

BEYOND DETECTION: Practical Solutions for Microplastic Toxicity

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Why solutions matter: moving from awareness → action

Objectives for today's session:

- Brief review of PlasticTox™
the first test to detect microplastics in blood/saliva
- Tips to reduce ongoing exposure
- Support detoxification pathways
- Empower clinicians and families with practical strategies

What Are Microplastics?

- Microplastics are tiny plastic particles less than 5 millimeters in size (about the size of a sesame seed or smaller)
- They come from two main sources:
 - **Primary microplastics** – manufactured small (like microbeads in cosmetics, or fibers shed from synthetic clothing)
 - **Secondary microplastics** – formed when larger plastics (bags, bottles, packaging) break down due to sunlight, friction, or weathering

Potential Symptoms of Microplastic Toxicity and Underlying Mechanisms

System / Symptom	Potential Clinical Effects	Underlying Mechanisms
Gastrointestinal	Bloating, abdominal discomfort, altered bowel habits, dysbiosis	Gut barrier disruption, inflammation, microbiome imbalance
Immune & Inflammatory	Chronic low-grade inflammation, heightened allergic responses, autoimmunity	Activation of immune cells, oxidative stress, cytokine release
Respiratory	Cough, throat irritation, worsening asthma, possible fibrosis	Inhalation of fibers → airway deposition, inflammation, scarring
Endocrine & Metabolic	Hormonal imbalance, early puberty, weight gain, insulin resistance	Leaching of endocrine disruptors (phthalates, BPA), metabolic dysregulation
Neurological & Developmental	Brain fog, fatigue, possible cognitive/behavioral changes in children	Neuroinflammation, oxidative stress, interference with neurotransmission
General/Systemic	Fatigue, low energy, increased infection risk, cardiovascular stress	Oxidative stress, vascular inflammation, immune dysregulation

Microplastic Exposure Sources & Mitigation Strategies

Source of Exposure	Examples	Risk Level	Mitigation Strategies
Drinking Water	Bottled water, tap water	High	Prefer filtered tap water (reverse osmosis or activated carbon with sub-micron filtration) / Avoid bottled water / Store water in glass or stainless steel containers
Food (Seafood & Salt)	Fish, shellfish, sea salt	High	Choose low-trophic seafood (e.g., sardines, anchovies) which accumulate fewer plastics / Rinse seafood before cooking / Rotate protein sources to reduce reliance on seafood / Use sea salt brands tested for lower contamination
Food (Other Sources)	Packaged foods, produce, rice, honey, sugar	Moderate–High	Reduce plastic-packaged foods ; choose fresh, bulk, or glass-packaged items / Wash produce thoroughly / Store leftovers in glass or stainless steel , not plastic / Avoid microwaving food in plastic containers
Indoor Air / Household Dust	Fibers from textiles, carpets, upholstery	Moderate	Use a HEPA air purifier in main living and sleeping areas / Vacuum with a HEPA filter weekly / Choose natural fibers (cotton, wool, linen) over synthetics / Dust with damp cloths to reduce resuspension
Infant Feeding	Plastic baby bottles, formula prep	Moderate (High concern for infants)	Use glass baby bottles or those lined with safer materials / Avoid heating formula in plastic bottles / Mix formula in glass or stainless container, then transfer / Sterilize without high plastic contact
Personal Care Products	Scrubs, toothpaste, cosmetics (microbeads)	Low–Moderate	Check labels and avoid products with polyethylene (PE), polypropylene (PP), or “microbeads” / Choose natural or microbead-free exfoliants / Prefer eco-certified brands
Outdoor Air	Tire wear, synthetic fibers, urban dust	Low (chronic)	Keep windows closed during heavy traffic hours / Use indoor air purifiers if living near busy roads / Consider ventilation with HEPA filtration for urban settings / Reduce personal exposure near high-traffic roads

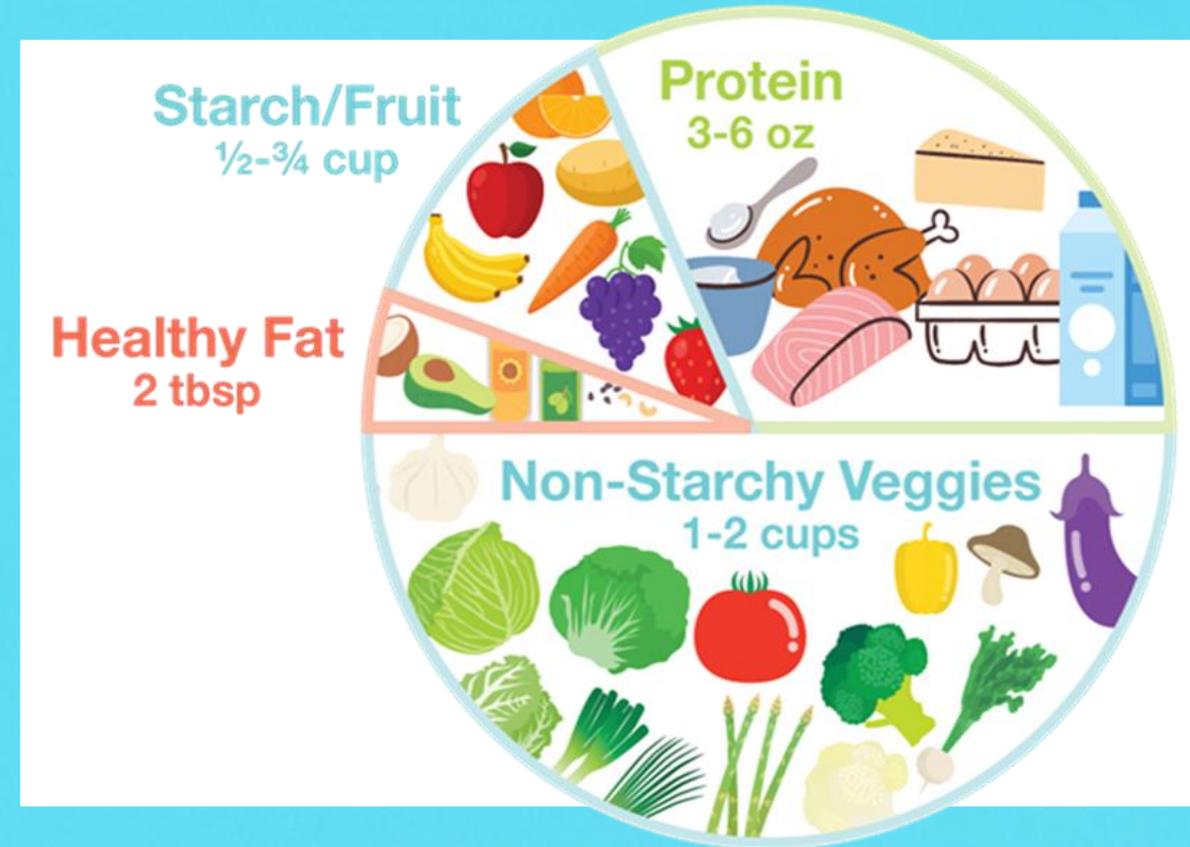
Why children are most vulnerable

- Higher Relative Exposure
- Developmental Sensitivity
- Immature Metabolic and Detoxification Pathways
- Enhanced Intestinal and Pulmonary Absorption
- Behavioral Factors
- Cumulative and Lifelong Risk

Diet to Help Reduce Microplastic Burden

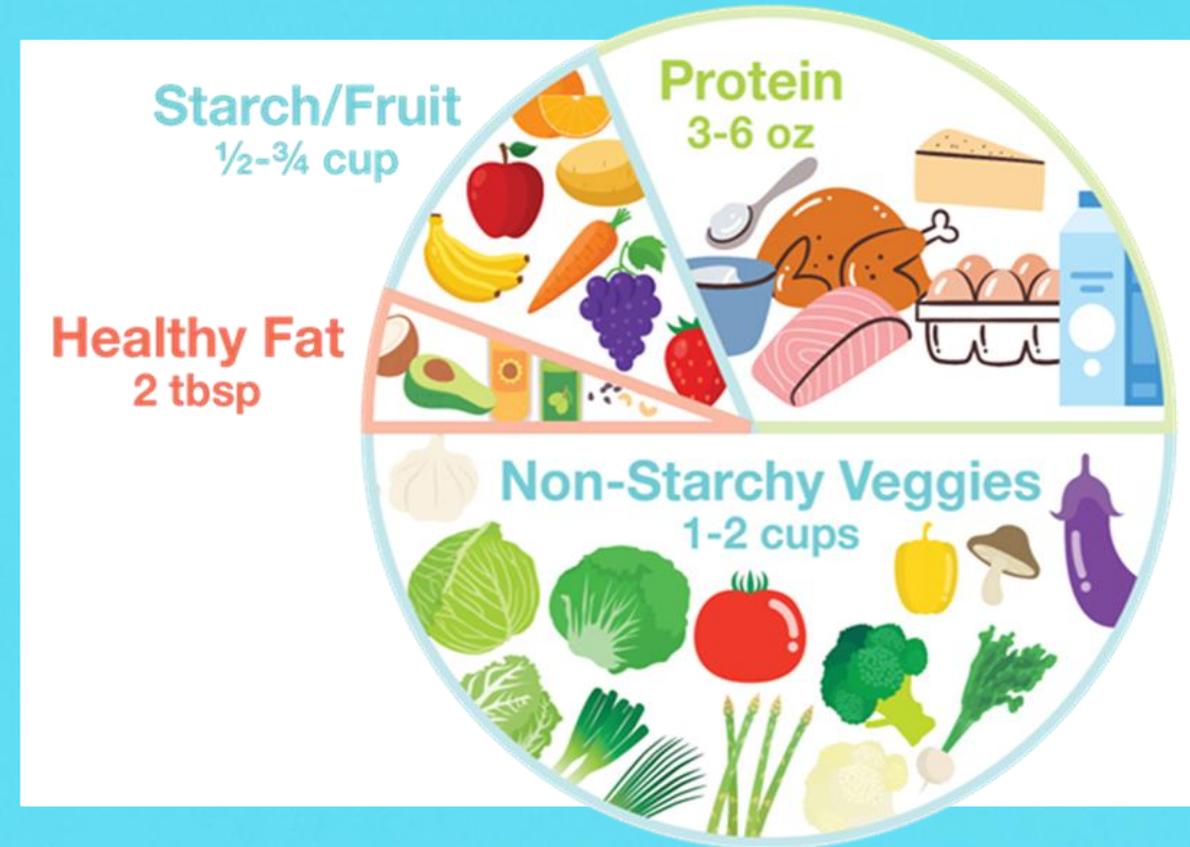
- **Support Gut Barrier & Reduce Absorption**

- **High-fiber foods** (vegetables, fruits, legumes, oats, chia, flax) – fiber binds toxins and supports elimination
- **Fermented foods** (sauerkraut, kefir, kimchi, miso) – boost beneficial microbes, which may help degrade plastics and reduce gut permeability
- **Polyphenol-rich foods** (berries, green tea, olive oil, turmeric, cocoa) – help protect gut lining from oxidative stress



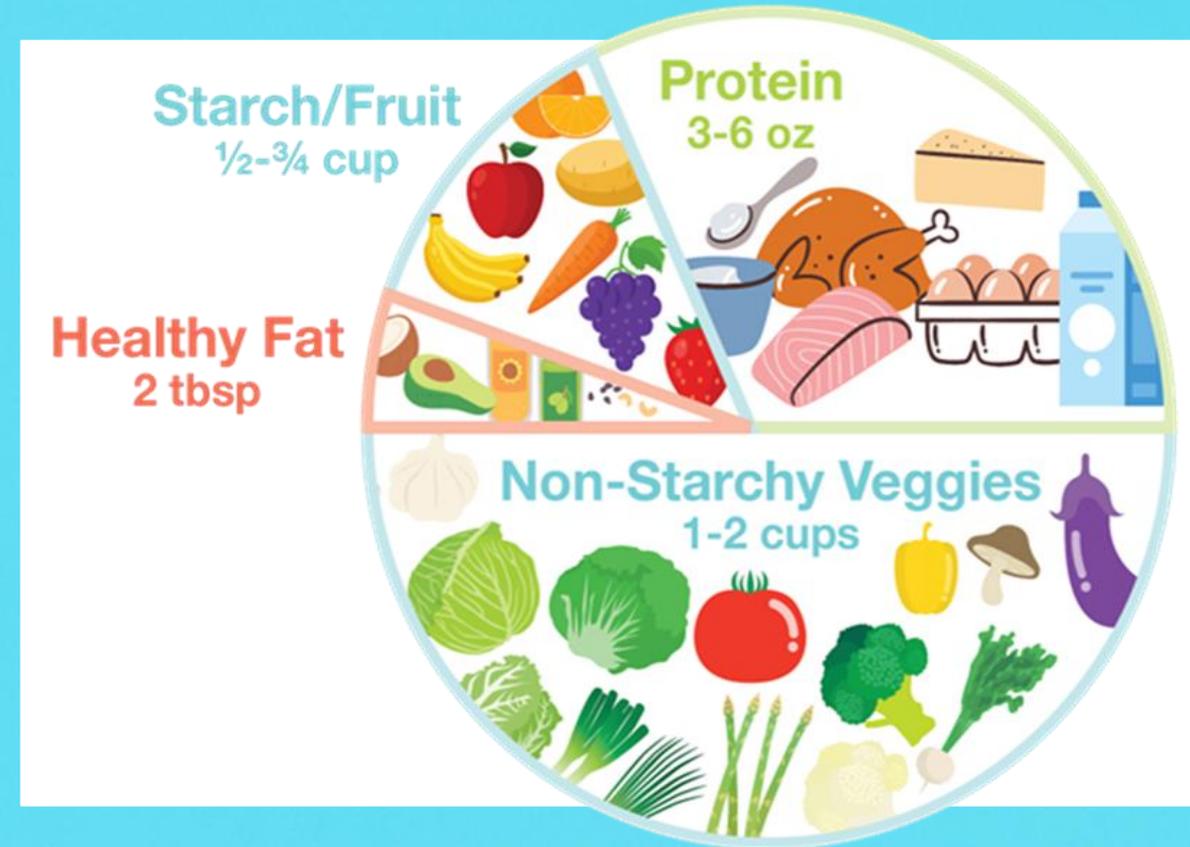
Diet to Help Reduce Microplastic Burden

- **Enhance Detoxification & Elimination**
 - **Cruciferous vegetables** (broccoli, cauliflower, Brussels sprouts) – support liver detox enzymes
 - **Cilantro & parsley** – may help mobilize heavy metals that cling to microplastics
 - **Adequate hydration** – flushes toxins via kidneys and urine
 - **Probiotics & prebiotics** – encourage a diverse microbiome, which early studies suggest could play a role in breaking down xenobiotics (foreign compounds)



