

Liver Detox *Protocol*

Symptoms Of Poor *Liver Detoxification*



Acne



Brain Fog



Fatigue



Inflammation



Digestive
issues



Pigmentation



Weight gain



Constipation or
Diarrhea

Your Liver – The Body’s Master Filter

Every moment, your liver protects you. It filters nearly every drop of blood, transforms toxins, balances hormones, and directs waste toward elimination.

Detoxification is the body’s natural ability to convert harmful substances - such as toxins and metabolic byproducts - into non-toxic compounds and remove them through the **kidneys, digestive tract, and skin**.

This process depends on a healthy liver, gallbladder, and gut working in harmony.

But modern life places your liver under constant pressure:

- Processed food, caffeine, alcohol
- Medications, plastics, environmental toxins
- Hormonal fluctuations, poor sleep, and stress

All of these introduce **toxins** - both internal and external:

- **Endotoxins** - produced inside your body (from metabolism, gut bacteria, and hormone breakdown)
- **Exotoxins** - coming from the outside world (food, air, cosmetics, medications)

Most toxins are initially fat-soluble.

This is nature's protective design - preventing toxins from freely circulating in the bloodstream. However, to eliminate them, your liver must transform these fat-soluble compounds into water-soluble ones so they can safely exit through **urine, bile, and stool**.

When this process slows down, toxins circulate instead of leaving.

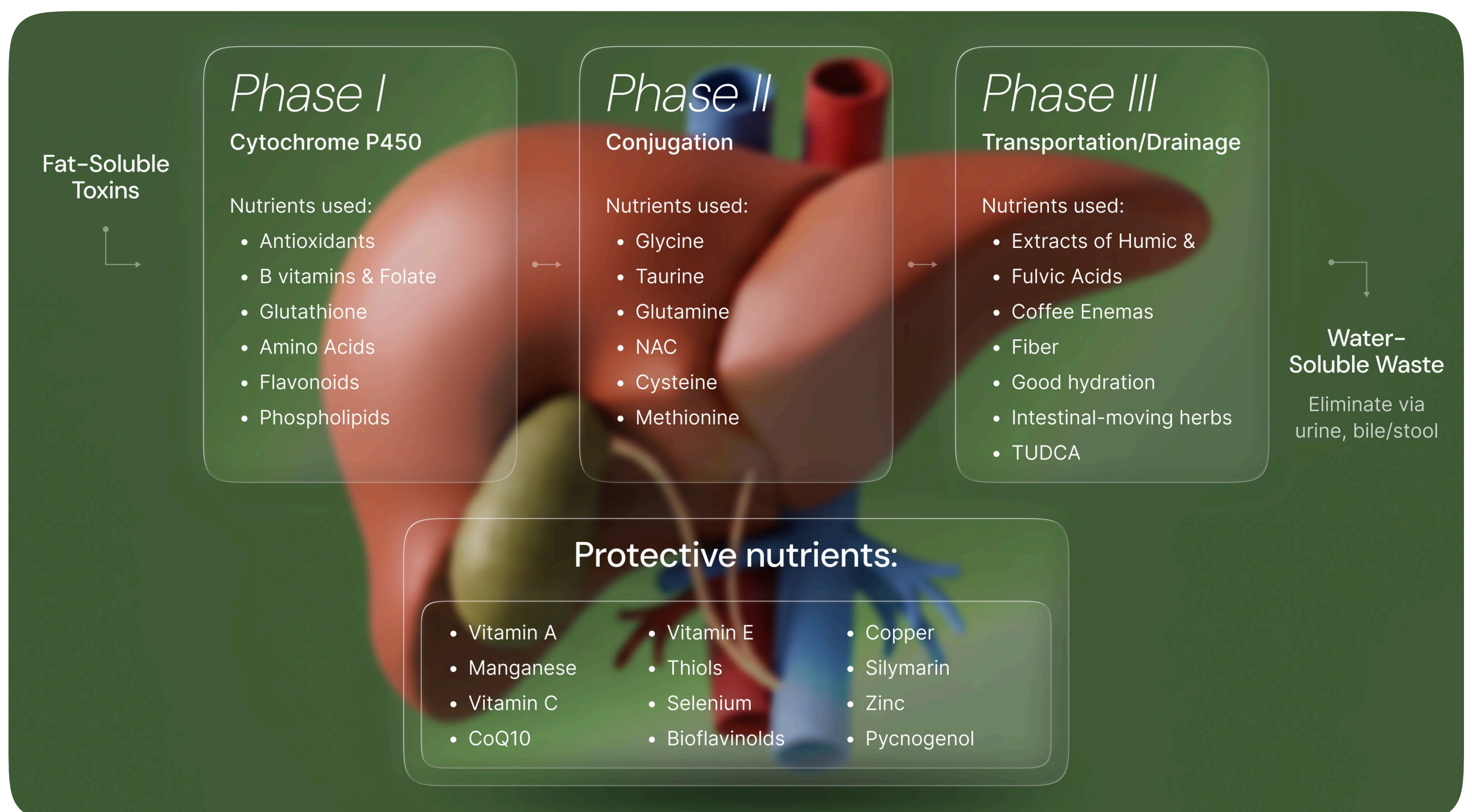
You may feel **fatigued, bloated, moody, or foggy-headed**, notice skin breakouts, or feel sluggish after meals.

