



# Environmental Health and Pregnant Women & Infants



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# Environmental Health

- Branch of public health that is concerned with aspects of the natural and built environment that can affect human health
- Some examples:
  - Many residents in FEMA trailers got sick from formaldehyde exposure after Hurricane Katrina
  - Outdoor air pollution can cause asthma
  - Lead in paint can affect the brain
  - BPA, Styrene, and other chemicals that may be in plastics have been linked to health effects



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# Why should we be concerned about environmental health?



**We are exposed to hundreds of chemicals every day** – children are exposed to some chemicals more than adults and exposed to chemicals that adults may not be exposed to

**Chemicals enter our body** – breathe them in, they pass through our skin, or we eat them – and many are stored in body fat

**Exposure linked to health effects**  
Children are more vulnerable & at higher risk of suffering effects than adults



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# Environmental Health

Chemical Exposure	The Human Body	Chemical Effects on Babies	Children's Product Safety
<u>100</u>	<u>100</u>	<u>100</u>	<u>100</u>
<u>200</u>	<u>200</u>	<u>200</u>	<u>200</u>
<u>300</u>	<u>300</u>	<u>300</u>	<u>300</u>
<u>400</u>	<u>400</u>	<u>400</u>	<u>400</u>
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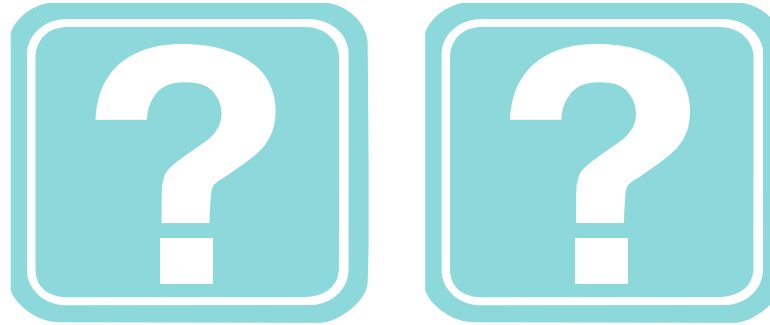


Young children are often exposed to lead by eating dust that's contaminated with lead from paint. How does lead affect your body?





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Name the three ways chemicals are most likely to enter your body.





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Name three ways you are exposed to  
chemicals at school.







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Name five ways you are exposed to  
chemicals at home.

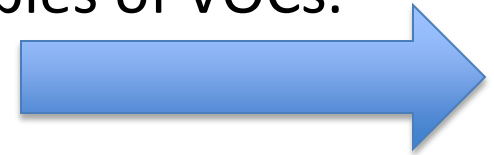




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Volatile organic compounds are chemicals that are released from a material and enter the air. They usually have a smell associated with them, like paint and cleaners. These chemicals can cause damage to the liver, kidneys, and nervous system as well as headaches, dizziness, and vomiting. Name three examples of VOCs.





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A fetus grows the fastest during the first month. If a baby continued to grow at the same rate for 9 months, how much would the baby weigh at birth?

- a. 100 pounds
- b. 1,000 pounds
- c. 2,000 pounds
- d. 3,000 pounds





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Organs develop at different times while a fetus is growing. Order these body parts from the first developed to the last: nose, spine, arms and hands, and heart.





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Once chemicals enter our bodies, many of them are stored in body fat. These chemicals can be released when women are pregnant and pass to the unborn baby. Many of these chemicals can affect our endocrine and reproductive systems.

What does the endocrine system do?





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Chemicals found in household products and toys can affect the nervous system by causing behavioral changes, reproductive system by causing changes in reproduction and fertility, endocrine system by changing your hormones, and birth defects. Name an organ in the nervous and endocrine systems.

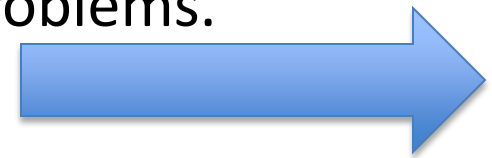




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Chemicals can affect the endocrine system in a number of ways. They can mimic a natural hormone, block the effects of hormones, or stimulate or inhibit the endocrine system. Exposure to endocrine disruptors has been linked to which of the following affects? (1) learning disabilities, (2) attention deficit disorder (ADD), or (3) brain development problems.





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True or False – chemicals can pass from  
mom to baby through breast milk.







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True or False - Developmental effects can result from father's exposure to chemicals before a woman gets pregnant.