Diet to Help Reduce Microplastic Burden

- **Reduce Inflammation & Oxidative Stress**
 - **Omega-3 fatty acids** (salmon, sardines, walnuts, flax, chia) – reduce inflammation from particle-induced oxidative stress.
 - **Antioxidant-rich foods** (vitamin C foods like citrus, bell peppers; vitamin E foods like nuts, seeds, avocado) – help counteract free radical damage.
 - **Spices** (turmeric, ginger, garlic) – anti-inflammatory and liver-supportive.



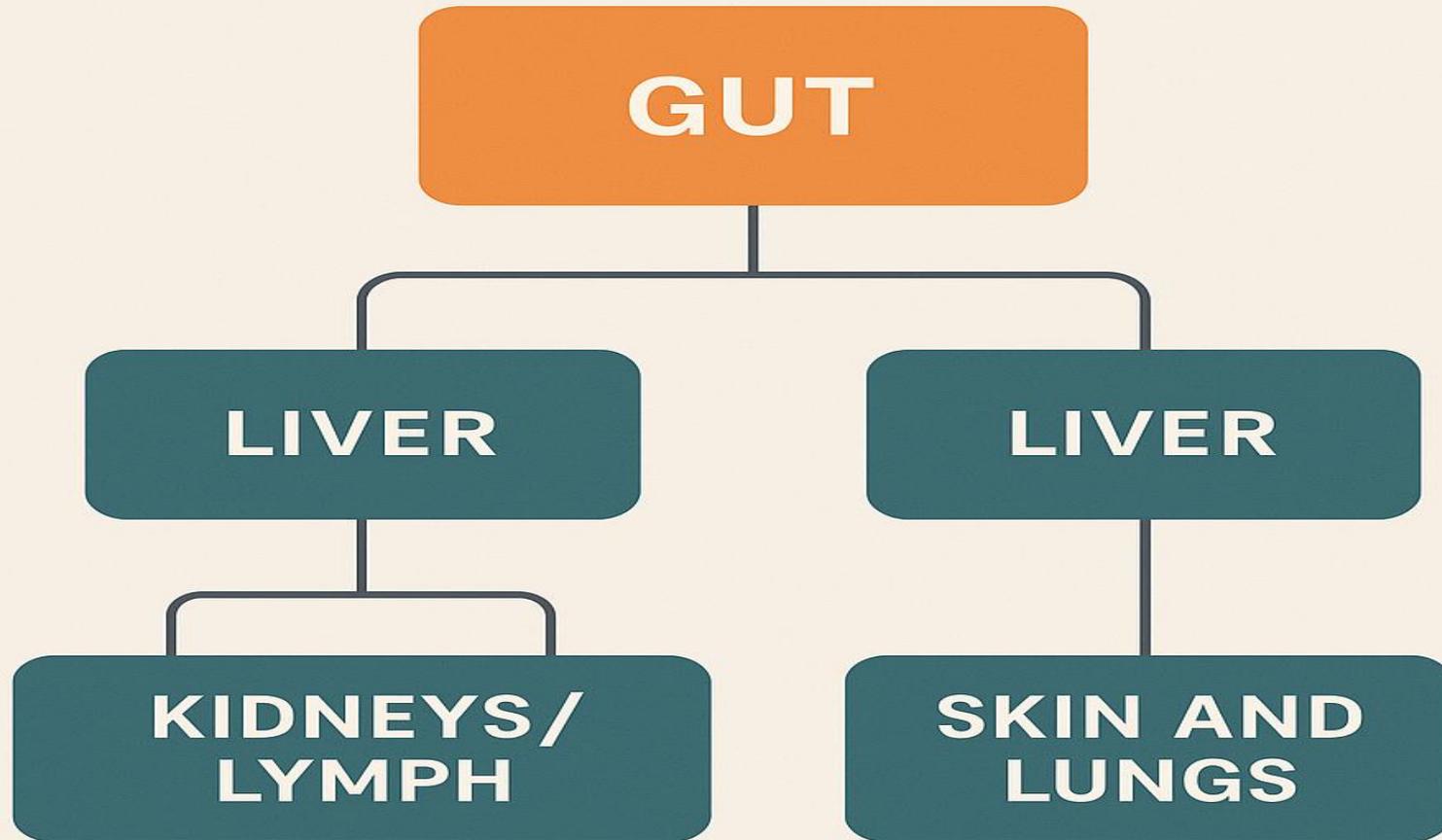
Diet is a key part of reducing microplastic burden... but only if digestion is working.

Without good digestion, even the best foods can create toxicity rather than support detox.

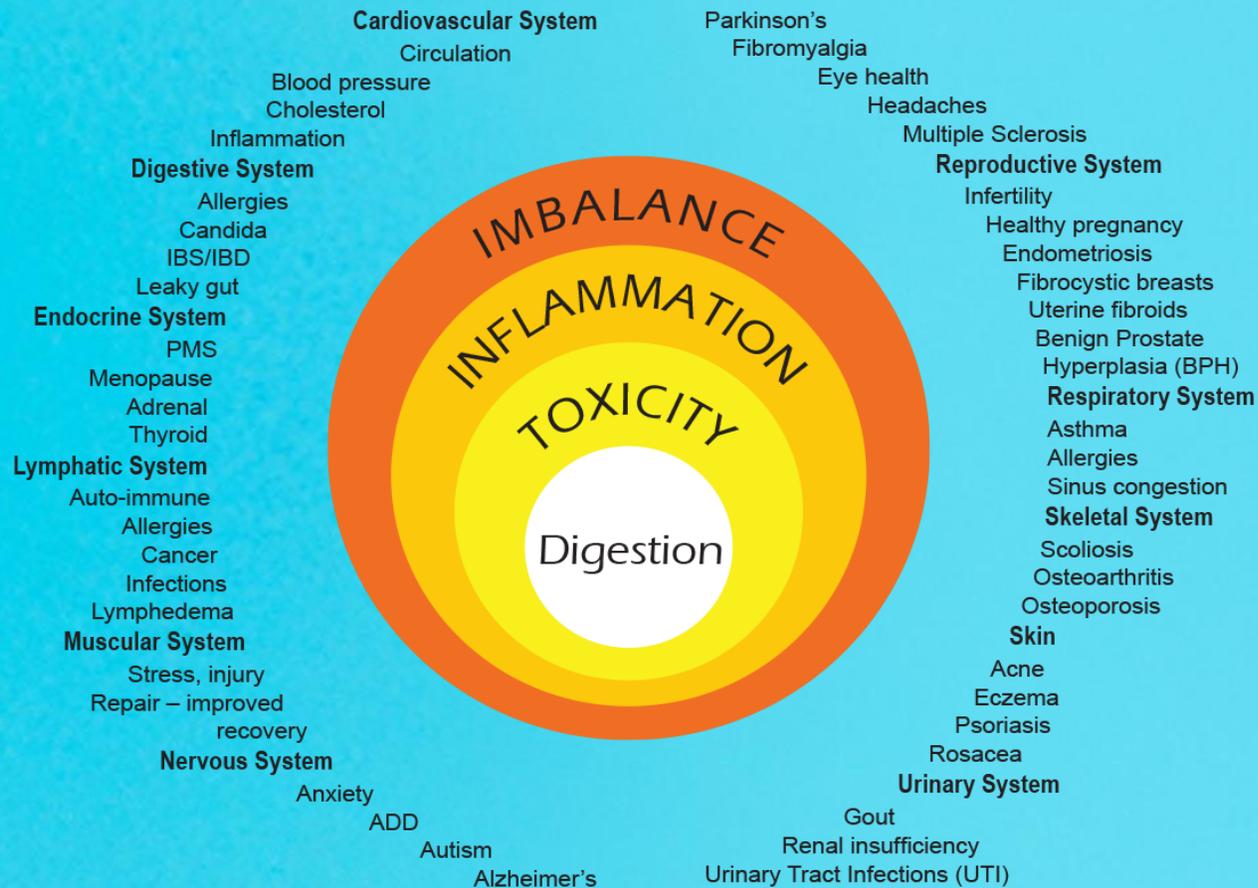
TRANSFORMATION
THE GENESIS OF GOOD HEALTH®



SUPPORTING DETOX PATHWAYS



System Disruption *Starts in the Gut*



- When foods aren't properly digested, instead of supporting detox, they can ferment, putrefy, or go rancid in the gut.
- This creates new toxins, feeds inflammation, and burdens your liver — the opposite of what we're trying to achieve.

Toxicity Starts in the Gut

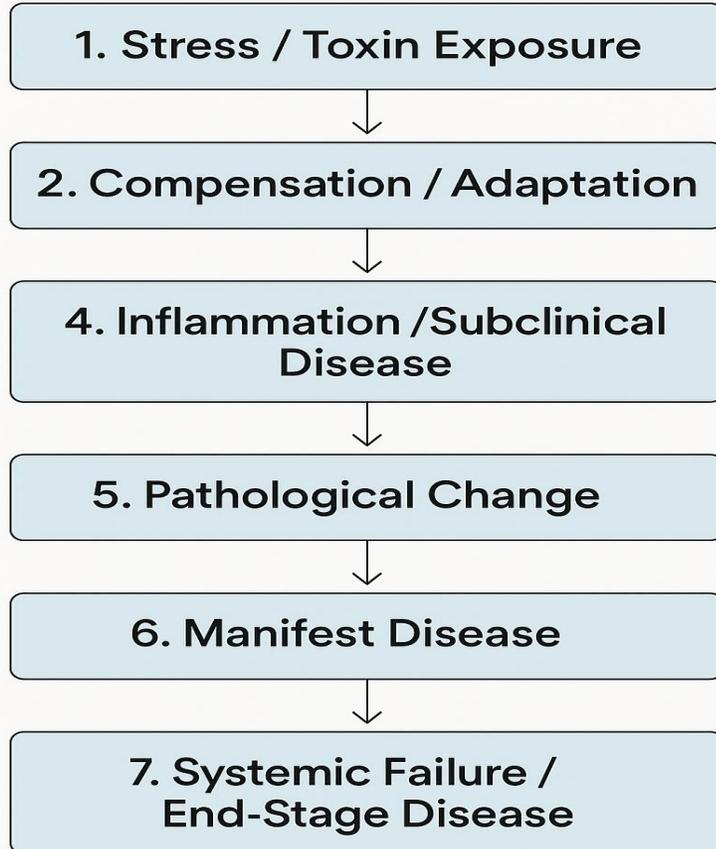


Cost of Poor Digestion

- Nutrition deficiency
- Cell death
- Dysbiosis
- ↑ burden on pancreas
- ↑ burden on liver
- Leaky Gut
- Dirty terrain
- Dirty receptors