That's your body's way of asking for support - not another crash diet, but **nourishment for its detox pathways**.

How Detoxification Works in Three Phases

Detoxification isn't just about the liver.

It's a coordinated process involving the **liver, gallbladder, gut, and lymphatic system** working together in three interconnected phases.



Phases of liver detox

Phase I – Activation (Transformation)

Your liver's **cytochrome P450 enzymes** start transforming fat-soluble toxins - from hormones, alcohol, medications, and pollutants - into smaller, intermediate molecules. These intermediates can be **highly reactive** and even carcinogenic if not quickly neutralized, so **antioxidant protection** is critical between Phase I and Phase II.

Key nutrients: B-vitamins (B2, B3, B6, B12, folate), glutathione, vitamins C & E, zinc, magnesium.

HORMUNITY SUPPORT:

- **Mito Energy Boost™** - enhances mitochondrial energy and supports enzyme function
- **Glutathione Complex™** - restores glutathione, the body's master antioxidant
- **Micellized Vitamin D3™** - supports detox-enzyme regulation and immune balance
- **Magnesium Balance™** - activates over 300 enzymes including those in detox pathways
- **Vitamin C™** - neutralizes oxidative intermediates and supports collagen synthesis

Phase II – Neutralization (Conjugation)

The liver “packages” reactive compounds from Phase I by attaching them to other molecules so they can be safely excreted.

Each conjugation route requires distinct nutrients - all equally important for safe detoxification.

GLUTATHIONE CONJUGATION

Glutathione binds toxins, making them water-soluble for bile and urine excretion.

- **Support with Glutathione Complex™** - take 1 mL (≈ 2 pumps) and hold in mouth 30 seconds before swallowing, once daily
- Works synergistically with **Detox Boost™** to recycle used glutathione and protect cells

AMINO ACID CONJUGATION

Uses amino acids (glycine, taurine, glutamine) and N-Acetylcysteine to neutralize acids and metabolites.

Support with **Detox II Phase Support™** - take 6 caps daily between meals (3 caps twice daily); provides amino acids and sulfur donors.

Support with **NAC Glutathione Support™** take 2 caps on an empty stomach, once or divided into two doses. NAC is a key sulfur donor that boosts intracellular glutathione and protects liver cells during toxin conversion.

Enhanced by **Liver & Gallbladder Synergy™** for bile flow and liver cell repair.

METHYLATION

Transfers methyl groups to deactivate estrogens, histamine, and neurotransmitters.

Methylation depends on genes like **MTHFR**; polymorphisms can slow detox and elevate homocysteine.

When methylation is sluggish, the body struggles to clear toxins efficiently.

Most people carry some folate-cycle variation, which lowers methylation capacity.

Without support this can lead to:

- Slow detox → High homocysteine → Cardiovascular risk
- Oxidative stress → Cognitive decline → Neurological imbalance

Because these gene variations are permanent, ongoing methylation support is essential:

- Use **bioactive B vitamins** (methyl-B6, B12, folate) through diet or separate supplementation
- Continue **Phase II support** with amino acids, NAC and sulfur nutrients for conjugation balance

Supporting the liver's detoxification phases is important for everyone, whether or not genetic polymorphisms exist.

