Reducing Toxics in Child Care

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CLEAN AND HEALTHY NEW YORK

Learning Objectives

- Understand why children are more susceptible to chemicals in their environment.
- Learn the chemicals of concern that are found in the early childhood setting & what risk they may pose to health.
- Find & share practical and low-cost solutions and resources to create clean & healthy child care settings.

What is Eco-Healthy Child Care?

- National Program through Children’s Environmental Health Network (CEHN)
- More than 1,800 endorsed facilities and 75,000 safer children
- www.cehn.org/ehcc

Chemicals and our Health:
Overview

About Clean and Healthy New York

- Founded in 2006
- Focused on protecting health by getting toxic chemicals out of everyday things
  - Policy advocates (BPA, flame retardants, heavy metals)
  - Market campaigners (Getting Ready for Baby)
  - Educators (Over 600 child care providers trained to date)
  - Collaborators (partner with groups in NY, across US, and around the world)

Environmental health: the outside world affects health

In our Environment
- Lead in drinking water
- Air pollution from cars
- Tobacco Smoke
- Chemicals in products

Potential health impacts
- Loss of IQ/learning developmental disabilities
- Asthma, heart disease
- Lung cancer
- The above, plus infertility, other cancers, obesity, diabetes

Cost just in New York, just for some diseases, just for children: $4.35 billion annually (According to Mt. Sinai School of Medicine)
How do the chemicals get in our bodies?

- We ingest them
- Absorb them through skin, mucus membranes

Prenatal exposures

Children’s Unique Vulnerability

- Their behavior – everything in their mouth, crawling
- Their consumption – more air, water, food
- Their development – first thousand days are critical
- Different environment: they’re close to the ground, the air is different down there!

Environmental Health–Chemical Regulation

- Constant & frequent chemical exposure
  - Over 84,000 chemicals in use
  - New technology & products
- Inadequate chemical testing & regulations
  - 1976 Toxic Substances Control Act (TSCA)
  - Insufficient update in 2016, implementation stalled
  - 250 EPA internal reviews, 6 banned

Children are not little adults

- More vulnerable to harm from the exposure
  - Organ systems still developing
  - Metabolism and excretion not as efficient
  - Adults may suffer little or no harm from exposure to a chemical (lead, mercury, alcohol) when that same exposure can cause life-long damage to a child
- Early chronic exposures pose greater risk
  - Many years within which to become sick

Why Focus on Children?

- Developmental disabilities now affect nearly 7% of all kids ages 3-17
- Childhood cancer rates increased by 27% from 1975 to 2014. Leukemia has increased nearly 35% since 1975
- Childhood type 1 diabetes increased by 1.8% annually from 2002 to 2012, and type 2 diabetes increased by 4.8% annually
  (Source: National Institute of Health)
Flame retardants
Made with bromine, chlorine, and phosphorous

Health problems
- Cancer
- Neurological problems
- Infertility
- Smoke from a fire is more toxic

Where you find them
- Nap mats
- Padded furniture
- Curtains
- Carpet padding
- Electronics

Child Care Environments Matter
6 million US children below age 6 are enrolled at child care and preschool facilities and family child care programs, averaging 33 hours/week – up to 50 hours a week

Formaldehyde
Health problems
- Eye and lung irritation
- Cancer

Where you find it
- Particle board cabinet and furniture
- Laminate flooring
- Permanent press drapes
- Plywood puzzles

Key chemicals of concern
Among many that pose health risks

Bisphenols... not just BPA
BPA, BPA, BPA, & BPA - Hormone disruption

Health effects - BPA
- Diabetes
- Obesity
- Reproductive and developmental problems
- Infertility
- Cardiovascular disease

Where to find them
- Food can linings
- Baby bottles
- Teething rings
- Receipt paper
- Polycarbonate plastic (#7)
**Pesticides**
- Designed to be poison
- Linger inside buildings
- Persist inside our bodies
- Can spread through air, seep into soil and water
- Residues commonly found in fruits, vegetables, and water
- Both inside and outside uses - major source of exposure
- 50% of the 2 million poisoning incidents/year: < 6 yrs

**Pesticide health effects**
- Linked to:
  - Childhood leukemia
  - Parkinson's disease
  - Kidney, liver damage
  - Hormone disruption

- Pre-natal exposure linked to:
  - Smaller head circumference
  - Lower birth weight
  - 1.5 to 2-year developmental delay
  - Lower IQs
Household Chemicals

- 84,000+ synthetic chemicals in commercial use today
- Only a small fraction has been tested for toxicity
- Toxic to our health and to the environment
  - Indoor air unhealthy to breathe
  - Irritate the skin, lungs, and eyes
  - Harm the endocrine system
  - Pollute the natural environment

Flame retardants

Little steps
- Dust frequently and damp mop
- Maintain padded products (no raw foam exposed)
- Remove foam-based books, chairs
- Choose wood or aluminum blinds or no window covers
- Limit electronics

Big steps
- Replace nap mats with newer cots or mats that are FR-free
- Remove carpeting with padding – only use area rugs without padding underneath
- Limit polyurethane foam products

Making child care healthier

- SMALL STEPS AND BIG IDEAS

What you can do--avoid these products

- Avoid polyurethane foam
- Avoid products with TB 117 label

How well is child care doing?

