

We Underestimate the Health Risk of Airborne Pollution and Pesticides in Food - Providing Fertile Ground for the COVID-19 Pandemic!

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Introduction

When conventional agricultural organizations and selected industry players claim that the use of pesticides and heavy metals is harmless, they do so without a host. It is a fact that both pesticides and heavy metals penetrate nerve and intestinal tissues and today there is no doubt that it negatively affects human health. We have yet to understand the more precise relationships between Micro-Particles (PM) from industry and cars and the specific diseases - as well as the insight into pesticide/chemical damage from groundwater. It is a fact that both pesticides and heavy metals penetrate nerve and intestinal tissues and today there is no doubt that it negatively affects human health. We have yet to understand the more precise relationships between Micro-Particles (PM) from industry and cars and the specific diseases - as well as the insight into pesticide/chemical damage from groundwater. It must not, however, become an excuse for politicians not to act - as is the case. Because the knowledge we have already acquired in recent decades through number of studies around the world points very clearly to the harmful consequences - autoimmune conditions, cancer, mental disorders to name but a few.

The Seveso accident near Milan back in 1976 was one of the first major industrial accidents to give rise to research into the health risks of exposure to chemicals. At the time of the accident, 2.5 kg of dioxin was spread across a larger densely populated area, but since no one knew what substances, the company was using in production, it took a fortnight for the area to be evacuated. Already the following year, local people felt the disastrous effects of the chemicals. 122 deformed babies were born. Another 450 children were attacked by an incurable skin condition. A few died of liver cancer. At the same time, women in particular experienced increased risk of type 2 diabetes.

The extent of the damage brought attention to the use of dioxin by the United States in weed and deciduous precipitation agents - not least its use in the Vietnam War (where the use of pesticides was used to remove the tall grass species where partisans were hiding), where four million Vietnamese were exposed to the toxin. The Red Cross in Vietnam subsequently estimated that about one million Vietnamese received serious pesticides. Dioxin is just one example of how the influence of a chemical can harm living organisms. The effects of other chemicals are not always as visible, but the health consequences are often equally fatal.

An ordinary Dane is exposed daily to a cocktail of various pesticides through drinking water and diet. In 2019, for example, pesticide residues were found in 2 out of 3 drinking water samples. The type, quantity and composition of pesticides vary from drinking drilling to drinking drilling and from food to food. Often, in isolation, it is small amounts of the

individual toxin, but in an unknown combination with other toxins. And no matter how the cocktail is screwed together, the chemicals penetrate into the human organisms.

A 2017 study has mapped 338 pesticides and shows how about 40% of these penetrate our nerve tissue and from there affect our brain, while about 80% penetrate our intestinal tissue and are passed on from there into the blood.

The human microbiome (surface of the mucous membranes) is the wall of defense against invasive organisms, including viruses, etc. It is worrying to note that pesticides and heavy metals destroy not only the defense membrane (Lectin layer - part of the innate immune framework), but also mitochondrial in the cells which are the body's 'energy factories'. Mitochondria are essential for the body's defense and development. When the functioning of mitochondria is weakened and affected macrophages and leukocyte function and thus immune system and the risk of chronic diseases increases. The biodiversity of the mucous membranes is essential to maintain a defense against invasive organisms and thus the existing species.

The constant exposure to chemicals via drinking water and food therefore increases the risk of chronic diseases. Exposure to microparticles in the air destroys the airway defenses - and may hypothetically become the way e.g., Covid-19 more easily penetrates and causes serious illness/death. Smoking has for many years been experienced as a known cancer trigger - no one will doubt that the lung tissue microbiome is destroyed by longtime smoking. If one is genetically predisposed, cancer can be one of several consequences - chronic bronchitis as a minimum.

Today, there is an increasing evidence that number of diseases are triggered by the external environment, what we call trigger points. Pesticides are one of the most striking trigger points, but there are several other examples, such as plastic and chemicals in clothing.

In society, there is a growing awareness of what environmental impact means for the traditional perception of a wide range of diseases that medical professionals have not been able to explain. So, what is the real interaction between e.g., chemicals/microparticles and diseases such as cancer, Parkinson's, diabetes, arthritis, autism, PTSD and chronic fatigue (ME/CFS). So far, we have tried unsuccessfully to explain these diseases as triggered by viruses, but more needs to be done and here environmental degradation comes into play.

There are many examples that should serve as a reflection. For example, the production of tobacco leaves in Brazil. Production is an essential part of the country's economy, which is why pesticides/chemicals are widespread to counteract damage to the leaves. A controlled clinical trial examined 40 farm workers exposed to pesticides on their plantation for 360 hours between June and September against a similar group in a pesticide-free plantation.

In the group of farm workers exposed to pesticides, increased

concentration in the blood of Aluminums, Arsenic, Chromium, Copper, Nickel, K+, Selenium, Zinc and damage to DNA level was measured. Studies on the blood of children in these families could also show harmful substances. It is a fact that there are harmful effects from pesticides and plastics, among others, develop diseases such as diabetes as a possible global touch of the environment and way of life.

But we do not know the exact effect and it's doubtful we'll ever have evidence of it. This would require unethical experiments in which groups of people are exposed to different pesticides with the harmful effects it may cause. It is important that examples such as those mentioned in the text here serve as reflection.

Today, it is the citizens who are left as the losers, because the consequence is that we only react when the disease has arisen with cancer packages, pain management packages, neurological rehabilitation, etc. Is it acceptable to expose the population to health risks of this nature? I do not think so. Health professionals and policymakers must go hand in hand - as is finally done in the Covid-19 pandemic.

As ordinary citizens, we must be able to expect politicians to protect at least our drinking water and our food so that they are freed from pesticide residues. We should also be able to expect politicians to take citizens into account when it comes to chemicals in plastics and clothing and other products.

It took a pandemic with Covid-19 for British society to open its eyes. A publication "Links between air pollution and COVID-19 in England" has highlighted this openness. The study shows a correlation so that the population around London and where air quality was lowest measured by concentration of PM was associated with a 12% increased incidence of Covid-19 cases and that in these areas were found to be a significant link between Covid-19 deaths and concentration of NO₂ and Dioxin in air pollution [1]. In a Dutch work, it is described that an increase in particle concentration (of one unit) generates a Covid-19 increase of 9.4%. The observations are thought-provoking. Evidence in traditional circumstances is not feasible - that would be unethical.

In focus is the training around environmental degradation and the destruction of the microbiome and that possible long-term consequences are taken seriously. ME/CFS patients (e.g., herpes-6 virus reactivation) have had to put up with a long course of action even though it was the most decisive laboratory findings -years ago, involving an autoimmune condition [2,3]. European Cooperation in Science & Technology (COST) Action ME/CFS has worked out a strategy plan for outpatient/GP clinics. Health professionals and policymakers must go hand in hand - as is finally done in the Covid-19 pandemic.

Boxplot: The overview is based on more than 60 scientific studies - the 4 articles included suggest a possible link between autoimmunity and environment and virus approach og European Cooperation in ME/CFS.

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