Since testing each phase is rarely available, preventive care should emphasize activating **Phase II and keeping both phases in sync**.

This ensures toxins are converted, neutralized, and eliminated safely, protecting the body from oxidative stress and hormonal overload.

- Support with Detox II Phase Support™ - amino acids (glycine, taurine, sulfur donors) for Phase II conjugation
- Combine with a balanced diet and, if needed, a methylated B-complex for methylation support
- Result: better hormone balance, mood stability, cardiovascular and neurological health

SULFATION

Adds sulfur groups to detoxify hormones and food additives.

- Support with **Detox II Phase Support™** (taurine, cysteine, methionine) **NAC™** and **Glutathione Complex™**

ACETYLATION

Deactivates caffeine, smoke residues, and aromatic amines.

- Support with **Mito Energy Boost™** for acetyl-CoA and **Magnesium Balance™** as cofactor

GLUCURONIDATION

Binds glucuronic acid to estrogens and pollutants for bile excretion.

- Support with **Liver & Gallbladder Synergy™** (bile-support herbs) and **Detox Boost™** (curcumin, rosemary, green tea extract)

If Phase I outpaces Phase II, reactive toxins can accumulate.

Synchronizing phases with nutrients and antioxidants prevents detox side effects like headaches or fatigue.

The liver “packages” reactive compounds from Phase I by attaching them to other molecules so they can be safely excreted.

Each conjugation route requires distinct nutrients - all equally important for safe detoxification.

Phase III – Elimination (Excretion)

The final step is getting toxins out - through stool, urine, sweat, and breath.

If bowel movements are irregular, conjugated toxins may be reabsorbed and recycled.

Daily elimination is essential.

The body relies on:

- Healthy bile flow from the liver and gallbladder
- Adequate hydration and fiber
- Regular movement and sweating

Support with:

- **Liver & Gallbladder Synergy™** - keeps bile flowing for smooth detox
- **Detox Boost™** - supports lymphatic and kidney clearance

How to Take Your *Supplements*

Protocol cycle: Typically 4–6 weeks per bottle supply. Re-evaluate after one cycle and continue as needed.

Hydration: At least 2 liters of filtered water daily.

Nutrition: Emphasize cruciferous vegetables, clean proteins, and healthy fats. Avoid alcohol, refined sugar, and synthetic chemicals during the program.



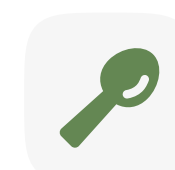
Glutathione Liposomal™

Dosage & Timing

Take 1 teaspoon after meal daily

Purpose

Master antioxidant & Phase II support



1 teaspoon



1 x daily



After meals



Detox II Phase Support™

Dosage & Timing

6 caps daily between meals (3 caps twice daily)

Purpose

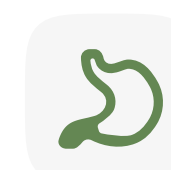
Amino acid & sulfur-based conjugation support



3 capsules



2 x daily



On empty stomach



Detox Boost™

Dosage & Timing

2 caps daily after meal

Purpose

Lymphatic flow & toxin elimination



2 capsules



1 x daily



After meals



Liver & Gallbladder Synergy™

Dosage & Timing

3 caps daily with a meal

Purpose

Amino acid & sulfur-based conjugation support



3 capsules



1 x daily



With meals



Mito Energy Boost™

Dosage & Timing

3 caps daily after meal

Purpose

Mitochondrial energy for Phase I activity



3 capsules



1 x daily



After meals



Magnesium Balance™

Dosage & Timing

2 caps twice daily after meals

Purpose

Enzyme activation & muscle relaxation



2 capsules



2 x daily



After meals



Vitamin C™

Dosage & Timing

2 caps daily after meal

Purpose

Antioxidant protection & immune support



2 capsules



1 x daily



After meals



B-Complex™

Dosage & Timing

1 cap daily after a morning meal

Purpose

Energy metabolism & methylation cofactor



1 capsule



1 x daily AM



After meals



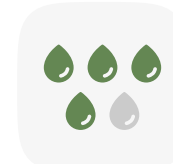
Micellized Vitamin D3™

Dosage & Timing

4–5 drops daily after meal (adjust per blood levels)

Purpose

Immune regulation & hormone balance



4–5 drops



1 x daily



After meals



NAC (N-Acetylcysteine)

Dosage & Timing

1000 mg daily on an empty stomach (either once or 500 mg twice daily)

Purpose

Boosts glutathione production & liver protection



1–2 capsules



1 or 2 x daily



On empty stomach

Caution

To support your comfort and safety, begin with one supplement and introduce the next every three days. This gradual approach makes it easier to recognize which product may be causing a reaction. If at any point you feel unwell or notice symptoms that concern you, pause the protocol and reassess.