Making the Connection

The 7 Stages of Disease



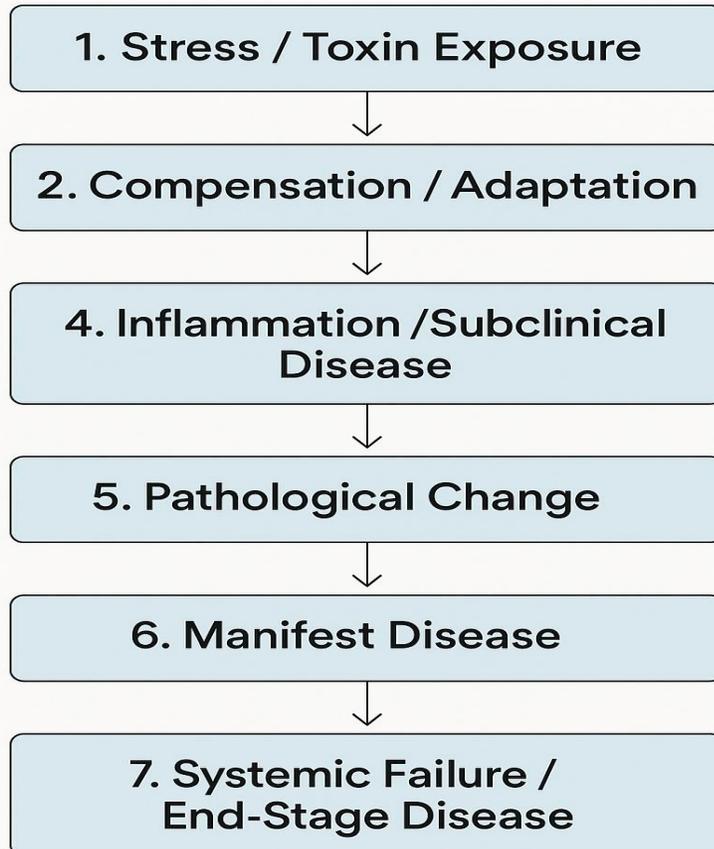
- **Digestion**

- Poor diet
- Lack of water
- Constipation
- Gas and bloating



Making the Connection

The 7 Stages of Disease



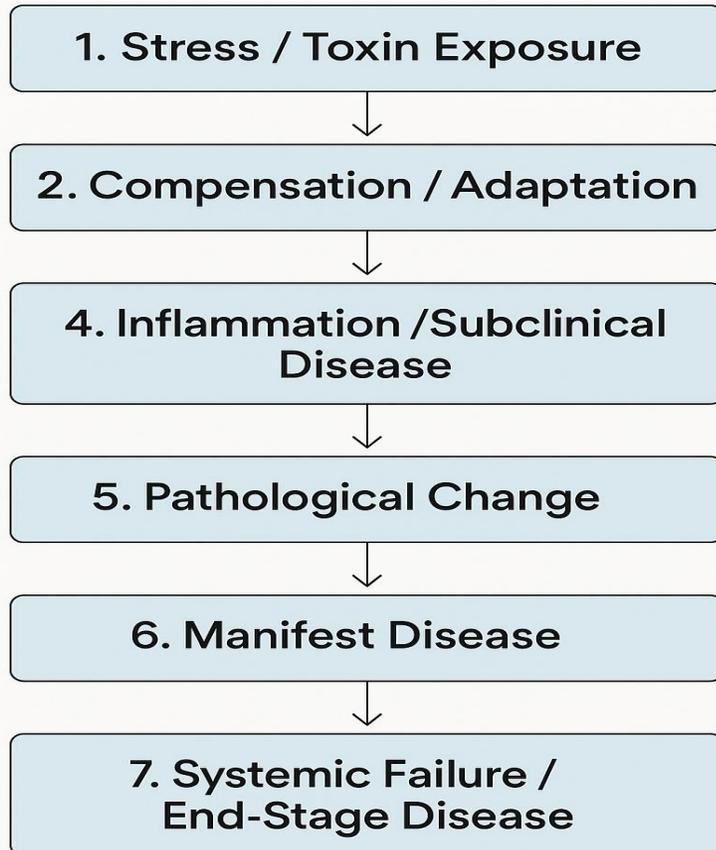
● TOXICITY

- Headaches
- Fatigue
- Dry skin
- Bad breath
- Disturbed sleep
- Cholesterol imbalances
- Compromised immunity



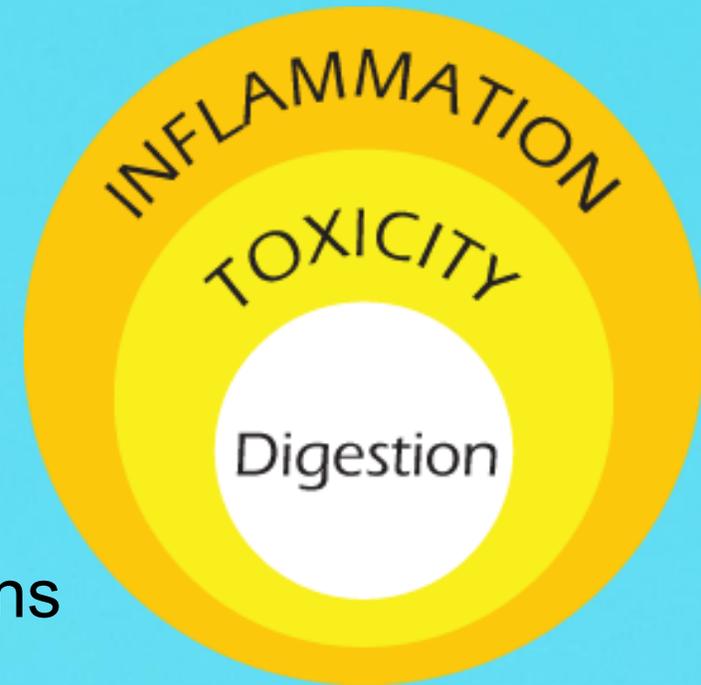
Making the Connection

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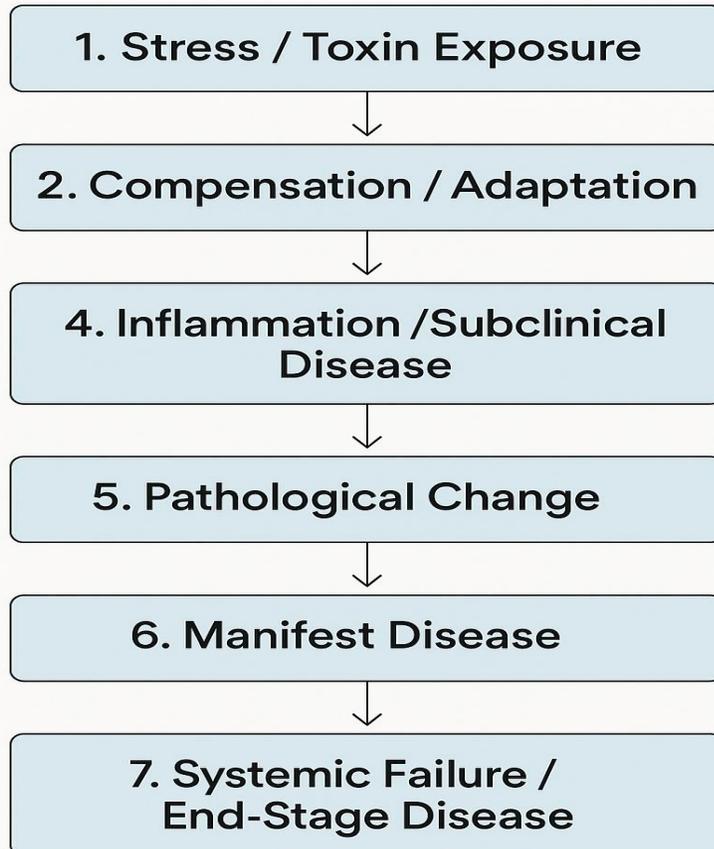
● INFLAMMATION

- Inflamed bowels
- Achy joints
- Sinus congestion
- Acid reflux
- Frequent infections



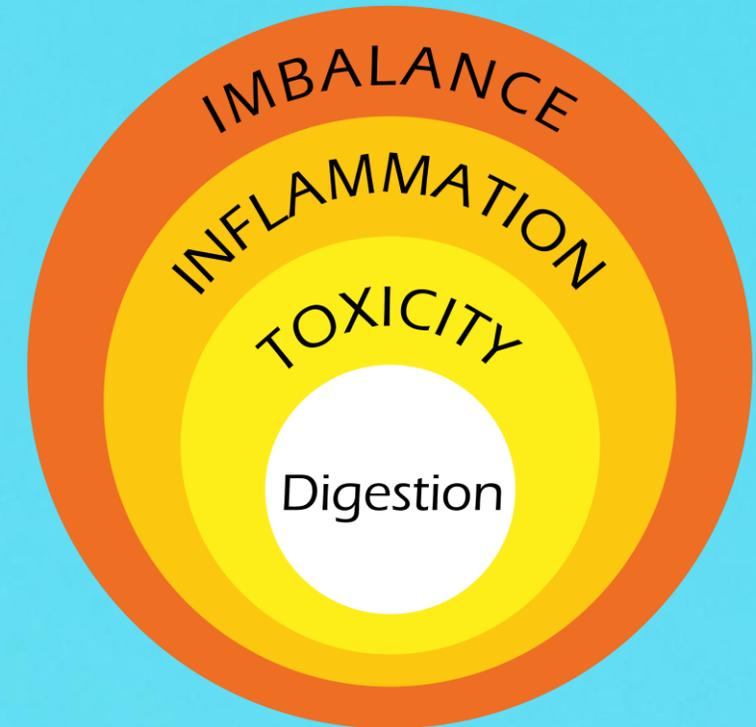
Making the Connection

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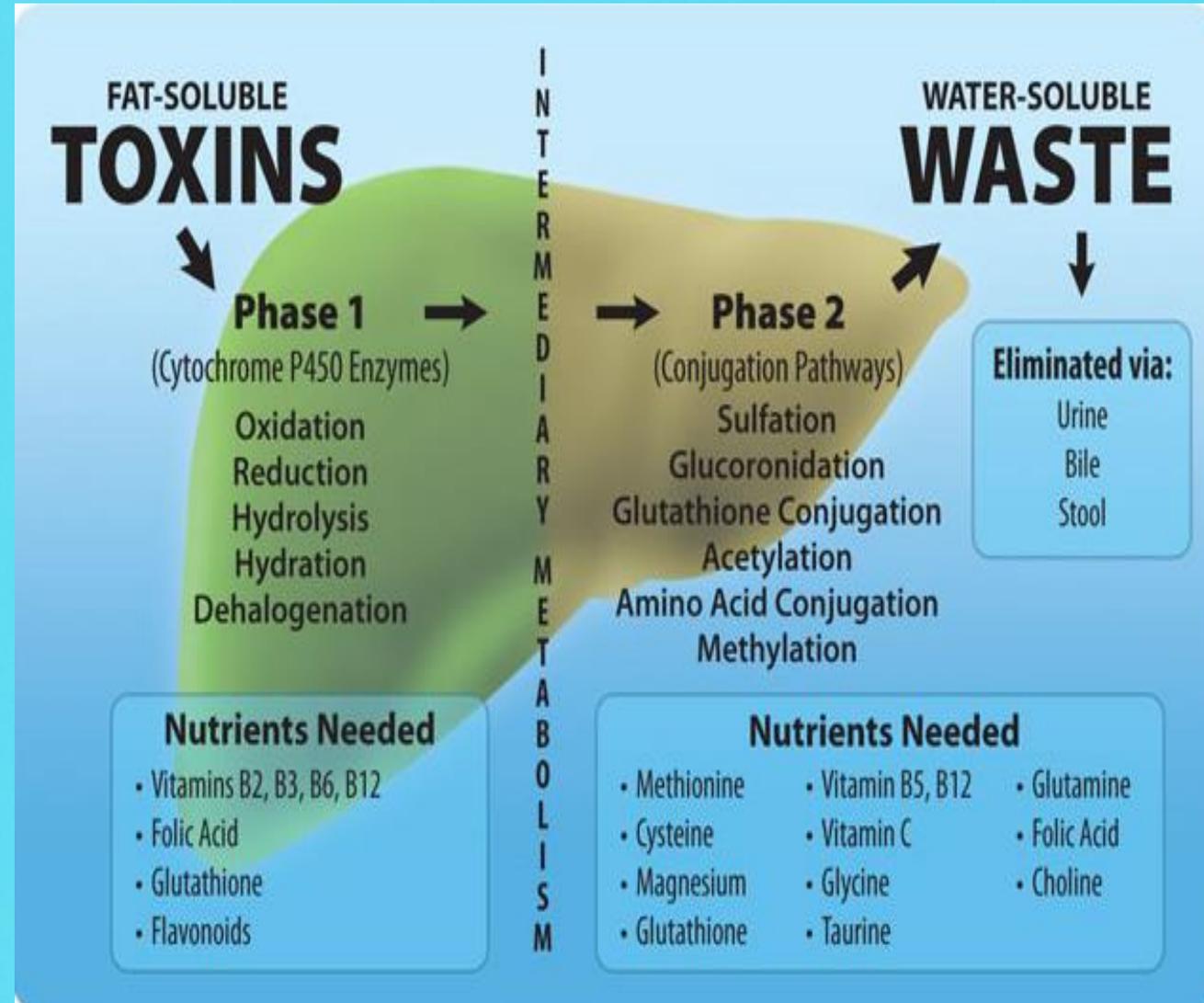
● **IMBALANCE**

- Food allergies
- Arthritis
- Auto-immunity
- Asthma
- Eczema
- Gout
- MS
- GERD

