

FACT SHEET | Gliotoxin

Gliotoxin opens the doorway to fungal infection. It's the most abundant metabolic product made when these particular fungi are in a growth phase.

Determining the Gliotoxin source can be difficult to nail down, since it comes from both molds and yeasts. Many of my patients who have Gliotoxin have a significant fungal yeast burden of Candida and other normally commensal yeast species.

Gliotoxin is one of the most diverse toxins in how it affects bodies. Its effects span from the genes to the immune system all the way out to the skin.

People with Gliotoxin tend to be sulfur sensitive, owing to the disulfide bond in the toxin. This is one case where, even though people with Gliotoxin get depleted in them, I'm very cautious in my use and timing of Zinc, Alpha-lipoic acid, N-Acetyl Cysteine, and Glutathione - as these may actually help the toxin work better. Therefore, I use these once my patients are on antifungal therapy, so we know the benefit goes to my patient, not the mold.

MOLD + YEAST SOURCES

Aspergillus spp., Trichoderma spp. ~

Color - typically light to very dark green but can take on any color

Favorite building material - flooring, carpet, textiles, wood, plywood, modified wood products, concrete

Candida and other commensal yeast species ~

This yeast grows in human bodies naturally and can overgrow after mold exposure

BODY SYSTEM AFFINITIES

Skin & mucosal linings - sinus, lung, mouth, throat, GI, bladder, vagina

Mast cell inducer

Immune suppressive

Genotoxic

Neurotoxic

Toxic to the liver

Negatively affect the mitochondria (energy powerhouse of cells)

SIGNS & SYMPTOMS

Fungal skin conditions

Itchy skin

Toenail fungus

Mast cell reactions

Bloating after eating

Sweet cravings

Nausea

Constipation

Intolerance to sulfur-containing foods

Chemical sensitivities

Fatigue

Cognitive difficulties

Headaches

Anxiousness

Frequent mood changes

Despair/suicidality

Incoordination

Multiple sclerosis-type symptoms

Insomnia

Frequent infections

Delayed wound healing

THINGS THAT HELP MY PATIENTS

Therapeutic Diet ~

Temporary avoidance of sulfur-containing foods, such as garlic, onions, eggs, fish, and the Brassicacea family (broccoli, kale, cauliflower, cabbage, Brussels sprouts.)

Bitters & Bile ~

Bile acids have an antifungal effect on yeasts, and also detox Gliotoxin by packaging it up for excretion.

Things that taste bitter help to make bile, and can be used before meals and/or binders to capitalize on this effect.

Bitter tinctures and bitter teas can be taken with meals.

Molybdenum. Reduces sulfur reactions.

Antifungals as soon as possible. Blends work best since this is both a yeast and mold toxin.

Resveratrol. Antifungal bioflavonoid.

Turmeric. Antifungal detoxifying agent.

Quercetin. Reduces mast cell reactions.

Coffee enema. Induces bile secretion.

Zinc*. Take with food. Combats the immunotoxic effects.

(may cause nausea on empty stomach)

*Start very low, and only once on antifungal therapy.

Glutathione*. Replete deficiencies in the mitochondria.

Use the same caution with thiol-containing glutathione inducers - Alpha lipoic acid (ALA), N-Acetyl Cysteine, and EDTA.

Adding Selenomethionine helps to combat the immunotoxic effects.

*Start very low, and only once on antifungal therapy.

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