Consult your healthcare provider before use if pregnant, nursing, or taking medications.

These statements have not been evaluated by the FDA.

This product is not intended to diagnose, treat, cure, or prevent any disease.

The Hormunity® Difference

At HORMUNITY®, detoxification means **cellular nourishment, not restriction.**

Our clinically designed formulas synchronize all three detox phases so your liver, gallbladder, and digestive system clear toxins safely and efficiently.

- Balances activation and conjugation phases
- Strengthens antioxidant defense and glutathione recycling
- Promotes healthy bile and digestive flow
- Supports daily toxin elimination
- Improves energy, mood, and hormonal balance

• Offer

Save 15% with protocol *bundles*

Carefully structured protocols designed to work together — at a better value than purchasing each product separately.

Buy Liver Detox Protocol Bundle • \$355.99



Liver Detox Protocol Bundle

Hormunity®

\$355.99

Contact us

 www.hormunity.com

 info@hormunity.com

 +1 (775) 525-6771

 400 Dorla Court
Suite 200
Zephyr Cove, NV 89448

References

- Danielson P. The cytochrome P450 superfamily: biochemistry, evolution and drug metabolism in humans. *Curr Drug Metab.* 2002;3(6):561–597.
- Ulrich V. Cytochrome P450 and biological hydroxylation reactions. *Topics Curr Chem.* 1979;83:67–104.
- Xu C., Li C.Y., Kong A.N. Induction of phase I, II and III drug metabolism/transport by xenobiotics. *Arch Pharmacol Res.* 2005;28(3):249–268.
- Kohalmy K., Monostory K. Regulation of phase II biotransformation enzymes by steroid hormones. *Curr Drug Metab.* 2011;12(2):104–123.
- James M.O., Ambadapadi S. Interactions of cytosolic sulfotransferases with xenobiotics. *Drug Metab Rev.* 2013;45(4):401–414.
- Kodama S., Negishi M. Sulfotransferase genes: regulation by nuclear receptors in response to xeno/endo-biotics. *Drug Metab Rev.* 2013;45(4):441–449.
- Wang L.Q., James M.O. Inhibition of sulfotransferases by xenobiotics. *Curr Drug Metab.* 2006;7(1):83–104.
- Wells P.G., Mackenzie P.I., Chowdhury J.R., et al. Glucuronidation and the UDPglucuronosyltransferases in health and disease. *Drug Metab Dispos.* 2004;32(3):281–290.
- Lazarou J., Pomeranz B.H., Corey P.N. Incidence of adverse drug reactions in hospitalized patients. *JAMA.* 1998;279(15):1200–1205.
- Macintosh A., Ballard K.D. The effects of a short program of detoxification in disease-free individuals. *Altern Ther Health Med.* 2000;6(4):70–76.
- Hodges R.E., Minich D.M. Modulation of metabolic detoxification pathways using foods and food-derived components: a scientific review with clinical application. *J Nutr Metab.* 2015;2015:760689.
- Su Z.Y., Khor T.O., Shen G., et al. Dietary phytochemicals and cancer chemoprevention: oxidative stress, Nrf2, and epigenomics. *Top Curr Chem.* 2013;329:133–162. Niture S.K., Khatri R., Jaiswal A.K. Regulation of Nrf2 — an update. *Free Radic Biol Med.* 2014;66:36–44.
- Suzuki T., Yamamoto M. Molecular basis of the Keap1–Nrf2 system. *Pharmacol Ther.* 2016;157:84–104. Lu Y., et al. Glutathione synthesis. *Biochim Biophys Acta.* 2013;1830(5):3143–3153.
