

# Is Your Baby's 'First Food' Loaded With Toxic Heavy Metals?

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## STORY AT-A-GLANCE

- › Researchers looked at samples from 20 formulas made by well-known local and international brands, and found that six out of 20 formulas tested positive for five types of toxic heavy metals, including lead and aluminum
- › In May 2024, the FDA sounded the alarm on the Crecelac Infant Powdered Goat Milk Infant Formula, after tests revealed it was contaminated with Cronobacter, which can lead to life-threatening infections like sepsis and meningitis
- › U.S. lawmakers are also working on a new bill, dubbed The Baby Food Safety Act of 2024, that would direct the FDA to set maximum allowable limits for heavy metals in baby food and infant formula
- › Breast milk is still the best option for both infants and mothers. However, if you are unable to lactate, I recommend making your own homemade formula milk – recipes are included in this article

The “breast versus bottle” debate has long divided concerned parents who only want the best nourishment for their child. Many parents who seek convenience often choose infant formula. Others, such as moms who cannot produce enough breast milk to satisfy their children, have no choice but to resort to formula milk.

So, to find out that most infant formulas sold today are contaminated with not just one, but FIVE toxic metals is not just alarming, but an eye-opener to just how unnatural and damaging these highly processed infant foods are.

# **Study on Infant Formulas Finds All Samples Contaminated With Heavy Metals**

Published in May 2024, the study was a collaboration between two nonprofit organizations, GMOScience and Moms Across America.<sup>1</sup> Spearheaded by Michelle Perro, MD, Zen Honeycutt and Stephanie Seneff, Ph.D., the study aimed to determine the presence of toxic metals in several brands of infant formula.

The researchers tested 40 samples from 20 formulas made by well-known local and international brands, such as Enfamil, Gerber and Similac, to name a few. Some were labeled “Organic,” “Non-GMO,” “Grass fed” and “Hypoallergenic.” Most formulas were dairy-based, and only one was soy-based. Each formula was tested twice.

The study findings were alarming. Not only did all samples test positive for aluminum and lead, but the researchers also found that:<sup>2</sup>

- Six out of 20 formulas tested positive for all the heavy metals being tested
- 35% of the samples tested positive for cadmium, 55% were positive for mercury and 57% were positive for arsenic
- Four samples had mercury levels that were higher than the allowed limit in drinking water by the U.S. Food and Drug Administration (FDA)
- Cadmium levels in both samples of one formula are nearly twice higher than the allowed amount in drinking water
- The aluminum levels in a goat's milk baby formula were at 41,000 ppb – this means it was 4,000 to 40,000 times higher than other metals in the formulas tested. It also exceeds the limits set by the FDA for the maximum safety level of aluminum for a preemie

## **Heavy Metals Can Cross Your Infant’s Underdeveloped Blood-Brain Barrier**

The study authors, who released their findings on their podcast The New MDS (Mothers, Doctors and Scientists),<sup>3</sup> emphasized the significance of this project and what it can mean for young children's health. They mentioned that these toxic heavy metals can cross your child's blood-brain barrier, which doesn't fully develop until they're 6 months old, which puts them at risk of cognitive health issues.

*"Chronic exposure to these metals, even at low levels, can have cumulative effects on infants, potentially leading to developmental and neurological issues, carcinogenic, as well as initiating the development of chronic diseases later in life.*

*Given the [crucial] growth period in infants, even small amounts of toxic metals can have disproportionately large impacts as compared to adults,"* they stated.<sup>4</sup>

They also noted that the heavy metal contamination from formula milk can have a cumulative effect. The levels can also increase during early infant growth, as well as when various nutrient deficiencies are present, such as iron and vitamin D deficiency.<sup>5</sup> In a blog post, Anne Temple of Moms Across America commented:<sup>6</sup>

*"[W]e are extremely dismayed by the results. We had hoped some formulas would be free from toxic and heavy metals, but they were not. We were shocked to see such high levels of toxic metal aluminum present in goat's milk formula and urge the manufacturers and the FDA to immediately take action to resolve this issue."*

## **Even More Alarming – Infant Formula Tests Positive for Cronobacter**

In late May 2024, the U.S. Food and Drug Administration (FDA) sounded the alarm on another infant formula manufacturer after learning that it not only failed to comply with FDA regulations,<sup>7</sup> but one of its products is contaminated with Cronobacter.<sup>8,9</sup>

The Crecelac Infant Powdered Goat Milk Formula was voluntarily recalled by its Texas-based manufacturer Dairy Manufacturers Inc. after its samples tested positive for Cronobacter. This bacterium can cause life-threatening infections affecting the central nervous system and bloodstream, such as meningitis and sepsis.

