



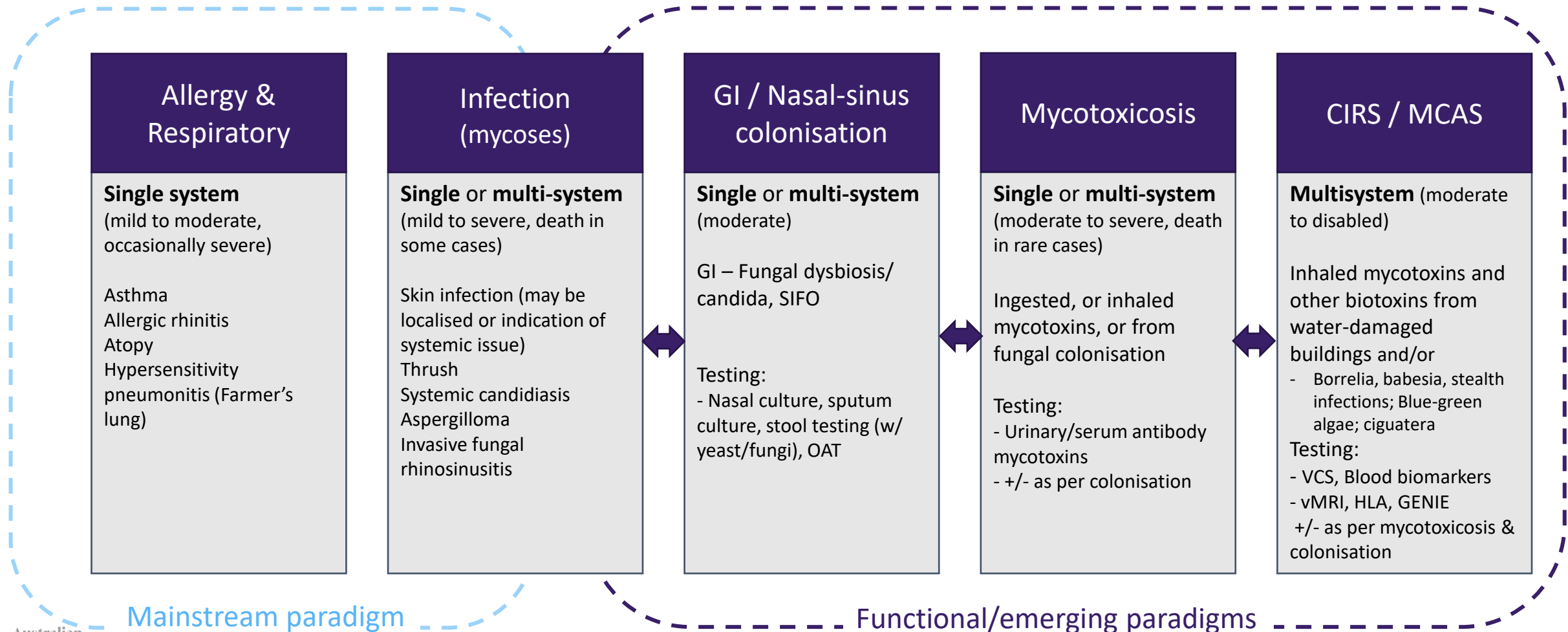
Practical Aspects of Mould-Related Illness

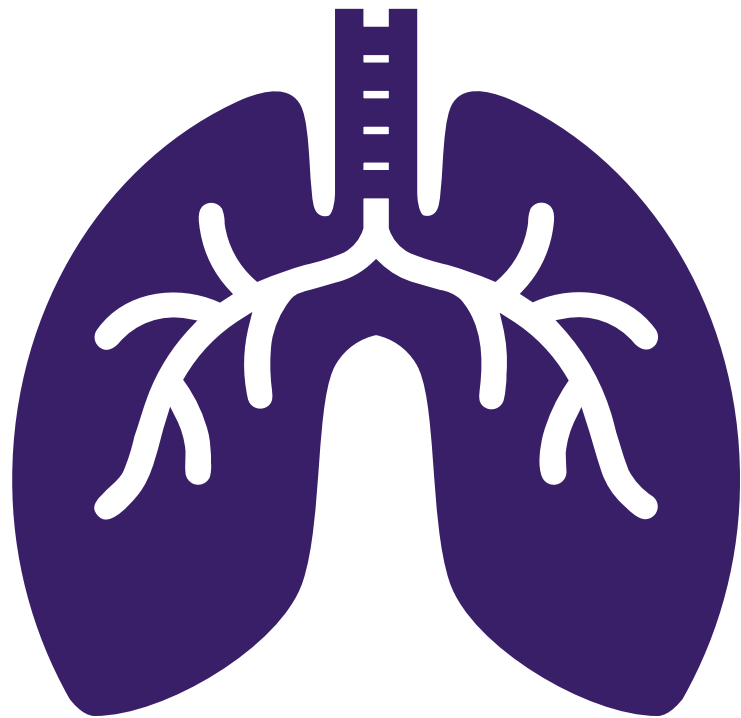
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Basic Premise