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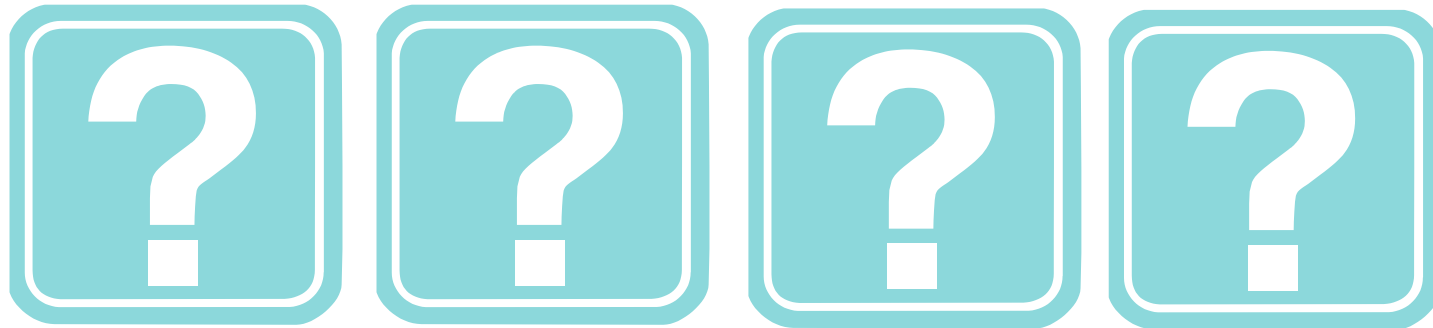


Studies have shown that prenatal exposure to chemicals is linked to: miscarriage, low birth weight, birth defects, motor delays (smiling, rolling over, crawling, and walking), developmental delays, and impacts to brain development. What does “prenatal exposure” mean?

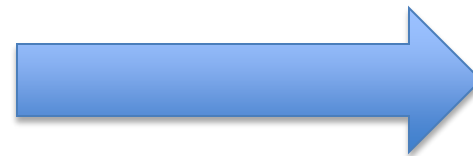




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Name three reasons why children are at a higher risk of suffering effects from chemicals than adults are.





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Babies and young children are exposed to hundreds of chemicals every day. They are exposed to some chemicals more than adults and other chemicals that adults aren't exposed to. Name two products that children use that may also contain hazardous chemicals.





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True or False – All toys and children’s products, like cribs, car seats, and strollers, are tested by the government for safety before they are sold.





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True or False – lead can legally be in children’s products.

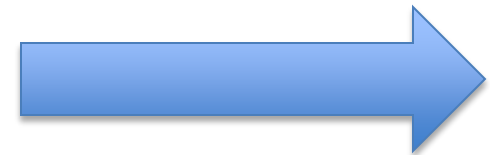




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True or False – Toys have to be marked  
with the material they are made out of.





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True or False – all children’s products have a tracking label on them, making it easier for customers to identify products in case of a recall.







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The US Consumer Product Safety Commission operates a recall program for toys and other consumer products that are unsafe. True or False – companies must replace the recalled product, repair it, or give you your money back.





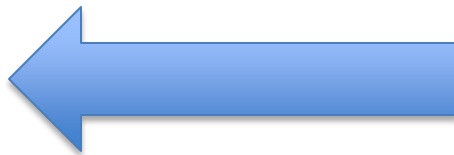
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Answer:

It affects your neurological system/brain





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Answer:

- (1) We breathe them in
- (2) through our skin
- (3) We eat them (via contaminated food or dirty hands)





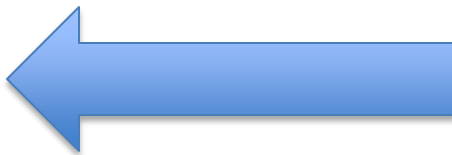
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Answer:

furniture, flooring, cleaning chemicals,  
food, indoor air, markers





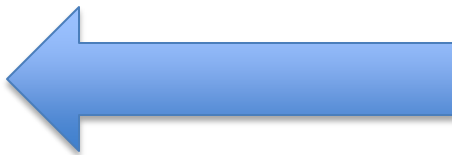
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Answer:

cleaning products, toys, plastics, fabrics,  
personal care products, dust, wastes,  
paint, carpets, cookware, furniture,  
tobacco smoke, lighting, clothes





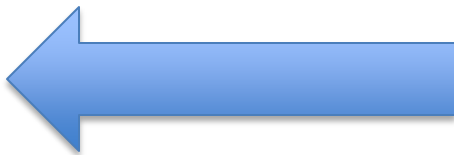
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Answer:

Car exhaust, Air fresheners, Markers,  
Scented products, New carpet, furniture,  
plastic shower curtain & other plastics