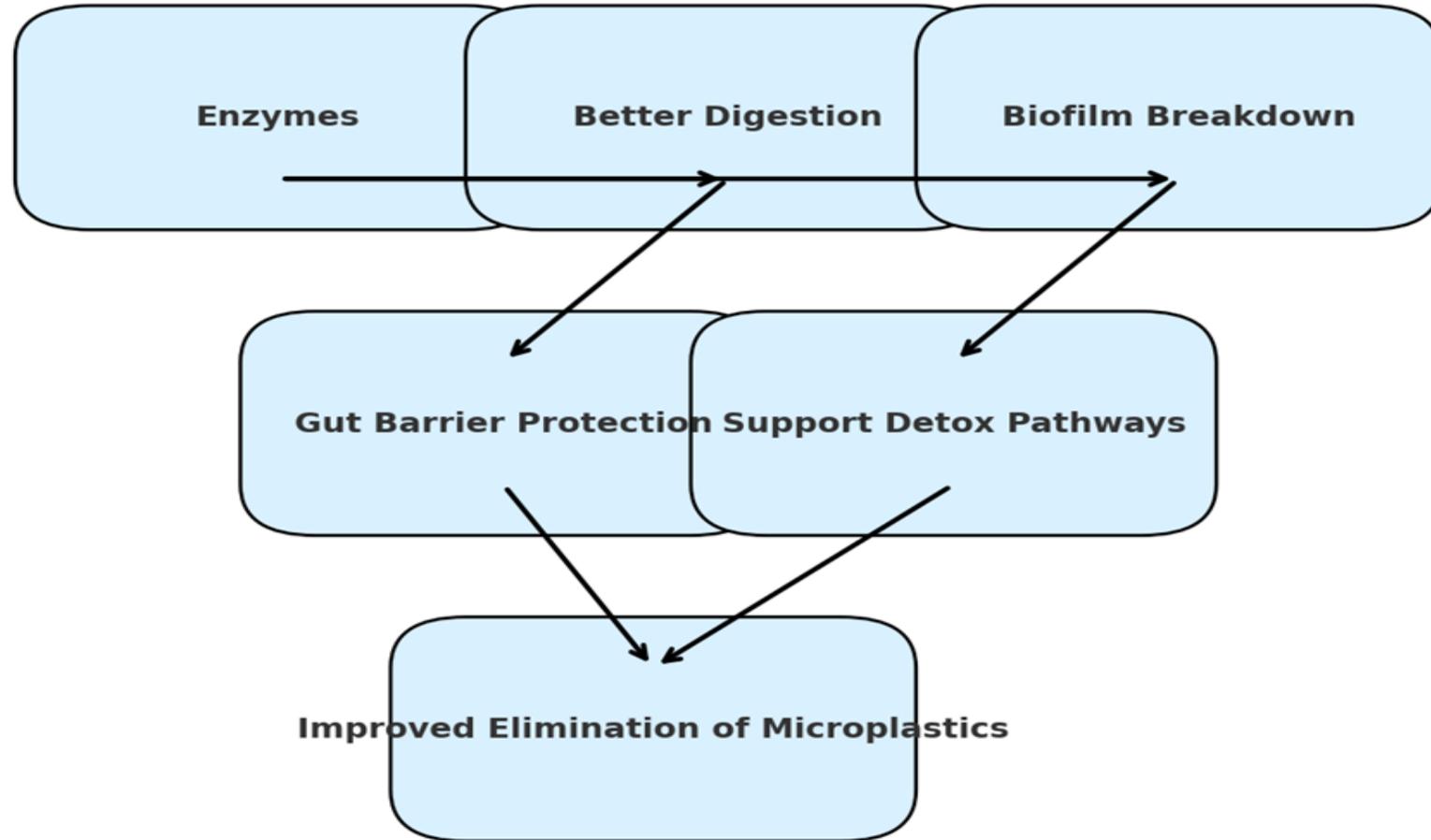


Why Gut Health Comes First in Detoxification

- Primary barrier + first line of defense
- Microbiome support + balance
- Nutrient availability for proper liver detoxification
- Sequential detox strategy to address this first, ensuring that toxins are efficiently processed + eliminated

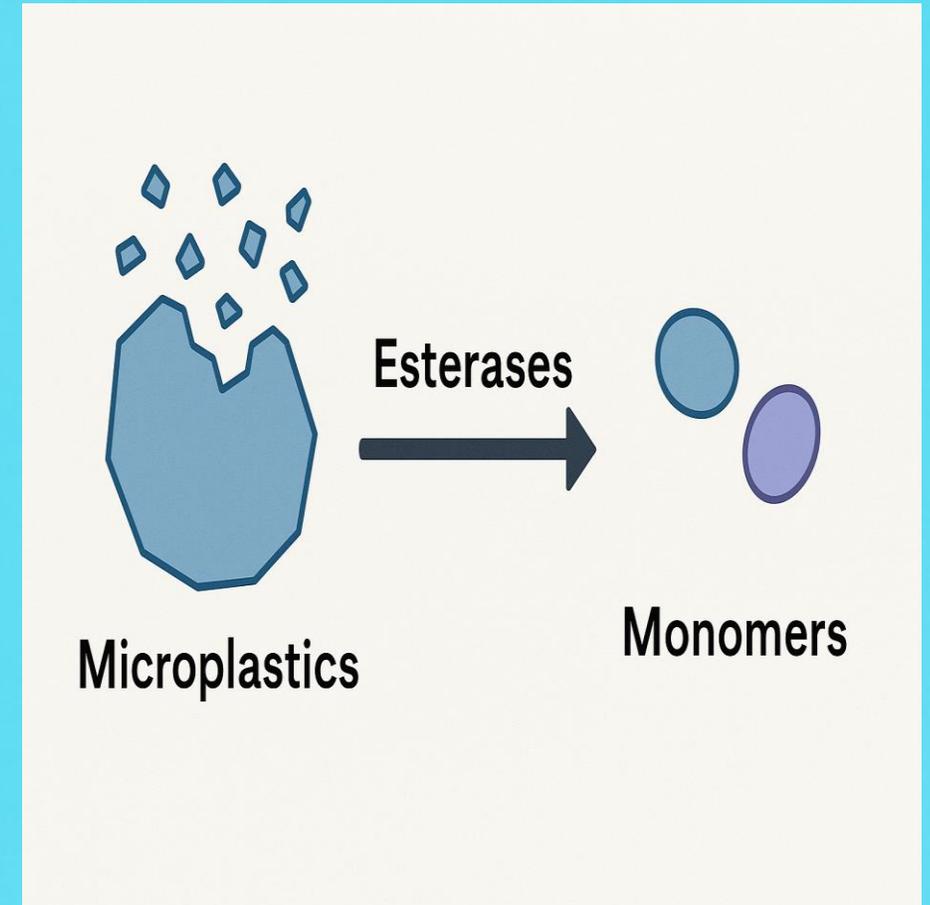


How Digestive Enzymes Support Microplastic Elimination



Enzyme Action on Microplastics

- Certain esterases can hydrolyze the ester bonds in polyester-based microplastics, breaking them into smaller molecules such as monomers (like terephthalic acid and ethylene glycol).
- In environmental studies, researchers are exploring microbial esterases that can degrade plastic pollution.
- In human or animal systems, esterases might theoretically help break down small amounts of ingested microplastics, though the efficiency and clinical relevance are still under investigation.
- Types of esterases involved: Lipases and carboxylesterases are common enzymes studied for this activity.



Direct Role of Mycelial-Derived Esterases for Microplastic Degradation

Microbe / Source	Enzyme Type	Plastic Type Targeted	Notes
<i>Aspergillus niger</i>	Esterase / Cutinase	PET, PLA	Secreted by mycelium; hydrolyzes ester bonds
<i>Aspergillus oryzae</i>	Esterase / Lipase	PET, PLA	Mycelial enzyme; used in lab biodegradation studies
<i>Fusarium solani</i>	Cutinase / Esterase	PET, polyesters	Mycelial origin; shows environmental plastic breakdown potential
<i>Penicillium</i> spp.	Esterase / Lipase	PET, PU	Secreted by mycelium; works under mild conditions
<i>Trichoderma reesei</i>	Lipase / Esterase	PLA, PBS	Fungal mycelial enzymes; often used in industrial biodegradation research
<i>Bacillus</i> spp.	Esterase	PET, polyesters	Bacterial source; not mycelial, but relevant as comparison

Indirect Role of Mycelial Enzymes for Microplastic Degradation

Source	Enzyme Type	Plastic Type	Mechanism / Notes
<i>Aspergillus niger</i>	Protease (acidic/alkaline)	Protein-based bioplastics; biofilms	Hydrolyzes peptide bonds; helps remove coatings/biofilms
<i>Aspergillus oryzae</i>	Protease (acidic/alkaline)	Protein-based bioplastics; biofilms	Hydrolyzes peptide bonds; enhances access for esterases
Bromelain (pineapple)	Protease	Gelatin, casein- based bioplastics	Hydrolyzes peptide bonds; can remove biofilms mainly effective on protein-based bioplastics , not synthetic plastics like PET or PE
Papain (papaya)	Protease	Gelatin, collagen- based bioplastics	Hydrolyzes peptide bonds; assists microbial degradation. Works on gelatin, collagen, or other protein-based film.

	ACTION	APPLICATION	ENZYME	SOURCE (controlled fermentation)	Effective pH Range
PROTEASES	hydrolysis of peptides and amino acids	digestion of all dietary proteins; fibrinolytic action (blood flow); immuno-modulation and anti-inflammatory agent	Bromelain	<i>Ananas comosus</i> (pineapple)	4.0 - 9.0
			Papain	<i>Carica papaya</i> (tropical plant)	3.0 - 10.5
			Peptidase	<i>Aspergillus oryzae</i>	3.25 - 7.5
			Protease 3.0	<i>Aspergillus niger</i>	2.75 - 4.7
			Protease 4.5	<i>Aspergillus oryzae var</i>	2.75-6.25
			Protease 6.0	<i>Aspergillus oryzae</i>	2.75 - 7.0
DPP-IV (Dipeptidyl Peptidase)	select <i>Aspergillus</i> species	2.0 - 8.0			
LIPASES	hydrolysis of triglycerides to mono- and di-glycerides, glycerol, fatty acids	digestion of all dietary fats and oils from plant and animal sources	Lipase AN	<i>Aspergillus niger</i>	3.0 - 8.0
			Lipase CR	<i>Candida rugosa</i>	3.0 - 8.0
			Lipase RO	<i>Rhizopus oryzae</i>	3.0 - 8.0
CARBOHYDRASES	hydrolysis of carbohydrates (sugar, starch, fiber) to glucose, fructose, galactose, sucrose	digestion of carbohydrates in cruciferous vegetables, legumes, dairy, desserts	Alpha-galactosidase	<i>Aspergillus niger var</i>	2.5 - 7.5
			Invertase	<i>Saccharomyces cerevisiae</i>	3.5 - 5.5
			Lactase	<i>Aspergillus oryzae</i>	3.0 - 8.0
		digestion of starches in whole grains, cereals, breads, pasta, rice, etc	Amylase	<i>Aspergillus oryzae</i>	3.0 - 7.0
			Beta-glucanase	<i>Trichoderma longibrachiatum</i>	2.0 - 7.0
			Glucoamylase	<i>Aspergillus niger</i>	4.0 - 6.0
		digestion of fiber in fruits, vegetables, grains	Diastase	<i>Aspergillus oryzae</i>	4.0 - 9.0
			Cellulase	<i>Trichoderma longibrachiatum</i>	2.0 - 8.0
			Hemicellulase	<i>Aspergillus niger</i>	3.0 - 5.5
Macerase	<i>A. niger & T. longibrachiatum</i>	2.0 - 5.0			
Pectinase	<i>Aspergillus niger</i>	2.0 - 5.0			
Phytase	<i>Aspergillus niger</i>	2.0 - 7.0			

Additional Benefits to Mycelial Enzymes

- No animal byproducts
- Free of harmful excipients (i.e., no enteric coating)
- Greater systemic benefits due to GI stability/functionality
- Wide range of pH stability

Pretox: Healthy Gut Program

Prepare the body for your detoxification efforts with mycelial and plant based enzymes!

- Digestive enzymes
- Probiotics
- Protease enzymes



DIGEST

Transformation's most comprehensive "therapeutic" digestive formula with the highest lipase

Provides the specific enzymes needed to digest the carbohydrates, proteins, and fats common to the human diet. This high lipase formula is especially beneficial to those with imbalances related to poor fat digestion and absorption.

