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Contents

- **Message:** from the President of BNHC
- **BNHC Directory: Board of Directors:** Dr. Nadir Sidiqi Ph.D., Mrs. Aziza Sidiqi, Mr. Zalmi Gulzarzada, Mr. Ghaus Siddiqi, Mr. Naveed Siddiqi
- **Staff & Faculty:** Mr. Wais Siddiqi, Prof. Rosalie Stafford, Dr. Nadir Sidiqi Ph.D., Dr. Tanveer Alam, and Dr. Vivek Sharma.
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- **BioNatural Healing**
- Medicinal plants, Nutrition, Health, Diet, Body, Mind, Spirit, Sleep, Exercise and related issues.
- **Science Research:**
- Agriculture, Environment, Public Health, Technology
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- **BNHC News & Advertisements:**
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Message: from the President of BioNatural Healing College (BNHC)



Greetings!

First and foremost, I am extremely thankful to Almighty God for granting me this opportunity to present the BioNatural Healing College E- Magazine to our dear readers. Also, I would like to thank you all especially those that are our dear readers that send us their valuable feedback and support. The information provided is for educational purposes only.

We hope this BNHC- E Magazine will be useful to you based with the contribution and dedication of many other respected researchers and colleagues around the globe. Thanking and wishing you all have the best health and prosperous life.

Best regards,

Dr. Nadir Sidiqi Ph.D.

A close-up photograph of a vibrant red rose. The petals are tightly packed and layered, showing a rich, deep red color. The background is softly blurred, showing green leaves and a hint of a white flower. The lighting is bright, highlighting the texture of the petals.

**A Healthy and Happy New
Year 2022**



BioNatural Healing College

BioNatural Healing College Hope you and your loved ones are staying healthy and safe during this pandemic (COVID-19). What we need to do especially during this uncertain time as follows:

1. Vaccination, Sanitation and Isolation from Social Interaction.
2. Positive Attitude will Increase the Power of Mind and Immune System.
3. Healthy Diet and Drink Plenty of Water (Honey with green tea, vitamin D₃, vitamin C), Get Enough Sleep.
4. Exercise (any type of physical activity for 30 minutes daily).
5. A Lot of Prayer to Almighty God (be patient, calm).

May Almighty God bless, guide us all (Humanity) and grant us the ability to find a cure for the elimination of COVID-19.

Detoxification: Removing Toxins an Approach to Optimun Health

By Dr. Nadir Sidiqi Ph.D.

Introduction

Nature gives us the sense of a detoxification system to experience every season especially during the fall and winter seasons when the trees fall their leaves, this means that the trees want to remove the leaves and other unwanted chemicals and go through the detoxification process. Spring is a season to rid all the extra fat and toxins we have accumulated in the winter season. Similarly, the spring season is the new growth and development for cells, tissues, in humans, plants, animals, and microorganisms based on laws of nature that were designed and created by the Creator of creations (Almighty God). Without a doubt human cells, tissues, organs, and whole systems, every day face many challenges and constantly are in a battle to get rid of the toxins that are consumed through food, water, and breathing in the air and also various personal care cosmetic products we use on our skin. Indeed, toxins that are present in the human body can be obtained from exogenous sources such as food, water, air, and medications; and the endogenous sources such as the products produced by digestion, energy metabolism, tissue regeneration, and end products from the metabolism of hormones, bacterial by-products, and other complex molecules¹. Therefore, detoxification is the process that involves the mobilization, biotransformation, and elimination of toxicants of exogenous and endogenous origin from the body. Human cells expend large amounts of energy to ensure that detoxification pathways continue to do their work as pointed out by John Cline MD in his review article “Nutritional Aspects of Detoxification in Clinical Practice (2015)”².

