



PLASTICS ALERT

FIVE TOXINS IN OUR KIDS' LIVES AND HOW TO AVOID THEM.

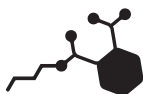


Introduction.



BPA

Microplastics and the chemicals within them are everywhere, even though we can't see them. Every day, we unknowingly consume, inhale, and absorb these invisible chemicals and particles. Once inside our bodies, the toxic chemicals can disrupt our health in serious ways.



PHTHALATES

Our comprehensive Umbrella Review pulls together data from more than one million individuals to show clear and undeniable evidence that these chemicals pose significant risks to human health at every stage of life.



PCBs

However, we can take steps to reduce the exposure to our children. In this ebook, we'll break down what these harmful chemicals are, where they might be hiding in frequently used products and safer alternatives to consider.



PBDEs

Minderoo Foundation is advocating for these 5 chemical classes to be regulated in a legally binding, Global Plastics Treaty.



PFAS

Source: J Dizon et al., 2024. *Umbrella Review: Impact of plastic-associated chemical exposure on human health.* (JBI and Minderoo Foundation)

Toxin 1: BPA (Bisphenol A)



What is BPA?

BPA is a chemical commonly used to make polycarbonate (PC) plastics and resins. It can be added as a hardening agent in other plastic materials. BPA can be found in many common plastics, including PC, PET, PE, PP, PS, PA.

Where might exposure occur in kids?

- Teething ring
- Rubber duck
- Plastic lunch boxes
- Coatings inside metal baby food cans
- Clothing made from polyester

What can we use instead?

- Teething items made from organic cotton, natural rubber, and untreated wood
- Bath toys made from natural rubber
- Metal lunch boxes
- Baby food from jars
- Check to make sure clothing is not made from polyester. Check community marketplaces or second hand stores for good quality hand-me-downs.

BPA increases risk of health problems across every stage of life

Infant

Anogenital Distance (Girls)

Child

Cardiovascular Disease
Obesity
Waist Circumference

Adult

Hypertension
Cardiovascular Disease
Type II Diabetes
Insulin Resistance
Obesity
Waist Circumference
Female:
Polycystic Ovarian Syndrome

Toxin 2: Phthalates



What are Phthalates?

Phthalates are commonly used as plasticisers to make plastics more flexible. They are frequently found PVC and have also been detected in various other plastics such as PET, PVA, PE, PP, PS, PA, and PC.

Where might exposure occur in kids?

- Bath books
- Plastic figurines
- Plastic spoons
- Plastic prints/motifs on kids' clothes

What can we use instead?

- Bath toys made from natural rubber
- Toys made from organic cotton, natural rubber, and untreated wood
- Metal spoons
- Check to make sure clothing does not have a plastic print/motif that could flake off. Check community marketplaces or second hand stores for good quality hand-me-downs.

Phthalates increase risk of health problems across every stage of life

Infant

Anogenital Distance (Boys)
Birth weight (decreased)

Child

IQ / Cognitive Development
Fine Motor Development
Thyroid Function
Blood Pressure
Asthma
Insulin Resistance
Waist Circumference
Puberty (Girls)

Adult

Thyroid Function
Insulin Resistance
Obesity
Waist Circumference
Male:
Sperm Quality (DNA Damage)
Sperm Concentration
Female:
Endometriosis

Toxin 3: PCBs

(Polychlorinated Biphenyls)



What are PCBs?

PCBs are a group of chemicals that were once commonly used as flame retardants in certain plastics and also in electrical equipment. They are classified as Persistent Organic Pollutants (POPs), meaning they remain stable in the environment for long periods, spread widely, accumulate in the fatty tissues of living organisms, and are toxic to both humans and wildlife. Although PCBs are banned in most countries, a 2016 study detected them in coloured pigments used in various toys.

Where might exposure occur in kids?

- Yellow chalk
- Green and yellow finger paint
- Vintage painted toys

What can we use instead?