Mould and dampness are extremely common causes of illness that are usually neglected at great expense to the patient.

Mould Affecting Human Health – An Overview





Allergy & Respiratory

Allergy & Respiratory – Background

- Soomewhat recognised in mainstream medicine that mould exposure can cause or exacerbate:
 - Allergic rhinitis
 - Asthma / Wheeze
 - Atopic / Contact dermatitis
 - COPD
 - Hypersensitivity Pneumonitis (farmer's lung)



Mould could be to blame for asthma, NZ study finds

9:01 am on 8 September 2017

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Medical researchers are calling for urgent improvements to the quality of New Zealand homes, after their research showed leaking and mouldy houses could lead children to develop asthma.



RELATED STORIES

Tenants wait years for state houses, boarding house owner says

6 Sep 2017

Raymond Teinaki and his family, who have lived at a boarding house for seven years, have given up hope of ever getting a state house.



Homeless accommodation 'not what I was expecting'

31 Aug 2017

Families in the Far North needing emergency housing are being sent to a dilapidated campground to live in concrete rooms with no carpet, insulation or hot water. (VIDEO, AUDIO)



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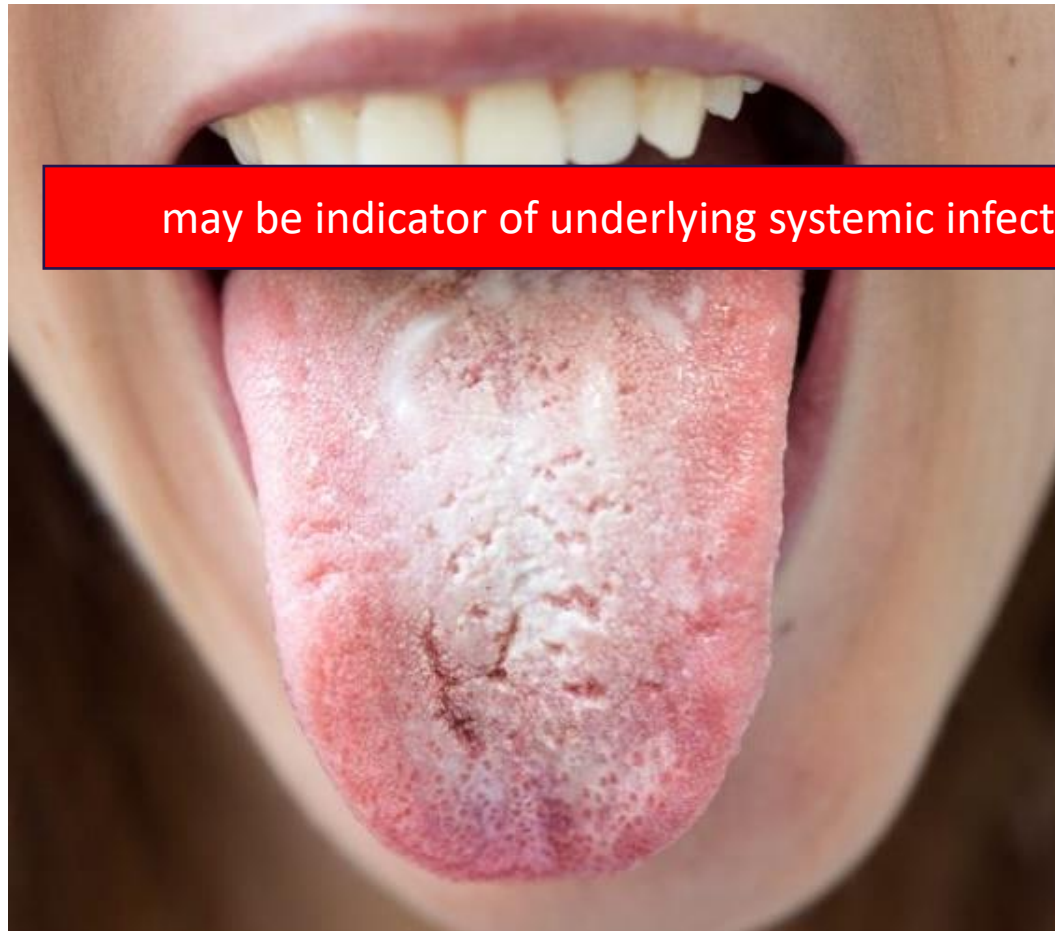
Allergy & Respiratory – Dx/Rx