Cronobacter infections are most common in infants younger than 2 months and can lead to complications like brain abscess, developmental delay and motor impairments. In the majority of cases, this infection can be fatal.<sup>10</sup>

Initial symptoms of this infection include poor feeding, temperature changes, irritability, jaundice, grunting breaths and abnormal body movements. So far, no illnesses related to the Crecelac recall have been reported,<sup>11</sup> though the FDA cautions parents and guardians to contact their health care provider and get immediate care if their child experiences these symptoms after consuming these infant formulas.<sup>12</sup>

## **New Bill Aims to Limit Harmful Heavy Metals in Baby Food**

There is one good outcome that came from the GMOScience and Moms Across America study – the FDA is taking notice and has made encouraging statements regarding the regulation of heavy metals in infant formula.

U.S. lawmakers are also working on a new bill, dubbed The Baby Food Safety Act of 2024,<sup>13</sup> that would direct the FDA to set maximum allowable limits for heavy metals in baby food, as well as to monitor and set standards for testing the final product. This will also allow them to establish mandatory recalls for food products that don't meet the standards. According to a CNN article:<sup>14</sup>

*“Parents want what’s best for their children, and they deserve peace of mind knowing the food they purchase for their babies and toddlers is safe,” Sen. Amy Klobuchar, D-Minnesota, said in a statement about the bill she is leading.*

*‘This legislation will boost food safety standards and require more complete testing by manufacturers to prevent heavy metals from poisoning our kids.’”*

In recent years, there have been increasing instances of heavy metal contamination seen in baby foods. “A 2019 report from the advocacy group Healthy Babies Bright Futures said that 95% of baby foods from major manufacturers contained lead and a quarter of the foods contained all four heavy metals,” CNN reports.<sup>15</sup>

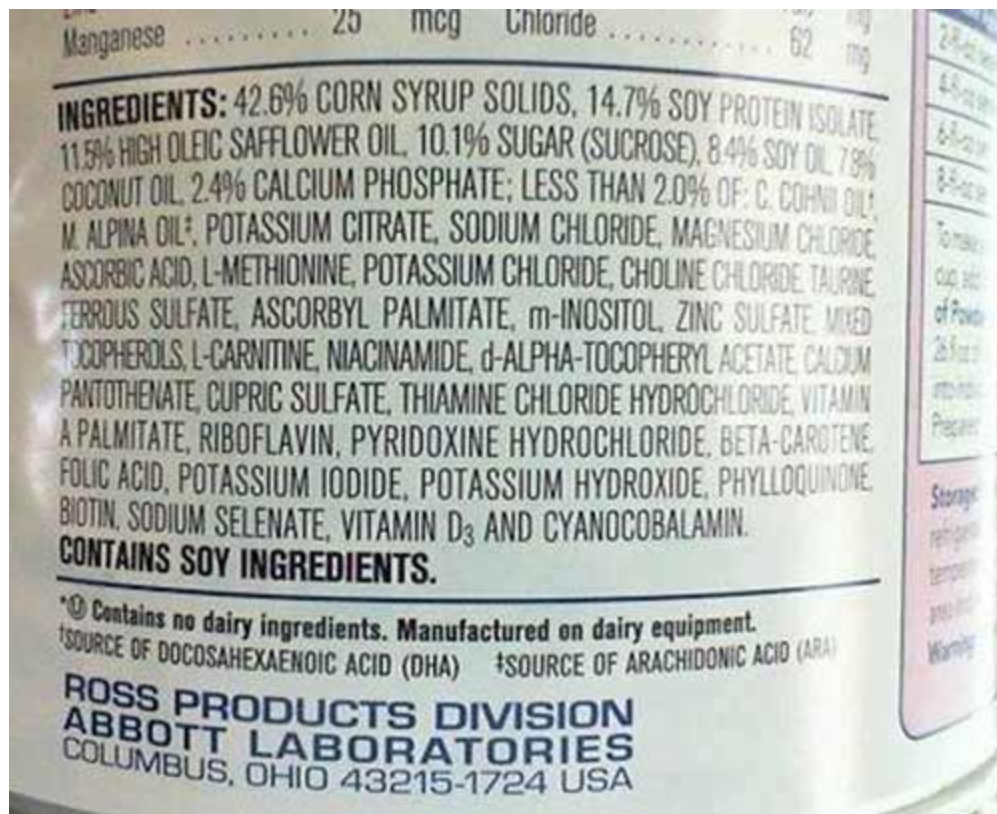
And just last year, the FDA issued a recall for **three brands of fruit pouches** after they were found to contain high lead levels.

*“We urge our Senators and Representatives from both sides of the aisle to remember that toxins are not partisan. Heavy metals, pesticides, and contaminants damage a baby's development, impair their ability to function, and prevent them from fulfilling their potential regardless of their parent's political party. It is imperative that our politicians come together to support this bill,”* according to the Moms Across America website.