- Be careful when purchasing pigmented products
- Toys made from organic cotton, natural rubber, and untreated wood

PCBs increase risk of health problems across every stage of life

Infant

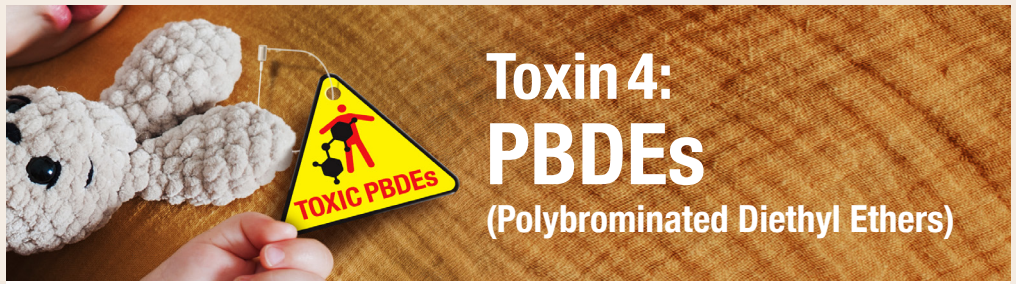
Birth weight
(decreased)

Child

Cardiovascular Disease
Non-Hodgkin's Lymphoma
Bronchitis

Adult

Hypertension
Cardiovascular Disease
Type II Diabetes
Liver Cancer
Hepatic Disease
Non-Hodgkin's Lymphoma
Malignant Melanoma
Female:
Breast Cancer
Endometriosis



Toxin 4: PBDEs

(Polybrominated Diethyl Ethers)

What are PBDEs?

PBDEs were designed to slow down the ignition and spread of fire, providing people with more time to escape or extinguish a fire. However, in recent years, PBDEs have raised international concerns due to their widespread presence in the environment, their toxicity and their potential to accumulate in both humans and wildlife.

Where might exposure occur in kids?

- Mattresses
- Children's pyjamas
- Some soft toys
- Carpets or rugs

What can we use instead?

- Check the labels for information on flame retardants or fire hazard warnings (choose the white label over the red label). Look for organic or natural fabrics that are less likely to be treated with flame retardants.
- Toys made from organic cotton, natural rubber, and untreated wood
- Undyed wool or organic cotton rugs



PBDEs increase risk of health problems across every stage of life

Infant

Birth weight (decreased)

Child

IQ / Cognitive Development
Thyroid Function

Adult

Thyroid Function

Toxin 5: PFAS

(per- and polyfluoroalkyl substances)



What are PFAS?

PFAS are commonly known as “forever chemicals” because they can persist in the environment for hundreds or even thousands of years without breaking down. They are used in various applications, including coatings that repel water, grease, and stains, as well as in fire-fighting foams.

Where might exposure occur in kids?

- Bibs
- Stain resistant kids’ clothes
- Carpets or rugs
- Paper, bamboo or plastic straws

What can we use instead?

- Organic cotton bibs
- Avoid if the label says ‘stain resistant’
- Undyed wool or organic cotton rugs
- Stainless steel straws

PFAS increases risk of health problems across every stage of life

Infant

Birth weight
(increased /
decreased)

Child

ADHD (Girls)
Allergic Rhinitis
 (“Hay Fever”)
Obesity
BMI

Adult

Thyroid
Function








Abbreviations explained

Toxins (plastic chemicals)

- BPA** Bisphenol-A
- PBDEs** Polybrominated Diethyl Ethers
- PCBs** Polychlorinated Biphenyls
- PFAS** Per- and Polyfluoroalkyl substances

Plastic types

Plastic code

PA	Polyamide	
PC	Polycarbonate	
PE	Polyethylene	
PET	Polyethylene Terephthalate	
PP	Polypropylene	
PS	Polystyrene	
PVA	Polyvinyl Acetate	
PVC	Polyvinyl Chloride	