	Diagnosis	Treatment
Allergic rhinitis	PE, Skin allergen testing / RAST IgE mould panel	Removal from mould exposure Immunotherapy, LDI/LDA Nasal spray (antihistamine/corticosteroid)
Allergic dermatitis	PE, Skin allergen testing / RAST IgE mould panel	Removal from mould exposure Immunotherapy, LDI/LDA
Asthma	PE, Spirometry, Lung FT	Removal from mould exposure Inhaled steroids, leukotriene modifiers, beta agonists, combo inhalers
Hypersensitivity Pneumonitis	PE, Imaging, Lung FT, bronchoscopy, SpO ²	Removal from mould exposure, O ² , Corticosteroids (severe) Lung transplant (v. severe)
COPD	PE, Lung FT, Imaging, arterial blood gas	Removal from mould exposure, Inhaled/oral steroids, combo inhalers, O ²



Fungal Infection/Colonisation

Fungal Infection – Background



may be indicator of underlying systemic infection

Fungal infection (mycoses) although mentioned in mainstream medicine textbooks, is rarely diagnosed.

Skin infection

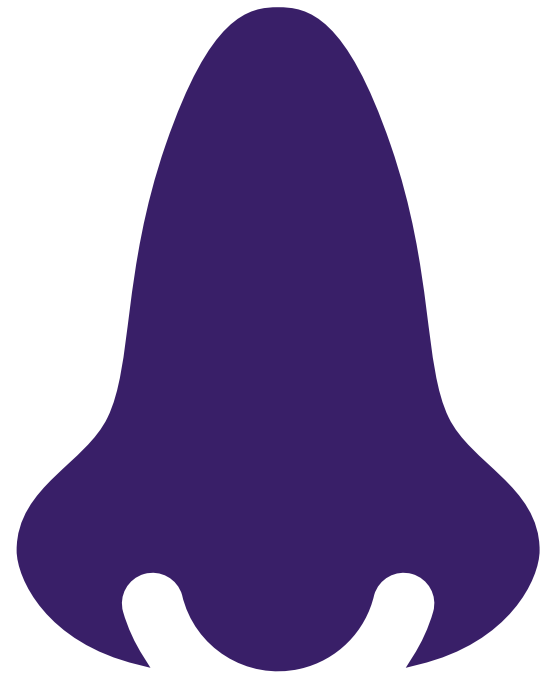
(athlete's foot, ringworm, jock itch etc.)

- Mucosal overgrowth
(oral/vaginal/penile thrush)
- Fungal rhinosinusitis
- Aspergillosis, Aspergilloma
- Systemic/Invasive Candidiasis
- Cryptococcus Neoformans
- Mucormycosis



Fungal Infection – Dx/Tx

	Diagnosis	Treatment
Skin/mucosal	Visual / Culture	Topical and/or systemic antifungals
Fungal rhinosinusitis	Culture, imaging	Topical and/or systemic antifungals, surgery
Systemic infection	↑ AB, culture	Systemic antifungals
Aspergillosis	↑ IgG AB Aspergillus spp in bronical washings	Systemic antifungals



Gastrointestinal/ Nasal Colonisation

Colonisation – Sx/Dx/Tx

Colonisation can occur when the normal amounts of yeast/fungi in the GI tract or nasal/sinus area become overgrown and crowd out normal flora turning pathogenic and causing symptoms.