Product Highlights

- 55,131 HUT + 11 SAPU protease for complete protein digestion and absorption of amino acids
- 7,518 FIP lipase for digestion of fats and absorption of fatty acids
- 12 polysaccharolytic enzymes for digestion of all forms of carbohydrates or complete digestion of starch, sugar, and fiber
- Digestive enzymes only, no probiotics or herbs

SUPPLEMENT FACTS		
Serving Size 1 Capsule		
Amount Per Serving	% Daily Value	
Tzyme™ Protease Blend (Protease and peptidase) (55,131 HUT + 11 SAPU)	67 mg	†
Lipase (7,518 FIP)	24 mg	†
Tzyme™ Polysaccharolytic Blend	301 mg	†
Amylase	20,000 DU	†
Phytase	42 FTU	†
Glucoamylase	25 AGU	†
Alpha-galactosidase	438 Gal U	†
Mucerase	400 CU	†
Beta-glucanase	25 BGU	†
Lactase	610 ALU	†
Pectinase	14 endo-PGU	†
Cellulase	295 CU	†
Diosease	168 DP*	†
Invertase	56 SU	†
Hemicellulase	28 HCU	†

† Daily Value not established
Other Ingredients: Vegetable Capsule (Hydroxypropylmethylcellulose, Water), Calcium Citrate

Clinical Applications

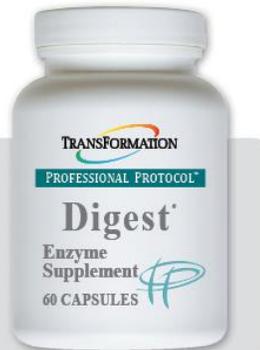
- Wellness and prevention
- Inability to digest FAT, CHO, PRO
- Pregnancy/lactation
- SIBO/candida
- Support after gall bladder removed
- Cardiovascular health
- Bloat, indigestion, reflux
- Weight management
- Hormone imbalances
- Skin conditions
- Conditions that challenge major organ systems
- Pancreatic insufficiency
- Chronic health challenges

For Your Information

- The most therapeutic and comprehensive digestive formula, the best choice for patients with chronic or serious health challenges. The enzymes are selected to cover all pH ranges of the digestive process, and the lipases and proteases in this formula work without bile or HCl.
- May be used by anyone – adult, child, pregnant, or lactating.
- GI/GB intolerance may arise when first taking a therapeutic digestive formula, a probiotic with the meal can ease this transition.
- May be given to be chewed by pets with digestive or other health challenges. If opening the capsule, mix with small amount of water or food to prevent pet from sneezing or coughing from the powder.

Dosage

- Maintenance: 1 capsule with every meal
- Therapeutic: 2 capsules at the beginning of every meal, or 1 cap may be taken at the beginning and 1 cap at the end of the meal
- More may be taken as needed for digestive discomfort
- Capsules may be pulled apart and mixed in a small amount of tepid water and/or mixed with first bite of food



KIDZ DIGEST

CHEWABLE

Transformation's chewable digestive formula with DPP-IV

This formula supports the digestion of carbohydrates, fats, and proteins including gluten and casein. These small, easy-to-dissolve tablets are ideal for kids who refuse to take pills or capsules and will only accept a chewable that tastes good.

Product Highlights

- Chewable tablets
- Proteases for protein digestion include DPP-IV for gluten and casein
- Polysaccharolytic enzymes for carbs, starches, sugars, fiber reduces gas/bloating
- Flax seed supplies EFAs
- Lipase for fat digestion, which is critical for growth and brain development
- *B. infantis* is a probiotic for healthy gut flora

SUPPLEMENT FACTS		
Serving Size 2 tablets (45/90 per bottle)		
Amount Per Serving	% Daily Value	
Total Carbohydrates	1 g	<1%†
Total sugars	<1 g	**
includes <1 g added sugar		1%†
Tzyme™ Peptidase Blend (50,000 HUT and 300 DPP-IV)	114 mg	**
Tzyme™ Polysaccharolytic Blend (Amylase, Glucoamylase, Lactase, Diosease, Alpha-galactosidase, Pectinase, Invertase, Cellulase, Hemicellulase)	90 mg	**
Flax Seed	30 mg	**
Lipase (3,000 FIP)	11 mg	**
<i>Bifidobacterium infantis</i> (100 million cfu)	2 mg	**

† Based on a 2,000 calorie diet
** Daily Value not established
Other Ingredients: Tapioca dextrose, Natural Flavors (mixed berry, strawberry, with other natural flavors), Modified cellulose, Magnesium stearate, Silica, Citric acid, Monk fruit extract, Malic acid, Beet juice color

Clinical Applications

- Digestive support for healthy kids
- Constipation or irregular bowel movements
- Upset stomach
- Food sensitivity and allergies
- Gluten/casein intolerance
- Immune support
- Energy and mood support
- Skin health

For Your Information

- Digestive enzymes with meals can be used as a preventive or intervention strategy for an array of pediatric conditions due to the significant impact the digestive system has on overall health.
- *Bifidobacterium infantis* is the main strain missing in a developed nation's babies due to increased numbers of C-sections, antibiotics, and formula feeding. This strain is critical for proper digestion of mother's milk.
- The EFAs in flax seed help build cells, absorb nutrients, build immunity, strengthen the cardiovascular system, and are necessary for healthy brain function and vision.
- This formula contains "other ingredients" which are necessary in order to produce a chewable tablet

Dosage

- 2 chewable tablets at the beginning of each meal
- This product is only appropriate for those on solid foods with sufficient ability to chew
- Recommended age is generally 2 and up



PROTEASE

Transformation's most
therapeutic systemic
proteolytic formula

This proprietary blend of highly active, GI stable proteolytic enzymes has been combined to promote circulation, a strong healthy immune system, reduced inflammation, and timely detoxification.

Product Highlights

- Endo/exo peptidases break the inner/terminal bonds of amino acid chains for more efficient hydrolysis of proteins
- Protease blend (including bromelain plant enzymes) for reducing inflammation
- More than 400,000 HUT for the highest proteolytic activity available (600,000 PU = 51,000 HUT)
- 18 SAPU units from Protease 3.0
- Approx. 2,400 FU breaks down fibrin and clots and promotes healthy blood flow
- Calcium improves tolerance on an empty stomach

SUPPLEMENT FACTS	
Serving Size 1 Capsule	
Amount Per Serving	% Daily Value
Tzyme™ Protease Blend (peptidases, bromelain) (355,020 HUT + 19 SAPU) (600,000 PU)	492 mg †
† Daily Value not established	

Other Ingredients: Vegetable Capsule (Hydroxypropylmethylcellulose, Water), Calcium Citrate

Clinical Applications

- Cancer of any kind
- Arthritis
- CVD / heart disease
- Chronic Fatigue Syndrome / Fibromyalgia
- Bacterial / Viral / Fungal Infections
- Hepatitis
- Kidney Disorders / Renal Insufficiency
- Eczema / Psoriasis
- Asthma / Emphysema
- All hormone imbalances
- Auto-immune disorders
- Autism
- Diabetes
- Muscle strains, soreness, injuries, and surgeries

For Your Information

- First choice when patient has been diagnosed with a condition (this is the "therapeutic" strength blend)
- It is better to take small doses of protease frequently throughout the day rather than large doses once or twice a day (protease has a half-life of approximately 3-4 hours; the goal is to keep the protease activity constant in the blood stream for therapeutic benefits)
- Compares with Nattokinase and Serra-peptidase
- May be given to children if condition warrants; may be given to pets
- Caution with patients on prescription blood thinning drugs (give protease formulas 3-4 hours away from Rx dose)
- May cause discomfort for individuals with stomach ulcers as protease will debride necrotic tissue and promote healing
- Discontinue taking Protease 24-48 hours prior to surgery and resume 24 hours post-surgery

Dosage

- Maintenance dose: 1 capsule 3 x day (rise, midday, rest) on an empty stomach
- General therapy dose: 2 capsules 3 x day between meals (approximately 1 hour before or 2 hours after meals)
- Therapeutic dose: 2-3 capsules 4-5 x day, or every 3 hours (goal is to keep high levels of activity in the blood stream at all times; "between meals" becomes difficult, so 30-60 minutes before or after meals is acceptable)
- **MAY BE TAKEN WITH FOOD IF UNABLE TO TOLERATE BETWEEN MEALS**
- Sometimes it is suggested 1 capsule may be taken with meals to enhance the digestion of proteins (diabetes, heartburn, acid reflux, gout, autism, high protein diet)
- For those who have difficulty swallowing pills, the capsules may be pulled apart and mixed in a small amount of tepid water or liquid and consumed immediately
- Topical application: open capsule and make a paste with a small amount of water, then apply to insect bite, fungal rash, mouth sores, inflamed gums, etc

PUREZYME

Transformation's "original"
systemic protease formula

This formula is a slightly gentler systemic protease option for those who are sensitive to detoxification. This product will assist in maintaining optimal blood flow, immune function, and elimination of toxicity.

Product Highlights

- Smaller capsule
- Single Protease (4.5) contains 185,000 HUT per capsule
- Calcium for tolerance on empty stomach

SUPPLEMENT FACTS	
Serving Size 2 Capsules	
Amount Per Serving	% Daily Value
Protease (370,000 HUT)	618 mg †
† Daily Value not established	

Other Ingredients: Vegetable Capsule (Hydroxypropylmethylcellulose, Water), Calcium Citrate

For Your Information

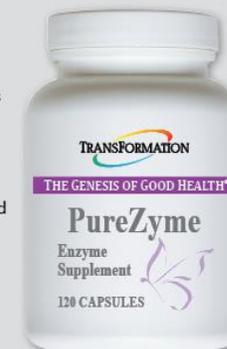
- Gentler formula is very well tolerated for sensitive patients, young children, and those unable to swallow a larger capsule
- Caution with patients on prescription blood thinning agents (give protease formulas 3-4 hours away from Rx dose)
- Proteases may cause discomfort for individuals with stomach ulcers as the protease debrides the necrotic tissue and promotes healing
- Discontinue taking PureZyme 24-48 hours prior to surgery and resume 24 hours post surgery
- May be given to pets

Clinical Applications

- Support and prevention for cancer
- Immune system imbalances
- Cardiovascular health
- Chronic Fatigue / Fibromyalgia
- Bacterial / Viral / Fungal Infections
- Hepatitis
- Kidney Disorders / Renal Insufficiency
- Skin disorders
- Chronic respiratory issues
- All hormone imbalances
- Auto-immune
- Support for complications associated with autism
- Support for complications associated with diabetes

Dosage

- Maintenance dose: 2 capsules first thing in the morning, midday, and right before bed
- General therapy dose: 3 capsules 3 x day between meals
- Therapeutic dose: 5 capsules 4-5 x day, or every 3 hours (the goal is to keep high levels of activity in the blood stream at all times, so 30-60 minutes before or after meals is acceptable)
- 2 capsules may be taken with meals to enhance digestion of proteins (diabetes, heartburn, acid reflux, gout, autism, high protein diet)
- For those who have difficulty swallowing capsules, they may be pulled apart and contents mixed in a small amount of tepid water and/or mixed with first bite of food
- Topical application: open capsule and make a paste with a small amount of water, then apply to insect bite, fungal rash, mouth sores, inflamed gums, etc



TRANSBIOTIC™

Transformation's spore-based probiotic formula with an innovative prebiotic

Includes the spore probiotic *Bacillus subtilis* and PreforPro® prebiotic to support the growth of healthy bacteria in the gut through a method that is neither fiber nor starch-based.

Product Highlights

- Bacterium blend provides 1.75 billion cfu per capsule
- *Bacillus subtilis* is a natural spore probiotic found in our environment, and *Lactobacillus* is found both in nature and in the digestive system
- PreforPro® blend of highly specific bacteriophages which support growth of beneficial bacteria in the gut
- DR capsule increases intact delivery to the small intestine by protecting these organisms from stomach acid

SUPPLEMENT FACTS	
Serving Size 1 Capsule	
Amount Per Serving	% Daily Value
Probiotic Blend (1 billion cfu)	299 mg †
Lactobacillus acidophilus, Bacillus subtilis DE111®, Lactobacillus casei, Lactobacillus plantarum	
PreforPro®	15 mg †
LH01 - Myoviridae, LL5 - Siphoviridae, T4D - Myoviridae, LL12 - Myoviridae	
† Daily Value not established	

Other Ingredients: Delayed Release Capsule (Hypromellose, Pectin, Water)

Clinical Applications

- Diarrhea
- Inflammatory bowel
- Viral/bacterial infection
- Weakened immunity
- Histamine intolerance
- Frequent antibiotic use
- Dysbiosis
- SIBO
- Food borne illness
- Candida
- UTIs
- Traveler's Diarrhea

For Your Information

- Works with a broad spectrum of probiotic species, does not cause flatulence commonly seen with other prebiotics, works throughout the entire digestive process, and is stable in varying gut environments
- Convenient, uncomplicated, and practical probiotic can withstand extreme temperatures and environments for a longer shelf life
- Refrigeration not required but recommended for optimum activity—do not freeze
- Excellent alternative for antibiotic therapy without risk of resistance
- While Transbiotic™ has a lower cfu and strain count than Probiotic and Probiotic 42.5, it is just as powerful
- *Bacillus subtilis* is an endospore-forming bacteria that requires a lower cfu than non-spore probiotics due to its high durability and indefinite lifespan, which allows for equal productivity when compared with non-spore probiotics that have higher cfu count but may not contain strains with such durability
- Although *Bacillus subtilis* is of the spore genus, it meets GRAS standards and is easily distinguishable from disease-causing *Bacillus* species
- Non-digestible starch and fiber-based prebiotics can cause unwanted side effects such as gas and bloating, whereas the PreforPro® utilizes bacteriophages to inhibit the growth of potentially harmful bacteria, allowing the growth of beneficial bacteria without these negative side effects
- This formula is designed for eliminating *E. coli* and other pathogen transmission from food and water, making it ideal for travelers and those immune to antibiotics—may be beneficial to rotate with Probiotic or Probiotic 42.5 if using to treat specific infection from *E. coli*

Dosage

- 1 capsule upon rising or at bedtime with at least 8 oz of water
- More may be taken as needed for discomfort
- May be taken with antibiotics to help maintain healthy balance
- As probiotics are meant to be released over an extended timeframe of 10-12 hours, effective dosing is typically once per day which ensures delivery throughout the entire intestinal tract

THIS INFORMATION IS INTENDED FOR HEALTH PROFESSIONALS ONLY AND SHOULD NOT BE COPIED OR RE-DISTRIBUTED.