## **Most Infant Formulas Are Actually Junk Food**

These findings aren't at all surprising, considering that infant formulas are among the most highly processed food products made for children today, and are prone to contamination. According to Dairy Reporter,<sup>16</sup> “The [Cronobacter] bacterium is naturally found in the environment and may end up in formula if it comes in contact with contaminated surfaces or has been improperly stored.”

What's more, infant formulas are made with junk ingredients that contribute nothing to your child's health. Just take a look at the list of ingredients of one infant formula that's “highly recommended” in the U.S.:



Corn syrup solids, safflower oil, sucrose, soy oil – No wonder **childhood obesity** in the U.S. is now rising at alarming rates. One study published in the American Journal of Clinical Nutrition found that formula milk made with corn syrup solids is associated with increased obesity risk in the first five years of life, in a dose dependent manner.<sup>17</sup>

Plus, the vegetable oils used in these products are loaded with omega-6 fats, particularly **linoleic acid**, the most damaging ingredient that contributes to most degenerative diseases today.

Babies nourished with formula milk are also more likely to rapidly gain weight and in excess – another risk factor for obesity both during childhood and in adulthood.<sup>18</sup> One study, published in the npj Metabolic Health and Diseases, noted:<sup>19</sup>

*“While infant formula is designed to provide all the necessary nutrients for infant growth and development, it has been linked with infant hospitalizations and infections, childhood obesity, and lowered levels of docosahexaenoic acid (DHA), an important fatty acid related to brain development.”*

## **Breastmilk Is Still the Healthiest Food for Babies**

This isn't the first disaster in recent years involving infant formula. In 2022, the FDA shut down Abbott Nutrition's facility in Sturgis, Michigan, after five infants were reportedly sickened with Cronobacter and Salmonella infections.<sup>20</sup> Two of the babies died. As a result of this shutdown, a [severe formula milk shortage](#) was experienced all across the U.S.

Were breastfeeding the norm, then parents wouldn't be in a panic over these disastrous events. Many children would also enjoy better health overall. Unfortunately, many mothers still turn to formula milk, as it not only offers greater freedom, but also because there's been a stigma associated with breastfeeding. For many years, breastfeeding in public has been frowned upon, and has been even considered "shameful."

Many mothers would defer to the bottle rather than be called out for "exposing themselves" in public – a ridiculous notion, as this is in fact the most natural, healthiest food you can offer your child.

## **Breast Is Best for Both Babies and Moms**

The growing awareness of the science behind the "breast is best" campaign has led to increasing rates in breastfeeding in the U.S. In 1971, only 24% of mothers initiated breastfeeding after childbirth;<sup>21</sup> this rose to 81% in 2016.<sup>22</sup> However, a study<sup>23</sup> notes that 60% mothers still stop breastfeeding sooner than planned.

But halting breastfeeding could cause your child to miss out on various health benefits, most of which continue well into adulthood. From a nutritional science point of view, there's simply no dispute that breast milk is the optimal food for newborns and young infants.

For one, breastfeeding has been associated with a lower risk of being overweight and obese.<sup>24</sup> Not only does exclusive breastfeeding prevent the early introduction of foods

that may trigger weight gain, but it also establishes a healthy gut microbiome, which is key for lifelong health. According to the Global Breastfeeding Collective:<sup>25</sup>

*“Breastfeeding helps populate the child’s body with ‘good’ bacteria from his or her mother, which provide protection against excessive weight gain. Breastmilk contains hormones and other biological factors involved in the regulation of food intake that may help shape the long-term physiological processes responsible for maintaining energy balance.*

*Feeding of infant formula by bottle may interfere with a child’s recognition of satiety and thus lead to overeating.”*

Adults who were breastfed during infancy were also found to have a 26% lower risk of becoming overweight or obese, as well as a lower risk of Type 2 diabetes, high blood pressure and heart disease.<sup>26</sup> Mothers who breastfed also experienced profound benefits, such as:

**Quicker recovery from childbirth** – It helps return the uterus to normal size and reduces postpartum bleeding<sup>27</sup>

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**Reduced risk of breast and ovarian cancer**<sup>28</sup>

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**Faster weight loss after childbirth** – Producing milk burns approximately 450 extra calories each day, which helps mobilize visceral fat stores.

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**Reduced risk of cardiovascular disease**<sup>29</sup>

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**Reduced risk of postpartum depression**<sup>30</sup>

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**Closer bond between her and her child, even beyond infancy**<sup>31</sup>

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## **Make Your Own Infant Formula at Home**



If you are a new mother and still lactating, then breastfeeding would be the best choice for both you and your child. However, moms who didn't breastfeed from the start, or who have stopped for weeks or months, may find it difficult to go back to breastfeeding, as you cannot restart lactation at will.