	Symptoms	Diagnosis	Treatment
Nasal	Nasal congestion Runny nose, Post-nasal drip, Sinus pain/headaches (may be asymptomatic)	Nasal swab/culture (nasopharynx, sinus)	Nasal herbal or pharmaceutical antifungals Colloidal Silver
GI	Bloating, Gas, Diarrhea, Constipation, Gastroparesis, Stomach pain, SIFO	Stool test (yeast/fungi) OAT (markers #1-9)	Herbal and other supplemental antifungals Pharmaceutical antifungals Low mould/yeast/sugar diet

Fungal Infection/Colonisation

Much more commonly is mild and involves multiple organs

- Small & large intestines
- Lung tissue
- Rhinosinus area
- Reproductive organs
- Skin

Fungal Infection/Colonisation - Treatment

Herbal medicine

- Reishi mushroom, Pau D'arco, Golden Seal, Olive Leaf Extract

Antifungals when needed

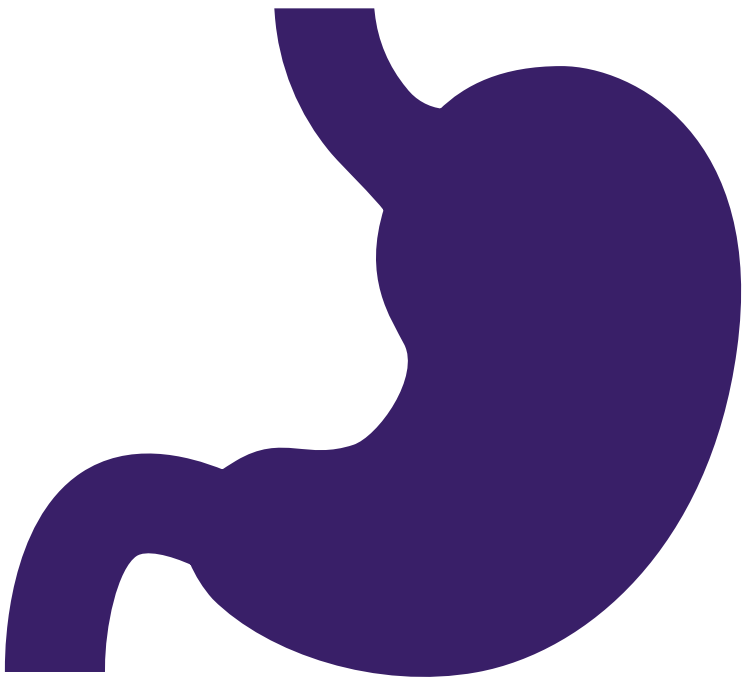
- Nystatin for yeast
- Azoles for mould and/or amphotericin B nasally

Avoidance of water-damaged buildings

- Always think of and focus on this aspect if you want good results

Local treatment can be helpful

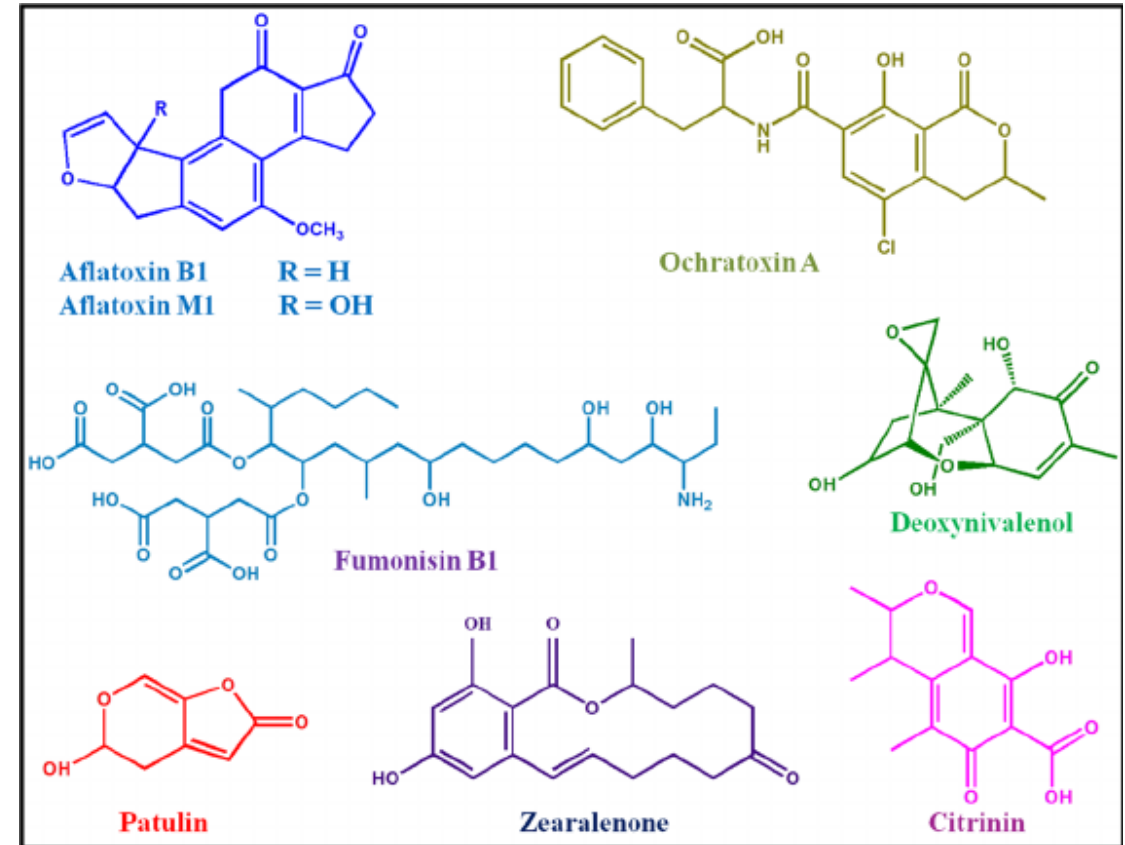
- Nasal sprays if nasal colonisation
- Vaginal douches
- Topical creams for skin