Few environmental health issues are addressed by:

- Professional development
- Accreditation Standards
- Quality Rating Systems
- Licensing Regulations

Formaldehyde

Little steps
- Look for low-formaldehyde labels
- Let new particleboard air out for several weeks before putting near children
- Ventilate

Big steps
- Ask furniture makers if they are using formaldehyde-free composite board
- Choose solid wood when possible
- Choose solid wood flooring, or natural tile materials (linoleum is back!)

Exciting Progress!
Heating Milk

- Heat in a glass or porcelain container, then move to bottle
- Heat over the stove, then move to bottle

Body burdens fell:
- BPA down 66%
- Phthalates down 53-56%

After 3 days of:
- Eliminating canned and packaged foods from the diet
- Using only glass or stainless steel food storage containers

The choices and decisions we make DO make a difference

Little steps

- Choose BPA-free cans for food
- Allow glass baby bottles
- Offer non-plastic teething options (frozen wash cloths, spoons, etc.)
- Avoid receipt paper; don’t let kids play with them

Big steps

- Replace plastic blender with glass
- Replace plastic cups with polypropylene, glass, or stainless steel
- Replace clear plastic pitchers with polypropylene or stainless steel

Little steps

- Remove pre-2008 vinyl toys
- Don’t use products with “fragrance”
- Don’t buy adult/general use vinyl items, they can still contain phthalates legally

Big steps

- Replace vinyl floors
- Don’t use vinyl wall paper
- Don’t put on vinyl siding

Little steps

- DIY microwave popcorn!
- Reusable dishes
- Replace non-stick cookware
- Beware of new “PFOS-free” – may not be PFAS-free

Big steps

- Remove stain-treated carpet, curtains, and furnishings
- Replace non-stick cookware

Little steps

- Remove toys made before 2008
- Flush water taps until cold
- Cook with cold water
- Don’t accept donated toys
- Treat old thermostats, thermometers, fluorescent lights as hazardous waste
- No adult costume jewelry for kids
- No adult keys, plumbing brass as toys

Big steps

- Test water for lead, take action
Candles and Air Fresheners

- Scented and Unscented Fragrances
  - These products contain multiple harmful chemicals which can include dangerous solvents and fragrances.
- Essential Oils
  - Some of them contain compounds that are skin and/or respiratory irritants to sensitive individuals.

No Smell is the Best Smell!!

What to do

- Provide good ventilation
- Use HEPA filters, and HVAC systems
- Place lemon slices in a dish of baking soda
- Work with children to create natural fragrances such as placing cloves into citrus fruits
- Simmering cinnamon sticks (on a back burner).

What you can do

- Clear kitchen of food and keep bathrooms dry
- Fix leaks
- Food and trash away in closed containers
- Clean up crumbs...quickly!
- Seal potential entryways
  - Caulk cracks and holes
- Use pesticides only as a last resort
- Use least-toxic pesticide

Choose Safer Cleaning Products

- Safer cleaning products
  - Less toxic
  - Environmentally safe
  - Often cost the same as conventional cleaners
- Use EPA-Registered products for sanitizing and disinfecting

www.greensaaf.org  www.eco logos.org

55-patty certified products that are environmentally friendly and less toxic to human health.
Routine cleaning with detergent and water is the most useful method for removing germs from surfaces in the child care setting.

However, some items and surfaces require an additional step after cleaning to further reduce the number of germs on a surface to a level that is unlikely to transmit disease.

...the label instructions on most disinfectants indicate that the surface must be pre-cleaned before applying the disinfectant.

What is the difference?

- **Cleaning**: To physically remove all dirt and other organic contamination (dirt, sand, bugs, feces) by washing with soap/detergent and water solution and rinsing with water.
- **Sanitizing**: To reduce germs on surfaces such as food contact surfaces, toys, and pacifiers to meet a specific health standard.
- **Disinfecting**: To destroy most germs on non-porous surfaces.