PLANTADOPHILUS™

The "original" probiotic formula

This well tolerated, time-tested formula contains the single bacterium *Lactobacillus plantarum*, one of the most versatile probiotics considered a good "starter" as it promotes the growth of other beneficial bacteria.

Product Highlights

- Provides 2 billion cfu of the plant-source probiotic *L. plantarum* per capsule

SUPPLEMENT FACTS	
Serving Size 3 Capsules	
Amount Per Serving	% Daily Value
<i>Lactobacillus plantarum</i> (6 billion cfu)	375 mg †
† Daily Value not established	

Other Ingredients: Vegetable Capsule (Hypromellose, Water)

Clinical Applications

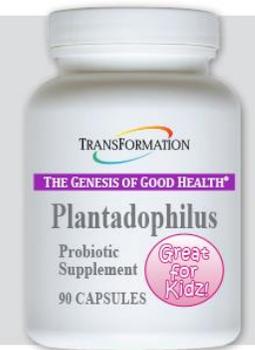
- First choice for sensitive GI
- Prevention and wellness
- Soothes inflamed GI tract
- Excessive gas and bloating
- Chronic constipation
- Infants and children
- Yeast infections, candida
- Sore throat, mouth sores
- Histamine intolerance

For Your Information

- Isolated from a plant source and naturally found in plant material and the GI tract, *L. plantarum* is GI stable, heat stable, and doubles its population in a short timeframe making it stronger and more stable than many acidophilus products on the market
- Along with promoting digestive health and serving as an effective treatment for IBS, Crohn's, and colitis, *L. plantarum* has shown the ability to destroy pathogens, preserve critical nutrients, vitamins, and antioxidants, produce the beneficial amino acid *L. lysine*, reduce risk of infections and inflammation, and is considered to be anti-pathogenic
- *L. plantarum* promotes production of B vitamins in the intestine and assists the production of enzymes for hydrolyzation of proteins, fat, and lactose
- Very well tolerated and is preferred by those with sensitive GI tracts or who may not tolerate FOS
- Keep refrigerated (when traveling take amount needed for the trip and store at room temp or lower)
- May be safely given to children, pets, and pregnant or lactating women (for ages 4 and up—consult your physician for use with younger children)
- As probiotics are meant to be released over an extended timeframe of 10-12 hours, effective dosing is typically once per day which ensures delivery throughout the entire intestinal tract

Dosage

- 3 capsules daily taken at bedtime (if preferred, take in the morning)
- For constipation, diarrhea, or excess gas: increase dose to 3 in the morning and 3 at bedtime
- May be taken with antibiotics to help maintain healthy balance (increase dosage as needed)
- May also be taken with meals for digestive discomfort associated with gas and bloating
- Topical dosage: open capsule, mix with small amount of water to make a paste, apply to fungal infection, fever blister, mouth sore, etc
- Capsule may be opened, mixed into 4 ounces of water, and gargled to relieve sore throat



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PROFESSIONAL PROTOCOL™

Gastro

- **Enzymes**
 - Polysaccharolytic blend
 - Protease blend
 - Lipase
- **Herbs**
 - Mucilaginous herbs
 - Digestive support
 - Antioxidant blend

GASTRO

Transformation's therapeutic nutritional digestive supplement for heartburn and discomfort in the GI tract

This comprehensive formulation of herbs, vitamins, antioxidants, and enzymes is designed to soothe GI discomfort and heal damaged mucosa. It is excellent support for digestive disorders such as gastric reflux, ulcers, gastritis, and IBS.

Product Highlights

- Contains an extensive polysaccharolytic blend
- Herbs that enhance digestion as well protect and heal the GI mucosa
- Proteases to further assist with protein digestion in alkaline pH ranges
- Fennel and Artichoke for bowel inflammation and decreasing the bacteria that cause gassiness
- Antioxidants combat free radicals and inflammation that can damage the mucosal lining
- Additional lipase to further assist with fat digestion and reduction of gas

SUPPLEMENT FACTS		
Serving Size 1 Capsule		
Amount Per Serving		% Daily Value
Vitamin E (as d-alpha tocopheryl succinate)	1 mg	7%
Tzyme® Polysaccharolytic Blend	91 mg	†
Phytase	60 FTU	†
Amylase	3,495 DU	†
Alpha-galactosidase	365 Gal U	†
Glucoamylase	9 AGU	†
Pectinase	20 esdu-PG	†
Lactase	140 ALU	†
Diastase	42 DP	†
Cellulase	40 CU	†
Hemicellulase	40 HCU	†
Invertase	14 IU	†
Tzyme® Protease Blend	76 mg	†
(Protease, peptidase) (44,396 HUT + 3.6 SAHU)		
Papaya leaf	80 mg	†
Mullein root extract	80 mg	†
Ginger root	70 mg	†
Tumeric root	60 mg	†
Fennel seed	40 mg	†
Gotu Kola (leaf)	40 mg	†
Artichoke leaves extract	30 mg	†
Tzyme® Antic Acid Blend	42 mg	†
(Divaline Salina Extract, Flax Seed, Alpha-Lipoic Acid, Eleuthera Root, Asian Ginseng Root)		
Bladderwrack algae	15 mg	†
Aloe vera leaf	15 mg	†
Peppermint leaf	10 mg	†
Lipase (125 FIU)	0.44 mg	†
† Daily Value not established		

For Your Information

- For those suffering from intestinal permeability or who have been diagnosed with a condition of GI dysfunction
- Use in place of OTC anti-acids or for discomfort "above the navel"
- While this product does contain various digestive enzymes, it is not considered as a digestive formula and should be paired with a digestive enzyme formula before meals for optimal results

Dosage

- Maintenance: 1 capsule with every meal
- Therapeutic: 2 or more capsules with or following meals
- When trying to wean off of prescription drugs (proton pump inhibitors) begin taking Gastro for at least a week and then gradually reduce or replace the drug with Gastro

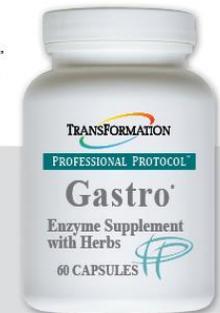
Clinical Applications

- Heartburn
- Indigestion
- Acid reflux
- Inflammation of the stomach lining
- Inflammation of the esophagus
- Diarrhea
- Excess mucous production

In general, herbal formulas are not recommended during pregnancy and lactation or for children 12 years or younger. Each case should be assessed on an individual basis and the practitioner, along with the patient, may use their professional judgment and decide to use it.

⚠ WARNING: Lead - Cancer and Reproductive Harm
www.P65Warnings.ca.gov

This product has been identified as containing naturally-occurring lead that exceeds California Proposition 65 lead levels when dosing more than three capsules per day.



GI Lining Support

The Genesis of Good Health® **GastroZyme**

- **Enzymes**
 - Polysaccharolytic blend
 - Protease blend
 - Lipase
- **Herbs**
 - Mucilaginous herbs
 - Digestive support
 - Antioxidant blend

GASTROZYME

Transformation's original, more gentle formula for very sensitive patients with GI discomfort

This formula focuses on the health and repair of the mucosal lining of the GI tract, respiratory system, and urinary tract system. It helps control diarrhea, excess mucous production, and soothes urinary discomfort.

Product Highlights

- Simple, well-tolerated formula
- Amylase, cellulase, and lipase only (no protease)
- Soothing and healing to the mucosal lining and symptom relief of gas, bloating, and constipation
- Anti-inflammatory, gut microbiome-modulating

SUPPLEMENT FACTS		
Serving Size 1 Capsule		
Amount Per Serving	% Daily Value	
Enzyme Proprietary Blend	28 mg	†
Amylase	2,500 DU	†
Cellulase	400 CU	†
Lipase	303 FIP	†
Marshmallow Root	95 mg	†
Papaya Leaf	95 mg	†
Rhodiola Rosea (root) extract	55 mg	†
Gotu Kola (aerial part) extract	48 mg	†
† Daily Value not established		

Other Ingredients: Vegetable Capsule (Hydroxypropylmethylcellulose, Water)

For Your Information

- The first choice for sensitive patients, this product is well tolerated and works fast to relieve discomfort
- Contains no protease, so great starter for those with active ulcers
- May be used in place of OTC anti-acids
- Supports pH balance
- Good for discomfort "below the navel"
- In rare cases, Gotu Kola may cause heart palpitations

Dosage

- Maintenance dose: 2 capsules with every meal
- General therapy dose: take a digestive formula at beginning of each meal and 3 capsules of GastroZyme at end of each meal
- Therapeutic dose: for chronic diarrhea and severe pain, take 3 capsules at beginning of meal, 3 at end of meal, and 3 at onset of each episode of diarrhea (our experience is that this, along with diet modifications, typically resolves the problem in 3-7 days)
- More may be taken as needed for discomfort

⚠ WARNING: Lead - Cancer and Reproductive Harm - www.P65Warnings.ca.gov

This product has been identified as containing naturally-occurring lead that exceeds California Proposition 65 lead levels.

Clinical Applications

- Intestinal permeability and gut barrier repair
- First choice for chronic diarrhea and extremely sensitive GI tracts
- Inflammation of the upper and lower GI tract, heartburn, upset stomach, sour stomach
- Inflammation and discomfort associated with UTI
- Excess mucous production, allergies, colds, asthma, and sinus congestion

In general, herbal formulas are not recommended during pregnancy and lactation or for children 12 years or younger. Each case should be assessed on an individual basis and the practitioner, along with the patient, may use their professional judgment and decide to use it.



Liver Cleansing

- Antioxidants
 - Selenium, Vit A
- Herbs
 - Milk Thistle, Dandelion
- Nutrients
 - N-acetyl cysteine, Choline
- Enzymes

LIVER SUPPORT

Transformation's product for liver health and detoxification

Enzyme-delivered herbs and nutrients with antioxidant benefits to promote optimum liver function by removing embedded toxic materials, supporting its normal regeneration sequence, and promoting liver cell generation.

Product Highlights

- Choline transports fat from the liver to the cells
- Selenium protects against cell damage in the liver
- NAC restores glutathione, an antioxidant detoxifier
- Milk Thistle protects the liver against free radicals
- Dandelion is known for its liver-detoxifying properties
- Enzymes for enhanced utilization of ingredients

SUPPLEMENT FACTS		
Serving Size 1 Capsule		
Amount Per Serving		% Daily Value
Vitamin A (as Vitamin A palmitate)	300 mcg	33%
Choline (as choline bitartrate)	20 mg	4%
Selenium (as selenium citrate)	25 mcg	45%
N-acetyl cysteine	75 mg	†
Milk Thistle seed	50 mg	†
Dandelion root	20 mg	†
Tzyme™ Enzyme Blend (Protease, Pectinase, Lipase, Alpha-Galactosidase, Phytase, Glucoamylase, Papainase, Cellulase, Hemicellulase)	20 mg	†
† Daily Value not established		
Other Ingredients: Vegetable Capsule (Hydroxypropylmethylcellulose, Water)		

Clinical Applications

- Bowel toxicity / constipation
- Excessive alcohol or drug use
- Liver or lymphatic stress and congestion
- Elevated cholesterol
- Fatty liver
- Support for hormone balance
- Elevated ALT/AST

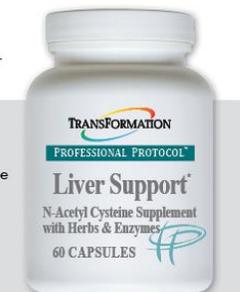
In general, herbal formulas are not recommended during pregnancy and lactation or for children 12 years or younger. Each case should be assessed on an individual basis and the practitioner, along with the patient, may use their professional judgment and decide to use it.

For Your Information

- The liver plays a vital role in digestion, hormone regulation, and detoxification.
- Selenium is an essential component of various enzymes and proteins called selenoproteins that help to make DNA and reduce serum AST and ALT levels. Choline prevents fatty liver and supports methylation, which creates DNA for nerve signaling and detoxification. N-acetyl cysteine (NAC) increases glutathione concentration and antioxidant production in the liver.
- This formula is well within the RDA allowance for vitamin A and should not cause vitamin A overload at therapeutic dosage.
- It is best to balance the digestive system before initiating a detox. Start with a Healthy Gut Program or pair it with this formula.