Mycotoxins

What are Mycotoxins?

- Toxic secondary metabolites produced by fungi
- Low molecular weight (small molecules)
- Thought to act as a defence mechanism against bacteria, other fungi and insects
- Some mycotoxins are used in medicine e.g.
 - Penicillin (antibiotic)
 - Mycophenolic acid (immunosuppressant)
 - Cyclosporin (immunosuppressant)
- 300-400 have been discovered to date



How Do Mycotoxins Enter the Body?

- Mainstream literature
 - Food contamination (entry via GI tract) only
 - An issue mostly in developing nations
 - Mostly associated with acute disease
- Integrative medicine
 - Also present in food of developed nations (chocolate, nuts, grains, corn, coffee, spices etc.)
 - Also via inhalation, dermal, tear ducts -- routes of exposure from water-damaged buildings
 - Associated more with chronic disease



What is Mycotoxicosis?

A poisoning of the body from mycotoxins --
“poisoning by natural means”

Acute

Rapid onset

Obvious toxic response

Symptoms

GI symptoms

Nausea, bloating, constipation, diarrhea

Neurological symptoms

Peripheral or central neuropathy, seizures

Death (rare)

Chronic

Symptoms

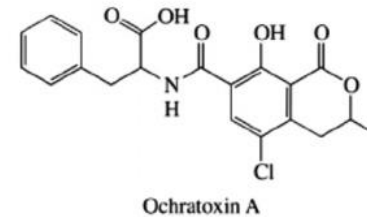
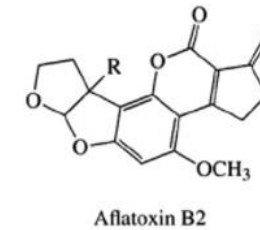
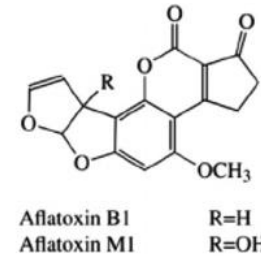
- GI symptoms
- Nausea, bloating, diarrhea
- Fatigue
- Poor sleep
- Insomnia, unrefreshing sleep
- Neurological symptoms
- Brain fog, memory issues, headaches, neuropathy
- Immune suppression
- Frequent colds & flus
- Frequent fungal infections
- Hormonal imbalance
- Particularly elevated estrogen
- Kidney toxicity
- Birth defects
- Cancer

Mycotoxycosis – Diagnosis

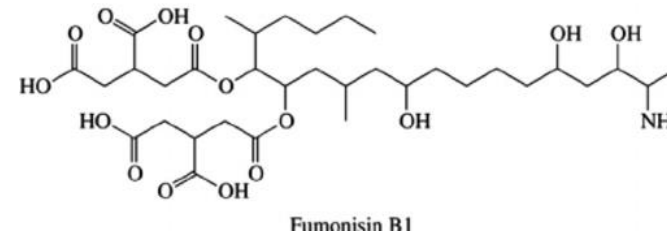
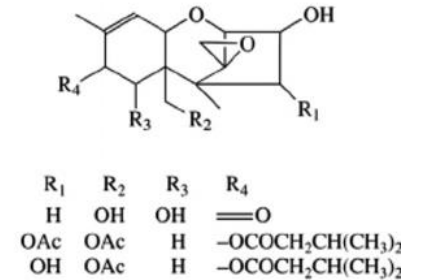
Urinary mycotoxins	Great Plains/RN Labs (LC-MS/MS) or Vibrant (MS)
Urinary mycotoxins	RealTime/NutriPATH (ELISA)
Serum mycotoxin antibodies	MyMycoLab (ELISA) (Patient or clinician can organise testing)
Organic Acids Test (OAT)	Great Plains/RN Labs #1-9 (yeast/fungal), #10-18 (bacterial) (May indicate fungal and/or bacterial overgrowth. Also, GSH, vitamin status, mitochondrial status, oxalate markers and more)
Stool analysis	GI-Map (Fungi/yeast) Bioscreen (Yeast) GI-360 (Yeast)

