



## 1. WHY ARE NATURALLY-OCCURRING FOOD CONTAMINANTS OF CONCERN?



### Prevalence and Toxic Strength

Before chemical contamination of foods, which began at the end of the 18th century, there were a lot of food-related human health problems and deaths despite a life that was very natural, green and ecological. Why? Because natural food contaminants were all around us... and they still are.

The most potent food contaminant is botulinum toxin, a protein produced by the naturally-occurring bacterium, *Clostridium botulinum*. The amount of botulinum toxin needed to kill the world population, if it was divided equally, would be the size of a chocolate bar. The most potent human-derived contaminant is *Italy* strychnine, a synthetically produced alkaloid. To kill the world population, about 440 truckloads of strychnine would be necessary.

■ One chocolate bar of botulinum toxin will kill all seven and a half billion inhabitants of this planet.

### Often Ignored

People put pesticides and food additives high on a risk ranking scale and they put naturally-occurring toxicants and pathogenic bacteria low. The scientific reality is different. Naturally-occurring contaminants: bacteria, viruses, fungi etc. can be more dangerous than chemicals in foods.

It's not often that food actually kills people. However, 50 people died in the *E. coli* outbreak in Germany in 2011 - but this is not reflected in political debates. Instead, food safety discussion tends to focus on limiting chemical contamination.

■ The word natural signals "safe" to many people, and this is a problem.

**To eat is a risky business: toxic agents are all around us**



Natural toxic agents	Human made toxic agents
<b>Micro-organisms</b> <ul style="list-style-type: none"><li>- Bacteria</li><li>- Bacterial toxins</li><li>- Fungi/moulds</li><li>- Mycotoxins</li><li>- Viruses</li><li>- Algal toxins...</li></ul>	<b>Environmental toxins</b> <ul style="list-style-type: none"><li>- Pesticides</li><li>- Fungicides</li><li>- Dioxins</li><li>- PCBs...</li></ul>
<b>Plant toxins</b>	<b>Processing toxins</b> <ul style="list-style-type: none"><li>- PAH</li><li>- Acrylamide</li></ul>
	<b>Radiation</b>

WAGeningen

April 2018 release of a summary paper from the October 2017 SAFE consortium food safety workshop, "Natural and Microbial Food Contaminant: Riskier Than We Think?". Read it [here](#) .

This 4-page glossy is from the 1 1/2 hour workshop which featured the [European Commissioner for Health and Food Safety, Vytenis Andriukaitis](#) as keynote speaker and the [Member of European Parliament Christofer Fjellner](#) as host.

Read more about the workshop [here](#) , including links to presentations and related publications.

See the 3 1/2 minute summary video of the workshop [here](#) .