Dosage

- Maintenance: 1 capsule daily with food
- Therapeutic: start with 1 capsule 1-2 x day with food and increase as needed
- May take Liver Support for 1 month prior to and/or after other detox protocols
- Suggested maintenance for women: take 1 capsule 2 x day with food for 1 week prior to menses



Antioxidants for Detox Support

- Curcumin
- Vitamin C, A, D, E
- Glutathione
- Alpha Lipoic Acid
- Garlic
- CoQ10
- Selenium, Copper, Zinc
- B Vitamins
- Enzymes

PROTEASE IFC

Transformation's antioxidant and enzyme product for inflammatory control

This unique formulation of highly active proteolytic enzymes and antioxidants is designed to help regulate inflammation anywhere on or in the body. This product is ideal for muscle aches, pains, injuries, and stiff joints as well as to promote cardiac health and is applicable for any other inflammatory conditions.

Product Highlights

- Antioxidants (A, C, E, Se, Zn) plus antioxidant blend to combat damage from oxidative stress, modulate the immune system, and reduce inflammation
- Over 300,00 HUT of protease activity emphasizing bromelain and papain for inflammation
- Rutin, Quercetin, Turmeric, and Hesperidin are well known for their anti-inflammatory properties

SUPPLEMENT FACTS		
Serving Size 1 Capsule		
Amount Per Serving		% Daily Value
Vitamin A (100% as beta carotene)	7,370 mcg (7,900 IU)	263%
Vitamin C (as ascorbic acid)	9 mg	18%
Vitamin E (as d-alpha-tocopheryl succinate)	1.3 mg (2 IU)	9%
Zinc (as zinc citrate)	0.5 mg	5%
Selenium (as selenium citrate)	16 mcg	29%
Tzyme® Protease Blend	209 mg †	
<small>(acid, neutral, alkaline, amylase proteases, bromelain, papain) (2,900,000 FCCU + 65,400 HUT)</small>		
Tzyme® Antioxid Blend	253 mg †	
<small>(Waly, Irish moss, Rutin, Grape seed extract, Quercetin, Alpha-lipoic acid, Citrus bioflavonoid complex, Rose hips (fruit), Hesperidin complex, Turmeric (root), Asian ginseng (root), Hawthorn (fruit), Ginkgo biloba leaf extract, L-phenylalanine, CoQ10, Ginkgo biloba leaf, Green tea extract, Catalase, Flaxseed, L-lysine, SOD)</small>		
† Daily Value not established		
Other Ingredients: Vegetable Capsule (Hydroxypropylcellulose, Water), Calcium Citrate		

For Your Information

- This formula is applicable to everyone, as inflammation is a common denominator in nearly all illnesses and disease
- This product is very well tolerated
- Beta carotene (Vitamin A) toxicity is rare – research suggests caution with long-term intake greater than 10 times of the RDA
- Reduced recovery time (post-surgery and post-injury) when combining Protease IFC with RepairZyme in equal amounts
- We advise discontinue taking Protease IFC 24-48 hours prior to surgery and resume 24 hours post-surgery

Dosage

- Maintenance dose: 1 capsule 3 x day on an empty stomach in conjunction with the basic protocol
- Chronic inflammation: 3 capsules 3 x day
- Acute injury: 3-5 capsules 4-5 x day

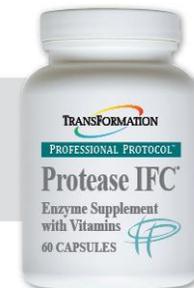
⚠ WARNING: Lead - Cancer and Reproductive Harm - www.P65Warnings.ca.gov

This product has been identified as containing naturally-occurring lead that exceeds California Proposition 65 lead levels when dosing more than two capsules per day.

Clinical Applications

- Prevention, wellness, and anti-aging
- Auto-immune
- Sore muscles after exercise or sports activities
- Recovery post-surgery and post-injury
- Cardiovascular health
- Skin disorders
- Inflammatory bowel disorders

In general, herbal formulas are not recommended during pregnancy and lactation or for children 12 years or younger. Each case should be assessed on an individual basis and the practitioner, along with the patient, may use their professional judgment and decide to use it.



Drainage

Assist the body's normal drainage process!

- **Lymphatic Herbs** – Red Root, Red Clover, Prickly Ash, Stillingia Root. All shown to remove toxins and improve circulation and drainage within the lymphatic vessels.

Use **L-Drain** along with **Digest**, **Protease** and **Probiotic**

L-DRAIN

Transformation's product for lymphatic drainage

This product assists in eliminating waste from the lymphatic system. It is a unique blend of herbs that are beneficial for relieving congestion of the interstitium, improving nutrient absorption, and enhancing immune function.

Product Highlights

- Liquid formula
- Herbal extracts specific for lymphatic flow and detoxification
- No enzymes
- Vegetarian product, no capsule
- Glycerine base is from palm kernel oil

SUPPLEMENT FACTS		
Serving Size 20 Drops		
Amount Per Serving		% Daily Value
Red Root (<i>Ceanothus americanus</i>)	9 mg	†
Red Clover blossoms (<i>Trifolium pratense</i>)	7.5 mg	†
Stillingia root (<i>Stillingia sylvatica</i>)	7.5 mg	†
Prickly Ash Bark (<i>Xanthoxylum clava-herculis</i>)	6 mg	†
† Daily Value not established		

Other Ingredients: Kosher Vegetable Glycerine, Filtered Water

Clinical Applications

- Lymphatic congestion
- Lymphedema
- Fluid retention
- Support for detoxification protocols

In general, herbal formulas are not recommended during pregnancy and lactation or for children 12 years or younger. Each case should be assessed on an individual basis and the practitioner, along with the patient, may use their professional judgment and decide to use it.

For Your Information

- Very well-tolerated
- Glycerine (glycerol) is a sugar alcohol but is not metabolized the same as sugar and therefore will not negatively affect blood sugars
- Available in 2 oz dropper bottles

Dosage

- 1 dropper (approximately 20 drops) in a small amount of water 3-4 x daily
- May squirt directly in mouth and follow with water
- May add to bottle of water and drink throughout the day



Colon Health

- Cascara Sagrada
- Psyllium
- Fennel
- Ginger
- Burdock
- Senna
- Goldenseal
- Enzymes

RELEASEZYME

Transformation's product
for chronic constipation

For those with chronic constipation, this enzyme-delivered blend will gently but effectively "jump start" the sluggish colon with herbs known for stimulating peristalsis, absorbing moisture, and providing bulk in the colon.

Product Highlights

- Enzymes for enhanced utilization of ingredients
- Cascara stimulates muscle contractions in the intestines
- Psyllium produces bulk to speed the passage of stool
- Ginger and Fennel speed up stomach emptying
- Burdock brings water into the bowel
- Senna leaf is well known for its laxative effect

SUPPLEMENT FACTS		
Serving Size 1 Capsule		
Amount Per Serving	% Daily Value	
Enzyme proprietary blend	104 mg	†
Phytase	15 FTU	†
Amylase	2,500 IU	†
Protease	3,000 HUT	†
Cellulase	400 EU	†
Lipase	100 FIP	†
Cascara Sagrada (bark)	150 mg	†
Psyllium (seed husk)	84 mg	†
Fennel (seed)	30 mg	†
Ginger (rhizome)	30 mg	†
Burdock (root)	10 mg	†
Goldenseal (root)	10 mg	†
Senna (leaf)	10 mg	†
† Daily Value not established		
Other Ingredients: Vegetable Capsule (Hyromellose, Water)		

Clinical Applications

- Chronic constipation (life-long or for a long time)
- Occasional constipation (<1 movement per day and/or hard dry stools)
- Regularity (goal is 2-3 soft, formed stools / day)
- Support of a colon cleanse or detoxification program

In general, herbal formulas are not recommended during pregnancy and lactation or for children 12 years or younger. Each case should be assessed on an individual basis and the practitioner, along with the patient, may use their professional judgment and decide to use it.

For Your Information

- Supporting regular elimination takes the burden of bowel toxicity off of the immune system, kidneys, lungs, liver, and skin
- Some patients experience minor cramping as the colon muscle is stimulated and retrained
- Diet, lifestyle, and water intake are key to resolving constipation
- Herbs may cause Melanosis coli (benign temporary staining of the colon wall)
- This product does not lead to physical dependency

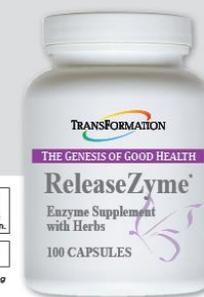
Dosage

- Maintenance: 1 capsule 3 x day following each meal, or take all three capsules at bedtime
- Therapeutic: 2 capsules after every meal and 3 capsules at bedtime (for 1-2 weeks)
- Long term use is not recommended, only use for 1-3 months to retrain the colon and allow the system to eliminate on its own

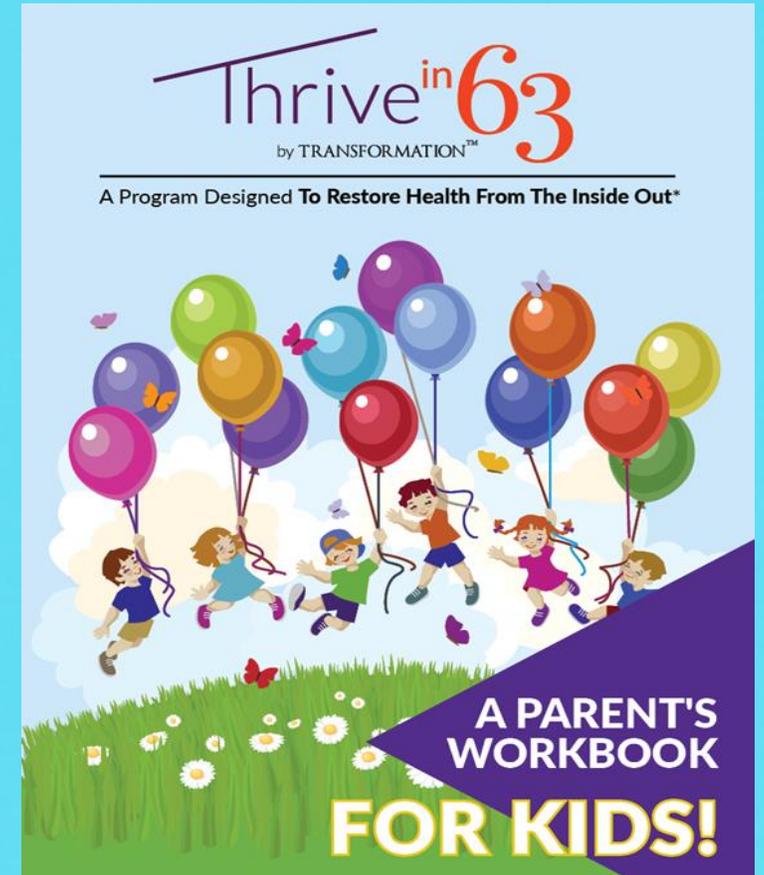
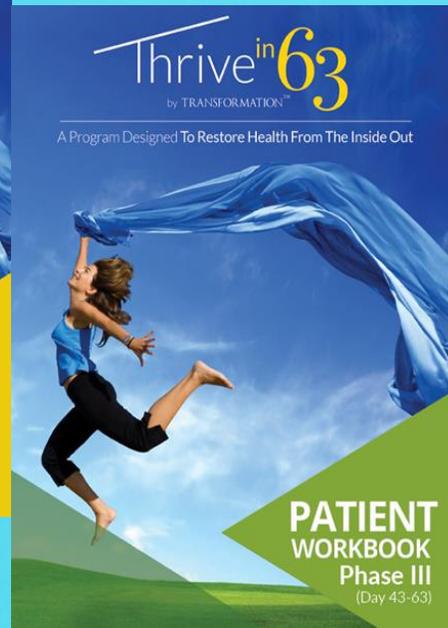
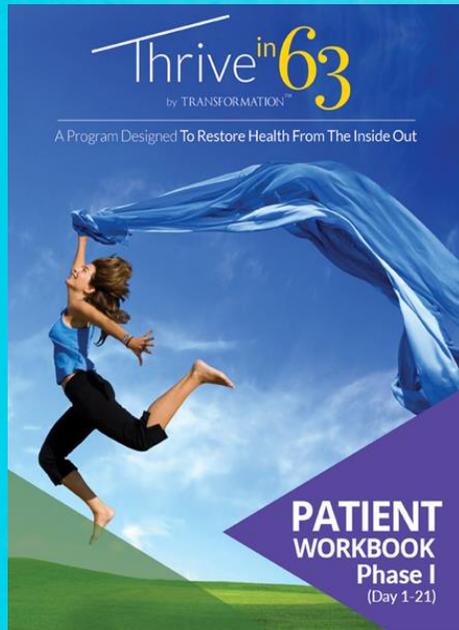
NOTICE: This product contains Cascara Sagrada Bark and Senna Leaf. Read and follow directions carefully. Do not use if you have or develop diarrhea, loose stools, or abdominal pain because Cascara Sagrada Bark and Senna Leaf may worsen these conditions and be harmful to your health. Consult your physician if you have frequent diarrhea or if you are pregnant, nursing, taking medication, or have a medical condition.