Mycotoxins – Treatment

- Low-mould diet
- Removal from water-damaged buildings/locations
- Antifungals – if colonisation present
- Binders (see next section)
- Inflammation reduction (see later)



Deoxynivalenol
T-2
NT-2

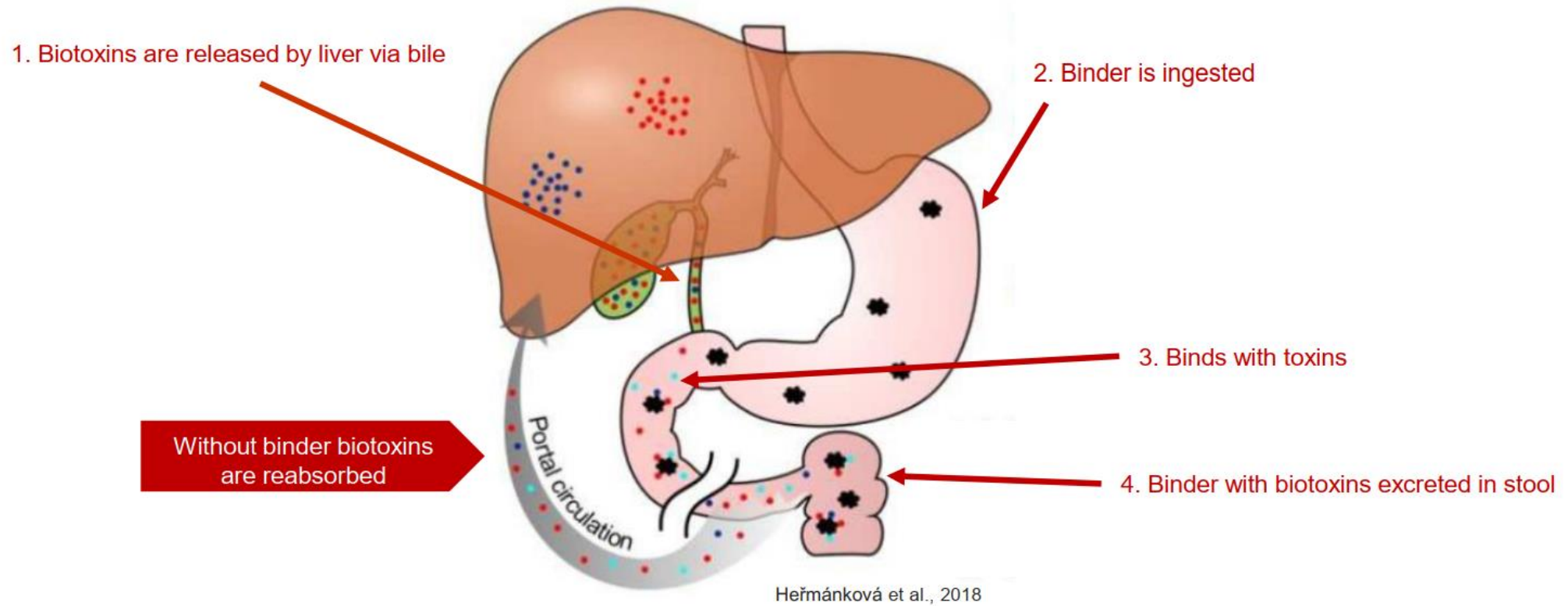


Mycotoxins – Low Mould/Yeast/Mycotoxin Diet

- **Avoid obviously mouldy or rotten food**
- Peanuts, Pistachios, Cashews, Walnuts, Brazil nuts
- All cheeses especially blue cheese/stilton
- Coffee (seek out mycotoxin free coffee)
- Grains (corn, wheat, rice, oats)
- Dried fruits
- Dried spices
- Apple juice
- Conventionally farmed dairy/meat/fish (due to mouldy diet)
- Processed and smoked meats
- Mushrooms
- Yeast, White vinegar, Fermented Foods
- Beer, Wine, Cider, Rum, Whiskey, Gin, Brandy
- Sugar, honey, maple syrup and high-sugar foods