Another study suggests that a variety of macronutrients and micronutrients are required on a continuous basis to construct the multitude of enzymes for the various oxidation (is the loss of electron during a reaction by a molecule, atom or ion), reduction (is the gain of electrons or the oxidation state of an atom, molecule, or ion decreases), hydrolysis (the chemical breakdown of a compound due to reaction with water), and conjugation pathways (liver detoxified many substances in phase 1 and 2 detoxification), as well as the provision of enzymatic cofactors, phytochemical antioxidants, and fiber³. However, the author Sidney MacDonald Baker MD on his book “Detoxification and Healing: The Key to Optimal Health” refers to the biochemistry of handling potentially harmful chemicals that appear within the system and must be neutralized before they pass from the body. Detoxification and Healing, states that not referring exclusively to the harmful environmental chemicals that have learned to fear such as lead, mercury, other heavy metals, additives, dyes, hormones, pesticides, herbicides, fungicides, and petrochemicals of all sorts of pollutants of the air, water, and food supply that humans ingest. Furthermore, the Detoxification concept handles waste not only from the environment but from every process in all the organs and systems of the body⁴. Therefore, detoxification is the process that the human body uses to remove toxins or naturalize that need to be eliminated. Either, its internal toxins or external toxins. For example, internal toxins are the waste products that are formed inside of our bodies during their daily exposure to an adverse environment, and the response of cells, tissues, organs, and whole-body functioning. These reactions that carry toxins occur during biochemical, metabolic, and cellular processes and need to be eliminated through detoxification. Studies have revealed, that human thoughts, emotions, and stress can also produce biochemical toxins.

However, external toxins are any toxic substances that come directly from outside as mentioned above. It would be necessary, first to understand the types of toxins.

Type of toxins: Toxins are poisonous substances that, when ingested, inhaled, or injected into an organism cause deleterious effects on the functioning of its cells and organ systems. These could be either natural or artificial toxins⁵. The Encyclopedia of Natural Medicine describes that toxin is any compound that has a detrimental effect of cell function and structure. It must be noted that some toxins cause minimal negative effects, while others can be fatal⁶. As such, toxins are classified as follows:

- • Heavy metals
- • Persistent organic pollutants (POPs)
- • Microbial compounds
- • Breakdown products of protein metabolism

Heavy metals: Arsenic, cadmium, lead, mercury, nickel, aluminum (which is not heavy metal but is toxic), are considered as “heavy metals”. Studies have shown that heavy metals accumulation in the brain, kidney, liver, immune system and other parts of the human body impede normal function and cause health problems. According to Environmental Working Group (EWG’s) 2017 Shopper’s Guide to Pesticides in ProduceTM, more and more Americans are demanding food free of synthetic chemicals. However, EWG’s analysis of tests by the U.S. Department of Agriculture found that nearly 70 percent of samples of 48 types of conventionally grown produce were contaminated with pesticide residues. The USDA found a total of 178 different pesticides and pesticide breakdown products on the thousands of produce samples it analyzed. The pesticides persisted on fruits and vegetables even when they were washed and, in some cases, peeled. But there are stark differences in the number and amount of pesticides on various types of produce⁷. This is an alarm message to everyone concerned about their diet and health.

As such, to better understand that toxic metals cause damage in three ways: First, blocking the activity of enzymes (e.g., mercury blocks the enzyme that converts the thyroid hormone T4 to the more active T3, resulting in functional hypothyroidism). Secondly, displacing minerals (such as lead replacing calcium in bones, making them weaker). Thirdly, increasing oxidative stress which negatively affects virtually all tissues and functions in the body. It means that how important is to take care of the whole body through our diet, lifestyle modification, and especially detoxification.

Persistent Organic pollutants (POPs): are toxic chemicals that adversely affect human health as well as the health of the environment. Examples are that deal with the liver and makes adverse effects on health include pesticides, herbicides, drugs, alcohol, formaldehyde, food additives, etc⁶. People are mainly exposed to POPs through contaminated foods and less common exposure routes include drinking contaminated water and direct contact with the chemicals. In people POPs cause damage in reproductive, developmental, behavioral, neurologic, endocrine, and immunologic adverse health effects have been linked to POPs. POPs can be transferred through the placenta and breast milk to developing offspring. It should be noted, however, that despite this potential exposure, the known benefits of breastfeeding far outweigh the suspected risks as pointed out by the U.S Environmental Protection Agency (EPA)⁸.