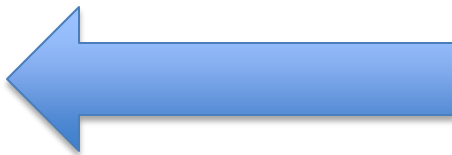
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Answer:

d. more than 3,300 pounds – or 1.5 tons





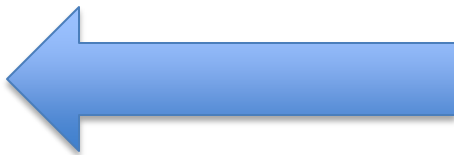
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Answer:

heart (25 days), arms & hands (32 days),  
spine (36 days), and nose (52 days)







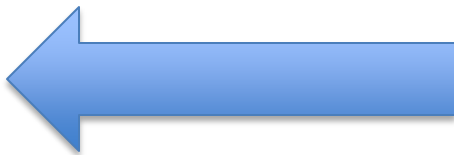
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Answer:

Your endocrine system is a collection of glands that produce hormones that regulate your body's growth, metabolism, and sexual development and function. The hormones are released into the bloodstream and transported to tissues and organs throughout your body.





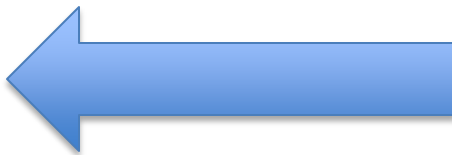
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Answer:

Nervous – brain, spinal cord, nerves;  
Endocrine – hypothalamus, pituitary  
gland, thyroid, pineal gland, thymus  
gland, adrenal glands, pancreas, ovaries,  
testes





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Answer:  
all of the above

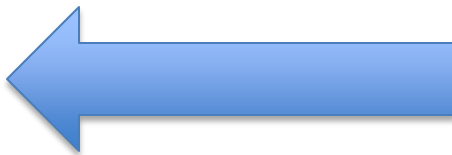




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Answer:  
TRUE

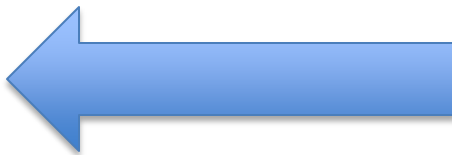




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Answer:  
TRUE





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Answer:

A pregnant woman is exposed to a chemical while she is pregnant and that chemical is passed to the unborn baby through the placenta





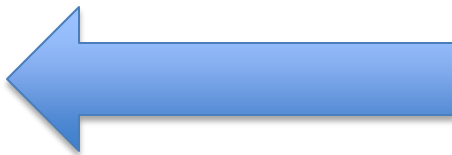
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## Answer:

1. Children have a heightened sensitivity as their bodies are growing and developing
2. Children have greater pound-for-pound intake of air, water, and food
3. Children's skin is 30% thinner than adults' & can absorb more from the skin's surface
4. Children don't have the same ability to excrete toxins
5. The blood brain barrier that helps block chemicals from penetrating the brain isn't fully developed until 6 months of age
6. Children have more years of future life left
7. Children spend more time close to the ground
8. Children have a tendency to put things in their mouth





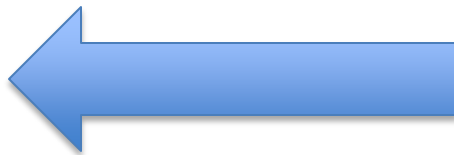
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Answer:

1. plastics – toys, baby bottles eating/feeding
2. car seats
3. mattresses – children sleep more than adults



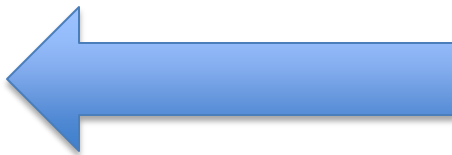




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Answer:  
FALSE





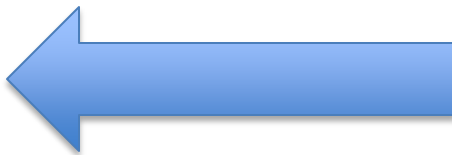
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Answer:

True. Up to 0.01% lead can be in paint.





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Answer:  
FALSE





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Answer:

- TRUE, A tracking label must contain certain basic information, including:
- (1) the name of the manufacturer or private labeler;
- (2) the location and date of production of the product;
- (3) detailed information on the manufacturing process, such as a batch or run number, or other identifying characteristics; and
- (4) any other information to facilitate ascertaining the specific source of the product.





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Answer:  
TRUE