Mycotoxycosis – Binders (Mechanism)



Mycotoxiosis – Binders (Pharmaceutical)

Binder	Notes	Pos Side Effects	Toxins bound
Cholestyramine (CSM)	<p>Commercially available as Questran Lite (with aspartame) or compounded without fillers/artificial sweeteners.</p> <p>Bile acid sequestrant, was first used 50 years ago to lower cholesterol.</p> <p>Dose: 4g 1-4/day on empty stomach 30-60 min before or 2 hours after food</p>	<p>Abdominal pain, bloating, nausea, diarrhea or constipation.</p> <p>May need to start at much lower dose (low and slow).</p>	<p>Ochratoxin Fumonisin Zearalenone</p> <p>Endotoxins Pesticides Cyanobacteria</p>
Colesevelam (Welchol)	<p>Similar mechanism of action to CSM but newer.</p> <p>Dose: 625mg x 2, 1-3 /day Can be taken with food</p>	<p>Gentler and better tolerated than CSM in general but can have similar side effects.</p>	<p>As per CSM</p>

Mycotoxiosis – Binders (Natural) – 1

Binder	Notes	Pos Side Effects	Toxins bound
Activated charcoal	<p>Used in ER in cases of poisoning.</p> <p>Dose: 500-2000g 1-4/day</p> <p>On empty stomach 30-60 min before or 2 hours after food</p> <p>Away from medications and supplements</p>	<p>Generally less than CSM but can also include abdominal pain, bloating, nausea, diarrhea or constipation.</p> <p>Adsorption of nutrients, supplements and medicines.</p>	<p>Aflatoxin</p> <p>Fumonisin</p> <p>Deoxynivalenol</p> <p>Trichothecenes</p> <p>Zearalenone</p> <p>Endotoxin</p> <p>Pesticides</p>
Bentonite Clay (montmorillonite)	<p>Seek out food-grade.</p> <p>Dose: 500-3000mg, 1-2 /day</p> <p>Can be taken with or without food</p> <p>Away from medications and supplements.</p>	“	<p>Aflatoxin</p> <p>Fumonisin</p> <p>Deoxynivalenol</p> <p>Ochratoxin</p> <p>T-2</p> <p>Sterigmatocystin</p> <p>Zearalenone</p> <p>Pesticides, BPA</p>

Mycotoxycosis – Binders (Natural) – 2

Binder	Notes	Pos Side Effects	Toxins bound
Chitosan	<p>Derived from shellfish. A natural version of CSM. Micro-chitosan is more potent.</p> <p>Dose: 500-1500mg, 1-2 /day Can be taken with or without food</p> <p>Away from medications and supplements.</p>	“	<p>Aflatoxin Fumonisin Deoxynivalenol T2 Zearalenone</p> <p>Endotoxin Pesticides BPA, Phthalates</p>
Zeolite	<p>Seek out food-grade/heavy metal free.</p> <p>Dose: 500-3000mg, 1-2 /day Can be taken with or without food</p> <p>Away from medications and supplements.</p>	“	<p>Aflatoxin Ochratoxin T-2 Zearalenone</p> <p>Histamine</p>

Mycotoxycosis – Binders (Natural) – 3

Binder	Notes	Pos Side Effects	Toxins bound
Probiotics	<p><i>L. plantrum C88, L. pentosus, L. berversis</i></p> <p><i>S. Boulardii</i></p> <p>Dose varies Can be taken with or without food</p> <p>Can take with medications and supplements.</p>	Minor GI disturbances.	<p>Aflatoxin</p> <p>Ochratoxin, Trichothecenes Zearalenone Endotoxin</p>
Glutathione / NAC	<p>Liposomal, s-acetyl or IV versions are preferred (500-1000mg)</p> <p>NAC: 500-2000mg</p>	<p>Possible detox/healing crisis. Not tolerated by all (esp. sulphur issues).</p>	<p>Aflatoxin Fumonisin</p>

Mycotoxycosis – Binders (Foods) / Detox Aids

Some **foods** have (slight) bile binding capability e.g.

