Fungal Infections Becoming Resistant, Evolving Like Antibiotic-Resistant Bacteria

Fungal infections are demonstrating resistance to fungicides in the same way that bacteria react to antibiotics, warns a new report in *Science* magazine. Many perceive fungal infections like candida, athlete's foot, and others to be relatively harmless, but an estimated 1.5 million worldwide die from fungal related causes. These microbes have slowly been building resistance to traditional methods of treatment, and according to the report, that's scary news.

> *Fungal infections on human health are currently spiraling, and the global mortality for fungal diseases now exceeds that for malaria or breast cancer."*

How Did We Get Here

These potentially devasting microbial evolutions follow the same pattern. People and animals are given large amounts of unnecessary antibiotics or fungicides. Even if these drugs kill all of the pathogens they are meant to (and they don't always), they also eliminate the beneficial bacteria as well. Once the beneficial bacteria is cleared out, bacteria and fungus left untouched by the treatment have a clear field to thrive. This allows the microbes strong enough to withstand the medication with the best possible environment for it to colonize.

Related: *Best Supplements To Kill Candida and Everything Else You Ever Wanted To Know About Fungal Infections*

Scientists predict a yearly death rate of 10 million people from antibiotic-resistant bacteria in the year 2050 if things

continue as they are. Currently, deaths from those bacteria number 700,000 people a year. Estimates for deaths caused by fungal infections this year are at 1.5 million. Fungus and their spores are causing more deaths, and the most commonly used treatments for fungal issues are being used more frequently and diversely than antibiotics are.

Burying the Lede

There are two reasons to be incredibly concerned about antifungal-resistance. We are using azoles, the most commonly used family of antifungals, as medicine for people and animals, as crop protection, for preserving lumber, and as antifouling coatings applied to the outside of ships. These fungicides are everywhere, and if we've learned anything from the widely published antibiotic-resistant superbugs, this is bad news.

Another reason? The fungus is impossible to contain, and fungi are better at becoming airborne than other pathogens like bacteria and viruses. Every inhale contains multiple fungal infections waiting to happen. Much of our food is grown with fungus specifically added to it. There is no escape.

Related: *How to Kill Fungal Infections*

Taking It Seriously

Agriculture has known about fungus resistance to azoles for more than a decade. We've been on this train for a while now, and no one is activating the brakes. How bad is the crash going to be?

Immune System Importance

Dangerous mycotoxins (toxic substances produced by fungi) can

develop in the compost pile, household mold, grains like wheat and sorghum, pet food, and dietary supplements. More people die from fungal infections than from tuberculosis. People who are taking antibiotics or who have compromised immune systems are especially susceptible. Which boggles the mind really…antibiotic use leaves you at a greater risk for a potentially dangerous fungal infection.

Related: *How To Heal Your Gut*

We can't always control what we're exposed to. The most common (and frustrating) fungal infections are caused by candida, a necessary digestive microbe! What we can control is how our body reacts to them. Balancing your microbes is key to a healthy immune system and avoiding serious illness.

Sources:

- *Deaths from fungal infections exceeding malaria, say researchers in new drug resistance warning* – The Independent
- *Worldwide emergence of resistance to antifungal drugs challenges human health and food security* – Science Magazine
- *How fungi kill millions globally* – CNN
- *Genesis of Azole Antifungal Resistance from Agriculture to Clinical Settings* – Journal of Agricultural and Food Chemistry
- *Attacking fungal infection, one of world's major killers* – Science News