Sanitizer and disinfectants are effective only if organic matter (dirt, crumbs, juice, sand, food) has been first cleaned from the surface/object with a soap/detergent, water solution and rinsed with water.

Bleach

- Sodium hypochlorite
- New concentration 8.25%
- Mix and label daily
- Drying time
- There are less toxic non-chlorine options
- Peroxide-based bleach products
- EPA-perchloric acid resistant

Fact

Bleach has been classified as an allergen—an something that can cause asthma.

What to do (continued)

- Store cleaning products, paints, and other household chemicals where children cannot reach them.
- Do not allow providers to bring in cleaning supplies from home.
- Limit eating and drinking to assigned areas.
- When cleaning:
  - Keep screened windows open or use fans.
  - Read and follow label instructions.
  - Use products in the areas children are most likely to be.
  - Don’t mix products.
  - Wear protective gear.
  - Use chlorine bleach only when and where it is recommended by state and local authorities.

Green Cleaning Curriculum

- This Toolkit will help you answer those questions:
  - Which products should be used to clean?
  - Which areas should be sanitized and why should it be disinfected and how often?
  - What is the difference?
  - What sanitizing and disinfecting products are safe to use?
  - How do we comply with child care licensing regulations?
  - Can disinfectants make us sicker than the disease they are meant to prevent?
  - Can I use bleach safely?
  - If a product says that it is “green,” is it safe to use?

Art Supplies

Topic 7
Art Supplies

- Lead, asbestos and organic solvents
  - Used to enhance color
  - Used to preserve art products
  - Used to improve application
- These toxic ingredients can trigger
  - Asthma attacks
  - Allergies
  - Headaches
  - Nausea

Fact
- Not all toxic substances have a warning label.
- Products labeled as “non-toxic” may still pose a health hazard for children.

Guess the Product

Shaving Cream

Products to Avoid

- Solvent based products
- Products that contain lead and other heavy metals
- Products that are not in original container or without proper labeling
- Products that can be inhaled, or get into children’s eyes
- Commercial Dyes
- Instant Papier-mâché
- Permanent felt tip markers or scented markers

What to do
- Use water based supplies
- Use vegetable or food dyes
- Use newspaper/papier-mâché
- Use supplies from Arts and Crafts Material Institute
  www.acminet.org

Tips for Safer Arts & Crafts

- Store and label all supplies properly
- Read labels and identify precautions
- Keep workspaces well ventilated

What you can do?

- No eating or drink
- Have children wear protective smocks and wash hands thoroughly
- Clean area mop or vacuum the floor

Be sure children are closely supervised when using household supplies (such as cotton balls or dried pasta noodles) as art materials to avoid ingestion or improper use.

What you can do?

- Look for the recycling code triangle on the bottom and avoid these:
  - “3” or “V” (PVC)
  - “6” “PS” (Polystyrene)
  - “7” “other” (polycarbonate)*

What you can do?

- Certificate, poster
- Posting on CEHN national website
- Eco-Healthy tips by e-mail
- Entered into Child Care Council Referral database
Broader action to address chemicals in child care

How are they doing?
- Best: Community Playthings (retailer and manufacturer) has a comprehensive chemicals policy and selects materials that avoid toxics.
- Good: Kids Advance Montessori avoids all flame retardants.
- OK: Kaplan Early Learning offers products meeting B certifications for being preferable.
- A good step: Constructive Playthings offers “Greenscape collection”

Who’s selling YOU stuff?
And are they making sure it’s not made with toxic chemicals?

Companies selling to early care and learning should...
- Create a policy to screen out harmful chemicals
- Establish a timeline for implementation
- Make the policy, list of chemicals, and timeline public
- Establish clear and consistent way for consumers to identify products that are less toxic
- Require vendors to verify these claims

Direct to you: early care and learning retailers
- 24 companies market specifically to early care and education programs
- They sell items you can’t get at mainstream stores: cubbies, kid-sized chairs and tables, nap mats, play mats, etc.

Resources
- Clean & Healthy New York: www.cleanhealthyny.org
- EcoHealthy Child Care: www.cehn.org/ehcc
- JustGreen Partnership: www.jgte.org
- Getting Ready for Baby: www.gettingready4baby.org
- Informed Green Solutions for Green Cleaning: informedgreensolutions.org
- Safer Chemicals, Healthy Families: www.saferchemicals.org
- Healthy Stuff: www.healthystuff.org
- SkinDeep database: www.cosmeticsdatabase.org
- The Green Guide: www.thegreenguide.com
Questions?

Thanks for helping us keep children healthy & safe!

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More resources and fact sheets:
https://cleanandhealthynewyork.box.com/ChildCare

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