Okra

Beets

Asparagus

Eggplant

Carrots

Green beans

Cauliflower

Kale, Brussel sprouts, spinach

Cabbage

Barley, oat, corn

Green vegetables, nori

Rice bran

Sauna

Sweating especially via sauna is thought to excrete mycotoxins--as it does for heavy metals, pesticides and other chemicals--but few studies have been done in this area as of yet.

Coffee / chamomile enemas

Coffee enemas greatly increase bile production and therefore the amount of mycotoxins and other biotoxins that the binders can latch onto

Mycotoxycosis – Treatment (Inflammation/Immune)

- Anti-inflammatory supplements
 - Resveratrol
 - Curcumin
 - Quercetin
 - Green / black tea extracts
 - Omega 3s (DHA, EPA)
- Repair supplements
 - Phosphatidylcholine
 - Glutamine
 - Zinc carnosine
- Immune support medications & supplements
 - Low Dose Naltrexone
 - NAD+
 - Glutathione
 - Zinc
 - Magnesium
 - Vitamin D



Chronic Inflammatory Response Syndrome (CIRS)

CIRS – Basics



- Chronic multisystem, multi-symptom condition must be present (except in very young children who may only have one symptom)
- Patient often presents with ME/CFS, or Fibromyalgia, but can present with autoimmune illness (IBD, Hashimoto's, RA), MS, Alzheimer's disease, MCAS, SIBO/IBS, psychiatric (depression, anxiety), or somatization, diagnoses

CIRS – Screening & Diagnosis

SCREENING		DIAGNOSIS/OTHER	
Visual Contrast Sensitivity (VCS)	Handheld or online (SurvivingMold.com or VCSTest.com)	Labs accessible in Australia	Leptin; VIP, copeptin (ADH), VEGF, ACTH, oestrogen, testosterone, DHEA-S, cortisol (hormones); AGA, ACA (antibodies)
HLA DR/DQ (Genetic test)	Via Sonic Health Care lab Put results into HLA calculator for interpretation: myhousemakesmesick.com/auhla/	Labs not accessible/not readily accessible	C3a, C4a, TGF-b1, a-MSH, GENIE (transcriptomics)
Mould Sabbatical	1-2 week break (e.g. camping) from current home. Take as little with them from home as possible.	Other	vMRI (NeuroQuant) Urinary mycotoxins Serum mycotoxin antibodies OAT MARCoNS (nasal swab)

CIRS – Removal From Mould

- Removal from water-damaged locations
Remediation or relocation
(home, work, study, vehicles)
- Inspection
Visible water damage or mould growth
Musty smell or other malodour
QPCR of dust: HERTSMI-2 > 10
Inspection by Indoor Environmental Professional
- Remediation
IICRC certified (iicrc.org) using IICRC S520 standard
Ideally different from IEP



CIRS – Treatment



Binders/Sauna	As per Mycotoxicosis
VIP (Rx: nasal spray*)	↓ inflammation (C4a, TGF-b1) ↑ immune modulation (↑Treg) ↑ neurogenesis/gray matter
Synapsin/Rg3 (Rx: nasal spray*)	↓ inflammation ↑ neurogenesis
Supplements	Resveratrol, curcumin, CBD, melatonin, NAC/glutathione— ↓ inflammation
Phosphatidylcholine (PC)(IV*, oral)	cell membrane repair

*compounded

Mycotoxycosis vs CIRS

	Symptoms	Diagnosis	Treatment
Mycotoxycosis	Single or multisystem <ul style="list-style-type: none"> - GI - fatigue, sleep - neurological 	Urinary mycotoxin testing Serum mycotoxin antibodies	Avoidance <ul style="list-style-type: none"> - dietary mould/mycotoxins/sugar - WDBs Binders Some inflammation/immune balancing
CIRS (Inflammatory Response)	Always multisystem More severe/disabling	VCS Inflammatory biomarkers (blood) Hormones (blood) Antibodies (blood) NeuroQuant (MRI)	Avoidance <ul style="list-style-type: none"> - dietary mould/mycotoxins/sugar - WDBs Binders More inflammation/immune balancing Neurological repair Cell membrane repair Limbic retraining Vagus nerve stimulation Takes longer to achieve recovery

A photograph of a field of dandelions at sunset. The sun is a bright, glowing orb in the center, casting a warm, golden light across the scene. The dandelions are in various stages of bloom, with some showing their characteristic white, feathery seed heads. The background is a soft, hazy landscape, possibly a field or a distant town, bathed in the same warm light. The overall mood is peaceful and grateful.

Thank you