⚠ WARNING: This product contains Goldenseal root powder a chemical known to the State of California to cause cancer. For more information, go to www.P65Warnings.ca.gov

⚠ WARNING: Lead - Cancer and Reproductive Harm - www.P65Warnings.ca.gov This product has been identified as containing naturally-occurring lead that exceeds California Proposition 65 lead levels when dosing more than five capsules per day.



Nutrition for the Whole Family



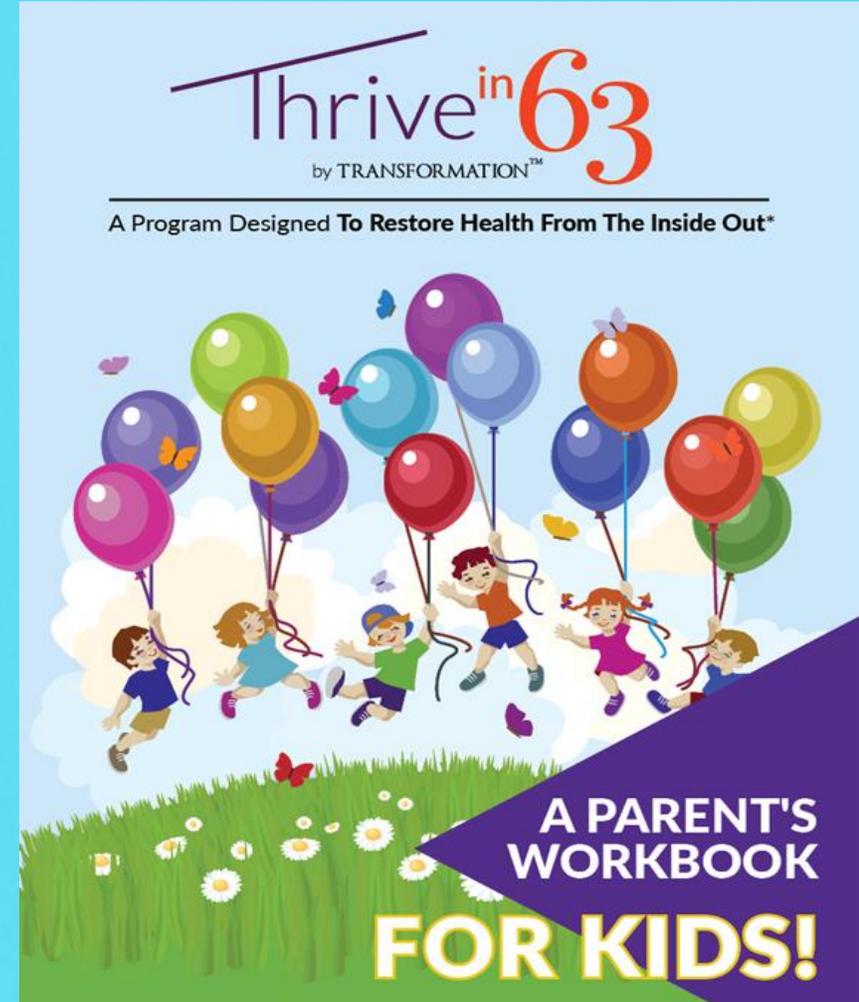
Transformation's DETOX for Kids Protocol Infants & Toddlers



Protocol: Nutrition

Parent's Workbook

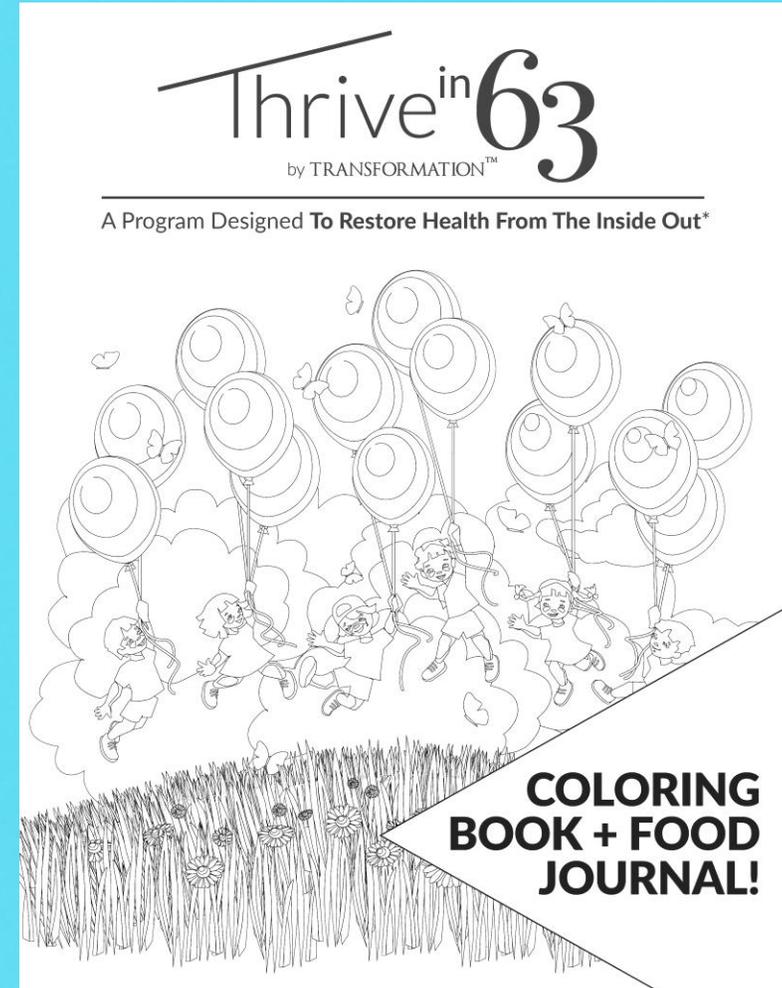
- Food Lists
- Kitchen Tips
- Protein Powder Advice
- Daily Anti-inflammatory Meal Plans
- Kid Friendly Recipes
- Enzyme Protocols Using Sensitive Formulations



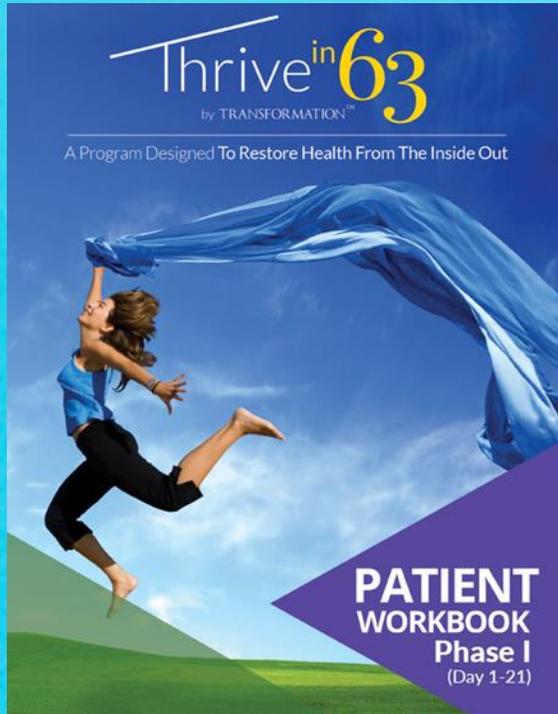
Protocol: Nutrition

Coloring Book + Food Journal - *Additional copies available for purchase separately*

- Food/Mood Journal
- Water Tracker
- Plate Method
- Coloring Book



Thrive in 63 Workbooks

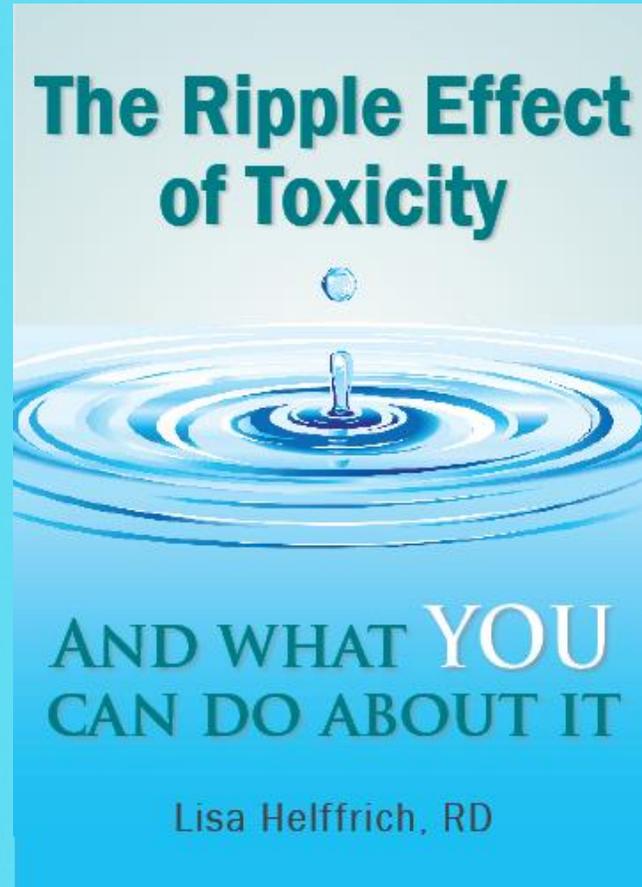


Results in the Clinic

- Digestive Health
- Colon Health
- Liver Health
- Lung Health
- Skin Health
- Kidney Health
- Lymphatic Health

“Give the body the nutrients it needs, clear away the waste, and allow the body to manage its resources.”

Read more about diet, lifestyle, and healthy detoxification in our free ebook, available with this webinar at **mycliniciantoolbox.com**



Plus download our detox instructional
handout to share with your patients,
available with this webinar at
mycliniciantoolbox.com



TAKE OUT THE TRASH!

Tips for Clearing Toxicity from the Body

by Lisa Helffrich Hudson, RD, LD

Toxins are anything that interferes with our body's ability to function optimally and remain healthy. They are stored in the body's tissues and fat cells. As your body goes through its normal activities, it is important to make sure you support the filtering and elimination of these toxins.

If you clean out your closet, you don't just leave the items you're getting rid of in your bedroom or hallway. You bag them up and put them on the curb or take them to a donation center, right? The same holds true in your body. You want to be sure the toxins from the cells and tissues are completely removed from the body. Otherwise, these materials may simply create congestion in other areas of the body. This is often what people experience if they feel sluggish during a detox program. Thus, it is important to make sure your liver, kidneys, and colon are being given enough support to handle the load effectively.

WHAT IS DETOXIFICATION?

Cleansing or purification as a way of ridding the body of harmful toxins has been used for thousands of years as part of our rituals for health and well-being.

The premise of body cleansing is based on the ancient Egyptian and Greek idea of autointoxication, in which food consumed can putrefy and produce toxins that harm the body. A more recent term—detoxification—is a process that promotes optimum health and wellness by removing toxins from the body and replenishing essential nutrients. It involves eliminating, neutralizing, and/or cleansing them from the body.

We do regular maintenance on our cars, cleaning the filters and changing the fluids so the engine runs better. The body is really not that much different. Cleaning our filters and fluids will help the body run more efficiently and feel better too.

HOW THE BODY DETOXIFIES

The body has a very sophisticated system of filters and exhausts that continually remove toxins from the body's tissues and fluids and eliminate them from the body.

The lymphatic vessels run parallel to and interact with the circulatory system traveling throughout the entire body. Blood is constantly pumping through our lungs, liver, kidneys, and GI tract, reabsorbing nutrients and filtering out impurities. The waste is collected in our bladder and colon to be eliminated on a regular basis. Last but not least, the skin is our largest detoxifying organ that can absorb as well as excrete toxins.

A healthy detoxifying system will filter impurities from the blood and lymphatic system in a timely manner. Oftentimes, however, our diet as well as modern lifestyle habits influence this system and put additional demands on the body. When you look at the various sources of toxicity in our food supply and environment, it is easy to see how the body may need extra support.

NEW WORKSHOP!

mycliniciantoolbox.com/workshops

- GLP-1, the Microbiome, and Metabolism: A Case-Based Workshop for Clinical Integration
- Exploring the connection between gut health, GLP-1 pathways, and metabolic function
- Presented by ResBiotic®, Transformation™, and Tiny Health™
- Featuring dietitians Kara Siedman, Star Edwards, and Amy Rawls
- Tuesday, October 7th @ 12pm CST

WEBINAR ARCHIVES

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- Endocrine Disrupting Compounds (EDCs) and Proteolytic Enzymes
- Toxins, Terrain, and Your Health
- A Clinician's Guide to Detox
- Dietary Protocols for Enhanced Liver Detoxification and Hormone Balance
- Mold & Toxicity During Hurricane Season
- New Year's Resolution Solution: Navigating Detox Symptoms During a New Year's Cleanse



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