United States has created over 80,000 chemicals; in Canada, there are now 40,000 chemicals in use. We assume that all of these chemicals are safe when in fact, many have been proven to cause cancer, developmental disabilities and other illnesses. Most of these chemicals stay in the body forever where they are stored in the liver and body fat of humans. Short-term and long-term effects of most chemicals are just not known.

Beginning in the womb, babies and toddlers are more vulnerable to environmental toxins. Pound for pound, children breathe more air, drink more water and eat more than adults. Their brains and neurological systems are still developing during the first three years and often times they are placed on the floor where chemicals are commonly used. Infants and toddlers are orally stimulated so many items in their environments go into their mouths.

While many resources have been developed to help early educators understand how to set up the physical environments of infants and toddlers, few resources have been created to assist early educators in safeguarding children's health. This article will outline the considerations for creating healthier infant/toddler environments.

Early Educator Functions

Sleeping

Sleeping is one of the most important developmental tasks that infants and toddlers do on a daily basis. While the body rests during sleep, it is also during this time that the brain is undergoing massive changes and growth. Infants usually sleep in cribs while toddlers sleep on cots. A careful selection of these furniture pieces will better assure that naptime is healthy too.

Many crib mattresses are made of foam that has been drenched in toxic flame-retardants. This is a requirement by fire officials in many provinces in Canada and some states in the US. The mattress is then covered with a plastic cover.

Choose a firm three to four inch mattress covered in plastic that is not made of poly vinyl coated (PVC) plastic which is toxic. Be sure that the mattress or its cover does not have any holes or punctures in the cover that could leak toxic chemicals.

The mattress should then be covered with a zippered 100% cotton mattress cover, preferably made of organic cotton. Regular cotton is heavily sprayed with insecticides and should not be used, if at all possible. Next, cover with sheets made of 100% organic cotton. If you can't find organic sheets and mattress covers, then focus on just getting 100% organic sheets. If you can't buy organic, then at least make sure that the laundry detergent used is free from chlorine bleach, inks, dyes and perfumes that can all irritate a baby's sensitive skin.

While it might be difficult to find an early childhood vendor who has an organic crib mattress, a search on the internet will quickly provide you with the names of all the children's furniture companies that have phased out using toxic flame retardants.

Infant cribs should be made of hard wood that is harvested from sustainable forests and that uses a water-based formaldehyde finish. The evacuation crib should be made of stainless steel with large wheels. Be sure to ask the manufacturer for the materials product safety sheets or to see certification that the wood is obtained from forests in a sustainable manner and that the finish materials are certified by a third party to be non-toxic.

Most toddler cots are made from the plastic polypropylene, which is preferable to PVC since it can be easily recycled and it creates no toxins during production. Follow the same suggestions for cot sheets as was provided above for crib sheets.

Feeding

Another huge developmental task of infants and toddlers is feeding. BPA, a commonly used chemical used in plastic was banned in baby bottles in Canada in 2008. However if you are feeding infants from plastic bowls heated in a microwave, children may still be exposed to the developmental endocrine disrupter, BPA. Only use plastic bottles and bowls that have been certified to be BPA free and if you are concerned at all about your water source, you should have it tested as well. Items put into the microwave should be glass not plastic. Do not use plastic wrap in the microwave either as it will leak dangerous chemicals into the food or liquid while being heated. If you decide on glass baby bottles, many manufacturers are now making silicone sleeves to prevent breakage if they are accidentally dropped. The above guidelines also apply to food preparation for toddlers.

Many centers provide bibs for both infants and toddlers. Again, make sure that the plastic bib is BPA and PVC free as some early childhood catalogues still carry PVC bibs that are toxic. It is best to use organic cotton, if at all possible.

To support individual feeding schedules of infants and toddlers, it is important to have a food prep area in each classroom. The food prep area should include a sink, refrigerator and a method for warming foods, which is a crock-pot in many

infant centers. Make sure that all appliances are energy efficient and if purchased from the states carry an Energy Star seal that explains their energy efficiency.

Facility Considerations

Flooring

Infants and toddlers spend the majority of their time on the floor. Having a “shoeless” environment means that toxins on adults and children’s shoes will not be carried into the classroom. In addition, having floor mats at the front door and play yard entrances to trap additional dirt and chemicals on shoes will make your entire center healthier.

Non-slip flooring should be used for both infant and toddler classrooms. Avoid wall-to-wall carpets, as they can’t be easily cleaned without the use of toxic chemicals. Healthy materials to use for flooring include hardwood, cork, tile or linoleum. Vinyl composition tile often used in childcare facilities is not appropriate, as it requires the use of toxic glue and toxic chemicals for ongoing maintenance.

Soft floor coverings such as throw rugs and blankets should also be made of natural fibers such as cotton, hemp and wool. If you choose any item that will need to be dry-cleaned make sure that you use one of the newer “green dry cleaning” companies that do not use toxic chemicals for cleaning.

Cleaning

Cleaning and sanitizing are a very important part of the picture for infant and toddler environments. Do not use chlorine bleach to sanitize, as it is not only toxic for those who use it but toxic for the environment as well. The fumes from sprayed chlorine bleach are irritating to children’s sensitive airways and can be a stimulus for asthma. You will have to work with the cleaning licensing standards that you have for your province. However, in speaking with many child care regulators, most of them admitted that they would be willing to substitute another sanitizer for bleach if the early educator would bring up the subject. After all, thousands of hospitals disinfect without the use of chlorine bleach! Be sure to choose a product that is certified by the Government of Canada Eco Logo program to be environmentally friendly and non-toxic. You can find the products certified at <http://www.terrachoice-certified.com/en/> The Guide to Less Toxic Products in Nova Scotia can also be a helpful resource, <http://www.lesstoxicguide.ca/>

Indoor Air Quality

The best way to ventilate your classroom is to open the windows to let out germs and toxins from time to time. Also indoor air quality can be improved by not spraying cleaning items into the air but on the cloth you are using. Limiting use of air way irritants, such as baby powders, will help keep your air cleaner. Air

fresheners which are made of toxic chemicals should not be needed if the diapers are taken out several times during the day and the room is ventilated.

Classroom Considerations

Movement is a developmental task of infant and toddler care so safety should be one of the most important concerns in a group setting. Make sure that all the furniture has rounded corners and is secured to prevent tipping.

Safe environments have :

- Developmentally appropriate props and toys preferably made of non-toxic wood and finishes
- Plastic toys that are phthalate free, a toxic chemical used to soften plastics
- Plastic toys that are lead free
- Art materials that carry an AP seal and have been certified by the a third party such as the American Institute of Arts and Crafts Materials to be safe for use with young children.

Toys in the states are now required after 2009 to be certified as being both lead-free and phthalate free. Toys in Canada are not required to be third party tested yet. So, buy from vendors who can prove the safety of their toys with testing data from a certified laboratory. If you cannot prove the safety any plastic or wooden item do not use it. The Healthy Stuff web site should be a useful tool to use to locate toys safe toys as their testing data is posted for review on all toys in the system, <http://www.healthystuff.org/departments/toys>

Summary

While you might not be able to implement all the suggestions in this article, every one can do some thing to better safe guard the health of infants and toddlers. Start small and make a few changes but be sure to help educate parents about these issues. The organization, Healthy Child/Healthy World, <http://healthychild.org/>, has some great inexpensive resources or check out the Canadian Organization, the Canadian Partnership for Children's Health and Environment at <http://www.healthyenvironmentforkids.ca/english/> We can all make change happen!

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