- Hung Y., Li W., Su Z.Y., Kong A.N. Nrf2 pathway: beyond the antioxidant response. *J Nutr Biochem.* 2015;26(12):1401–1413.
- Khor T.O., et al. Activation of Nrf2-antioxidant signaling attenuates NF-κB inflammatory response. *Biochem Pharmacol.* 2008;76(11):1485–1489.
- Mitsuishi Y., Motohashi H., Yamamoto M. The Keap1–Nrf2 system in cancers, stress response and metabolism. *Front Oncol.* 2012;2:200.
- Gin H., Hou D.X. Regulation of Keap1/Nrf2 system by dietary phytochemicals. *Mol Nutr Food Res.* 2016;60(8):1731–1755.6;96:130–138.
- Dinkova-Kostova A.T., Kostov R.V. Glucosinolates and isothiocyanates in health and disease. *Trends Mol Med.* 2012;18(6):337–347.
- Yang L., Palliyaguru D.L., Kensler T.W. Targeting Nrf2 with foods rich in sulforaphane. *Semin Oncol.* 2016;43(1):146–153.
- Gasper A.V., Smith J.A., et al. Glutathione S-transferase M1 polymorphism and metabolism of sulforaphane from broccoli. *Am J Clin Nutr.* 2005;82(6):1283–1291.
- Kensler T.W., Egner P.A., Agyeman A.S., et al. Keap1–Nrf2 signaling: a target for cancer prevention by sulforaphane. *Top Curr Chem.* 2013;329:163–177.
- Houghton C.A., Fassett R.G., Coombes J.S. Sulforaphane and nutrigenomic Nrf2 activators. *Oxid Med Cell Longev.* 2016;2016:7857186.
- Scapagnini G., Vasto S., Abraham N.G., et al. Modulation of Nrf2/ARE pathway by food polyphenols. *Mol Neurobiol.* 2011;44(2):192–201.
- Shehzad A., Ha T., Subhan F., Lee Y.S. Anti-inflammatory role of curcumin in metabolic diseases. *Eur J Nutr.* 2011;50(3):151–161.
- Shoskes D.A., et al. Effects of curcumin and quercetin on early graft function in renal transplantation. *Transplantation.* 2005;80(11):1556–1559.
- Li C., Zhang W.J., Frei B. Quercetin inhibits LPS-induced adhesion molecule expression via Nrf2 activation. *Redox Biol.* 2016;9:104–113.
- Chow H.H., Garland L.L., Hsu C.H., et al. Resveratrol modulates drug-metabolizing enzymes in humans. *Cancer Prev Res.* 2010;3(9):1168–1175.
- Kumar A., Negi G., Sharma S.S. Neuroprotection by resveratrol in diabetic neuropathy. *Curr Med Chem.* 2013;20(36):4640–4645.
- Fuentes F., Paredes-Gonzalez X., Kong A.N. Dietary glucosinolates and isothiocyanates: oxidative stress, Nrf2, inflammation, epigenetics. *Curr Pharmacol Rep.* 2015;1(3):179–196.
- Konsue N., Kirkpatrick J., Kuhnert N., King L.J., Ioannides C. Pharmacokinetics of phenethyl isothiocyanate. *Mol Nutr Food Res.* 2010;54(3):426–432.
- Ho C.Y., Cheng Y.T., Chau F.F., Yen G.C. Diallyl sulfide induces Nrf2-dependent pulmonary antioxidant enzymes. *J Agric Food Chem.* 2012;60(1):100–107.
- Colín-González A.L., Santana R.A., Silva-Islas C.A., et al. Antioxidant mechanisms of aged garlic extract. *Oxid Med Cell Longev.* 2012;2012:907162.
- Kumar H., Kim I.S., More S.V., et al. Natural product Nrf2/ARE modulators for chronic diseases. *Nat Prod Rep.* 2014;31(1):109–139.
- Nakai K., Fujii H., Kono K., et al. Vitamin D activates Nrf2–Keap1 pathway and improves nephropathy in diabetic rats. *Am J Hypertens.* 2014;27(4):586–595.
- Done A.J., Gage M.I., Nieto N.C., Traustadóttir T. Exercise-induced Nrf2 signaling is impaired with aging. *Free Radic Biol Med.* 2016;96:130–138.