Microbial compounds: Microbial toxins can be of different types like bacteria, fungal and algal toxins as pointed out by Vijayakumar et al., “A Review on Various Types of Toxins (2015)”. Bacteria toxins are neurotoxins⁹. Toxins produced by bacteria and yeast in the gut can be absorbed by the body, causing significant disruption of body functions⁶. For instance, *Clostridium botulinum* produces botulinum neurotoxin, which enters into the body through consumption of contaminated food, gets diffused through the intestinal mucosa, and enters into the bloodstream through the intestinal villi.⁹ After circulation through the blood, it affects the motors neuron ending⁹.

The toxin blocks various neurotransmitters like acetylcholine, dopamine, aspartate, etc.⁹ Tetanus toxins, which is produced by *Clostridium tetani* enter the body through wounds infected by the bacterium and eventually reaches the adrenergic, sensory, and motor neurons⁹. It binds to receptors on the nerve endings, where it blocks a number of neurotoxins, for instance, serotonin, GABA (Gamma-aminobutyric acid), etc.⁹ Algae like *Gonyaulax catenella*, when present in large concentrations in seawater cause red tides which are highly toxic¹⁰. The toxin enters humans due to the consumption of fish affected by the toxin.¹⁰ The algae *Pyrodinium phoneus*, which causes paralytic shellfish poisoning, and *Mytilus californicus*, which causes mussel poisoning cause toxicity when consumed by humans¹⁰. Symptoms of algal poisoning include blockage of muscle and axonal conduction¹⁰. Toxins such as hepatotoxins, carcinogens, and immunosuppressants can be produced by different species of *Alternaria*, *Fusarium*, *Aspergillus* (fungi group), etc.¹¹ Fungal toxins like aflatoxin, which is produced by *Aspergillus flavus* and *Aspergillus parasiticus* causes mutations in DNA due to the formation of DNA adducts. A result of these microbial toxins leads to many types of health problems, such as cancer, fusaric acid methyl amide is commonly associated with contaminated fruits and vegetables¹².

Breakdown products of protein metabolism: According to “Life Extension Magazine” the diet is a major source of toxin exposure. Even the method of food preparation has the potential for converting naturally-occurring food constituents into toxins. For instance, high temperatures can convert nitrogen-containing compounds in meats and cereal products into the potent mutagens benzpyrene and acrylamide, respectively. Smoked fish and cheeses contain precursors to toxins called N-nitroso compounds (NOCs), which become mutagenic when metabolized by colonic bacteria¹³. Therefore, the kidneys are the main organ responsible for the elimination of toxic waste products of protein breakdown (ammonia, urea, etc.).

Drinking plenty of water is the best remedy to maintain the health of kidneys and eliminate the toxicants from the body, as the main objectives of this study are to focus and take advantage of detoxification in our daily life.

Types of toxicity: Inside the human body numerous biochemical reactions are taking place, however, toxins in our environment (exotoxins) and that the human body produces (endotoxins) are more concerned, because both have the ability to disrupt the essential biological organs that are needed for the body to function properly such as DNA, cellular membranes and proteins. Repeated exposure to various toxins without detoxification can contribute to many health problems in the short term such as headaches, nausea, and fatigue; and in the long term can contribute to chronic health outcomes and suppressing of the immune system and other related health problems. Detoxification is essential for eliminating the body of toxins and preventing their health damage effects. Indeed, all cells have the ability to detoxify toxins, the most important organ for detoxification in the liver- known as the body's filter with its remarkable purification system as pointed out by the website: Isagenix Nutritional Sciences¹⁴. The Encyclopedia of Natural Medicine describes that how the body eliminates toxins either by directly neutralizing them or by excreting them in the urine or feces (to a lesser degree through the hair, lungs, skin, sweat). Toxins that the body is unable to eliminate build up in the tissues typically in our fat stores. The liver, intestine, and kidney are the primary organs of detoxification¹⁵. Let us consider to understand how the body's detoxification system work according to the Encyclopedia of Natural Medicine:**The liver:** the liver plays several important roles in detoxification. For instance, it filters the blood to remove large toxins, synthesizes and secretes bile full of cholesterol and other fat-soluble toxins, and enzymatically disassembles unwanted chemicals.

