

The problem of chemical contaminants in food

[Food & Diet](#)



Think back and see if you can remember eating at a Subway or a McDonalds. I'm sure you have because these are two of the most popular fast food restaurants in America. You might have enjoyed that sandwich but what you didn't realize is that you are eating yoga mats. Technically you're eating bread but fast food giants such as these big names have been including azodicarbonamide in their recipe which is the same stuff found in yoga mats and shoe soles (Scauzillo, 2014). This probably takes you by surprise but the fact is that a lot of the food we consume is contaminated.

Through the use of pesticides on a farm, food additives, metal or plastic containers and water, the food we consume daily is providing us with deadly chemicals. Many people wouldn't believe it if you told them but some of the foods you're eating can cause life threatening diseases such as cancer or diabetes. It's not to an extreme as to where you take one bite of a chip or a sip of water and you are immediately at risk to die but over the years the increase in use of pesticides has increased the risk over a gradual amount of time.

Pesticides are mainly used for the treatment of crops at the beginning of a food's life cycle but it isn't the only time pesticides enter the food we eat. The animals that we use to produce goods such as meat, milk or eggs are also treated with these same types of pesticides to keep the animals healthy. These pesticides are used for the greater good when applied but the need for money by farmers outweighs the risk that is formed so these pesticides can be used in excess. One of the most common pesticides used by American farmers is called DDT (Jones, Gadler & Engstrom 1971).

It was thought that this chemical was consumed in such small amount that the body was unaffected but studies show otherwise. People who died of liver cancer or central nervous disease were tested for high amounts of DDT in their body and the results came back positive. After these results came in further research was done and it was proven that DDT is directly related to problems with the liver, cancerous tumors and even Alzheimer's (Roberts & Urbach, 2014). This shocked the nation because up until then no one thought they could be at such risks.

A popular herbicide called 2, 4, 5-T was found to create birth defects in unborn children (Jones, Gadler & Engstrom 1971). Pregnant mice were given this herbicide in a closed study and their babies came out with cleft palates, cystic kidneys and even missing eyes DDT (Jones, Gadler & Engstrom 1971). The worst part about this herbicide is that it was used to defoliate certain areas during the Vietnam War and the children from that area were born with the same types of birth defects. Do to constant testing this herbicide was later banned but others soon followed in its footsteps that also had detrimental effects.

Pesticides all across the world are having similar effects like this, in Sri Lanka the government had to step in and stop the pesticides habits of the farmers because they were causing kidney ailments to those who consume them (Wijayaratne, 2014). A growth regulator called maleic hydrazide was used to promote the growth of crops but caused liver tumors (Jones, Gadler & Engstrom, 1971). Growth regulators such as these aren't only in crops but used heavily across the nation in our livestock.

Arsenic is one of the more common food additives used in our poultry and most of the chickens that we buy from the store have been raised using this poisonous chemical and can cause arsenic poisoning, which can result in death. Hormones are used for the same purpose of increasing the size of livestock. The most used hormone is called DES and it causes any human who consumes it to become very ill. The FDA states that no cattle can be slaughtered with traces of this hormone but it is up to the feeders to regulate the amount of DES given to their livestock (Jones, Gadler & Engstrom 1971).

That is why countries such as Sweden and Italy have put bans on meat from the US that has been raised using DES. Other countries are seeing the risk that we put ourselves at but we choose to make profit for a bigger cow than to ensure the safety of our own people and that is why the use of pesticides and hormones in food can have such a great risk. This is only the first stop in the life cycle of a food, it still has to be packaged and distributed and this is where many more chemicals come into play. One of the main ways that chemicals enter food during the packaging and distribution phase is through food additives.

Popular forms of these additives are preservatives, antioxidants and flavor enhancers. Preservatives are what keeps food fresh while it sits in a grocery shelf and they come in all different types of forms. These are added into almost every type of food you see in the store from bread to cheese to meat and anybody who consumes them are at risk. A toxic preservative used in fresh foods brought in from crops is called sulfur dioxide and is used in great proportion. Small samples of this chemical in the human body can cause

nausea, fatigue and even the destruction of the blood corpuscles (Jones, Gadler & Engstrom 1971).

Antioxidants are used for a similar purpose in that they prevent fatty foods from going bad. They are known to be put into foods, but people don't realize what they can actually do. Two main antioxidants, BHT and BHA, are the most common antioxidants and they can cause skin blisters, extreme weakness or difficulty breathing (Jones, Gadler & Engstrom 1971). In other countries the use of these chemicals have been banned, but in the United States we have increased the use of this chemical. The third big food additive are flavor enhancer.

Their name is pretty straightforward but they are used to retain the flavor lost from preserved foods. Many of these are synthetic and have ended up being of banned by the FDA for possibly causing cancer or brain damage. But MSG which was tested to be hazardous for people was agreed to no longer be used in production by manufacturers but it is still being used in other forms of processed foods (Jones, Gadler & Engstrom 1971). Not all of the problems of distributing come from additives, a main piece to the puzzle is from the materials the food comes in contact with such as cans or plastic containers.

When it comes to the relation between how plastic and our food little research has been done to provide any strong evidence that it causes a risk. It is known that in plastic bottles there are small amounts of formaldehyde which can cause cancer in higher doses but there has been no connection between the two so no alarms were raised (Barton, 2014). There was

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recently a small breakthrough and scientist noticed a high amount of bisphenol A (BPA) in our bodies. High doses of BPA were tested on rats and the results came back to show that it disrupts the function of hormones (Hoffman, 2011).

The studies were continued to show that there were higher doses of BPA in humans than the amount given to the rats (Hoffman, 2011). Studies like these continue over to the study of other food contact materials (FCMs) such as metals. Aluminum soda cans have also been found to have this same problem of containing BPA. The cans are lined with this BPA to prevent the liquid from coming in contact with the metal but it is a meaningless effort because the barrier is now being linked with causing the same hormone problems as in the plastic containers.

This is not the only problem of metal and our food, scientists have also noted that there are endocrine disrupting chemicals in our FCM's that can lead to chronic diseases in the future for unborn babies (Willey, 2014). The third way that a majority of the chemicals we consume enter our body is through the major component of everything we eat and drink, water. All across the world our supply of food is dependent on our water supply. Therefore it only makes sense that if we have contaminated water then we have contaminated food.

Most of this contamination comes from bacteria produced by waste dumped into sources of water but it can also come from pesticides draining from crops or radiation. Public water supplies have been tested for radioactive waste and sure enough they found traces of strontium 90 and cesium which both affect our bones and muscles (Brown, 2014). Other water pollutants are

metals such as lead, mercury, cobalt and zinc. In a study of the 50 states water was taken from water supplies and in three of those samples scientists found levels of these metals above a safe level (Jones, Gadler & Engstrom 1971).

It is not only that the water is contaminated, but that the organisms are succumbed to those conditions and they too become contaminated and when we consume them those, toxins and metals are carried over into our bodies. There have been many cases of the sale of fish from certain areas being banned due to an unsafe amount of chemicals, such as the case of American importers brought in 120, 000 pounds of fish that were contaminated with malachite green (Udesky, 2011). When it comes to the problem of chemical contamination in our food a solution needs to become clear.

Whether it is through pesticides on a farm, food additives and FCMs or through our basic necessity of life we need to find a way to keep our food clean. In all of the other big countries around the world harmful chemicals in their food have been banned but for some reason the United States has decided to hold on to their laws that allows for the contamination of food. Everyday people are at a constant risk of defects, cancer or even death yet we still have no solution. When a problem becomes as big as this you would think that the government would come in and solve it, well it's time for this problem to be solved.

References

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