Your next-best option then is to make your own infant formula using raw milk. In the video above, health and nutrition educator Sarah Pope of the Healthy Home Economist demonstrates how to make the formula created by Mary Enig, Ph.D., which was published in the book, "Nourishing Traditions." There are a couple of caveats with Pope's recipe, though:

1. Fermented cod liver oil is a recommended ingredient in Pope's recipes, which may be dangerous for babies. Laboratory testing has revealed the product tends to be prone to rancidity, may contain added vegetable oils, and lacks vitamin K2 and CoQ10.

The concentration of vitamins A and D can also vary significantly from one batch to another, as cod liver oil is not regulated or standardized. Unless you can verify the purity of the cod liver oil, I'd recommend using wild-caught Alaskan Salmon oil or krill oil instead.

2. The Weston A. Price Foundation's baby formula recipe suggests butter oil is optional, but Dr. Price himself recommended always pairing cod liver oil with butter oil, which contains vitamin K2 (MK-4). I recommend tweaking the recipe by making butter oil a requirement if you're using a certified pure fermented cod liver oil.

## **My Preferred Healthy Homemade Infant Formula**

I've made adjustments to Pope's recipe and have applied the necessary substitutions mentioned above. This milk-based recipe will make 36 ounces of infant formula, although if you need to make large batches to last several days, you can do so – just make sure to freeze the finished product.

## Procedure

1. Warm 1 7/8 cups of filtered water (to get this amount, measure out 2 cups of water and remove 2 tablespoons) over medium heat.
2. Add 2 teaspoons of grass fed beef gelatin and 4 tablespoons of lactose to the water; occasionally stir until dissolved.
3. Place 2 cups of raw organic whole cow's milk into a clean glass blender. Add remainder of ingredients to the blender:
  - 1/4 cup of liquid homemade whey (for instructions, see Pope's video. You can also visit the Weston A. Price Foundation's website for their own homemade whey recipe.<sup>32</sup>)
  - 2 to 3 tablespoons of raw cream
  - 1/4 teaspoon acerola powder
  - 1/4 teaspoon bifidobacterium infantis (a probiotic)
  - 2 teaspoons Frontier Brand nutritional yeast flakes
  - 1/2 teaspoon high-quality non-fermented cod liver oil. You could substitute the cod liver oil with wild-caught Alaskan Salmon oil or krill oil
  - 1 teaspoon coconut oil
  - 1 teaspoon organic ghee
4. Remove the pot of water from the stove. Add 2 teaspoons of coconut oil and 1/4 teaspoon high-vitamin butter oil to the water to melt. Once melted, add the water mixture to the blender ingredients and blend for about three to five seconds.
5. Pour the blended ingredients into glass jars or glass baby bottles and refrigerate. Before feeding, warm the formula by placing the glass bottle in a pot of hot water. A baby bottle warmer can also be used. Never microwave

infant formula, as this will destroy many valuable nutrients and enzymes and pose a burn risk.

## **If Your Child Cannot Tolerate Milk Proteins, Try This Meat-Based Formula**

Many symptoms of milk intolerance are caused by A1 casein, a type of lectin associated with leaky gut and autoimmune disorders. Casein A2 is the normal protein in milk, present in sheep, goat, water buffalo and some Jersey cow milk. Unfortunately, most cows today are casein A1 producers.

For babies who cannot tolerate milk, Pope recommends this hypoallergenic infant formula recipe, which uses meat instead.

### **Procedure**

1. Chop 2 ounces of organic grass fed beef or chicken liver into small pieces.
2. Gently simmer the liver pieces in 3 3/4 cups homemade chicken or beef broth, until thoroughly cooked.
3. Pour the liver broth into a clean glass blender. Blend for several seconds to liquefy the liver, then let cool. Once the liver broth has cooled, add the remaining ingredients:
  - 5 tablespoons of lactose (if your child is allergic to lactose, substitute with glucose)
  - 1/4 cup organic homemade liquid whey (if your child has intolerance to whey, you may leave it out)
  - 1/4 teaspoon bifidobacterium infantis (a probiotic)
  - 1/4 teaspoon acerola powder

- 2 teaspoons organic grass fed ghee
  - 1 teaspoon high-quality coconut oil
  - 1/2 teaspoon high-quality cod liver oil. You could substitute the cod liver oil with wild-caught Alaskan Salmon oil or krill oil
4. Blend for a few seconds on low speed, until well-mixed. Pour the blended ingredients into glass jars or glass baby bottles and refrigerate.
  5. Before feeding, warm the formula by placing the glass bottle in a pot of hot water. A baby bottle warmer can also be used. Never microwave infant formula, as this will destroy many valuable nutrients and enzymes and pose a burn risk.

## Sources and References

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