One of the main functions of the liver's detoxification is the prevention of cancer. Studies suggest that up to 90 percent of all cancers are thought to be due to the effects of exogenous toxins (environmental carcinogens: cigarette smoke, food, water, air, personal care products), combined with deficiencies of the nutrients the body needs for the proper functioning of the detoxification and immune system. One of the liver's primary functions is filtering the blood. Almost two quarts of blood pass through the liver every minute for detoxification. Filtration of toxins is absolutely critical for the blood that is coming from the intestines because it is loaded with bacteria endotoxins (toxins released when bacteria die and are broken down), antigen-antibody complexes (large molecules produced when the immune system latches on to an invader to neutralize it), and various other toxic substances. It is important to note that when the liver is working properly, the liver clears 99 percent of the bacteria and other toxins from the blood before it is allowed to reenter the general circulation. However, the unhealthy liver can't perform properly this filtration system and breaks down. Prof. Dr. H.D. El Yasin in his article "Inactivation and Detoxification of Xenobiotics and Metabolites in the Liver" stated that the liver detoxifies harmful substances by a complex series of chemical reactions. The role of these various enzyme activities in the liver is to convert fat-soluble toxins into a water-soluble substances that can be excreted in the urine or bile depending on the particular characteristics of the end product.

Many of the toxic chemicals that enter the body are fat-soluble, which means they dissolve only in fatty or oily solutions and not in water. This makes them difficult for the body to excrete. Fat-soluble chemicals have a high affinity for fat tissues and cell membranes, which are composed of fatty acids and proteins. In these fatty tissues of the body, toxins may be stored for years, being released during times of exercise, stress, or fasting. As mentioned earlier that the liver is the primary detoxification organ; it filters blood coming directly from the intestines and prepares toxins for excretion from the body. In addition, other organs play a significant amount of detoxification such as the intestines, kidneys, lungs, and brain. Let us discuss the three phases of detoxification from the researchers' point of view of Life Extension Magazine "Metabolic Detoxification":



Source: <https://www.scribd.com/document/214854176/Detoxification-in-the-Liver2012>

Phase I detoxification (Enzymatic transformation): As mentioned earlier that many enzymatic reactions are responsible for detoxification, however, Phase I enzymes begin the detoxification process by chemically transforming lipid-soluble compounds into water-soluble compounds in preparation for phase II detoxification. During phase I numerous enzymes family participate, but the primary family of enzymes is called the cytochrome P-450s (CYPs).

CYP enzymes are relatively non-specific, each has the potential to recognize and modify countless different toxins; after all, a mere 57 human CYPs must be able to detoxify any potential toxin that enters the body. However, the cost of this versatility is speed; CYPs metabolize toxins very slowly compared to other enzymes. For instance, compare the predominate CYP3A4, which metabolizes 1-20 molecules per second (). Major sites of detoxification overcome the slower speed by producing large amounts of CYPs-CYPs may represent up to 5 percent of total liver proteins, and similar large concentrations can be found in the intestines. CYPs are amongst the most well studied and best-characterized detoxification proteins due to their role in the metabolism of prescription drugs, and to their role in metabolizing endogenous biochemicals, for example, aromatase, which transforms testosterone to estradiol is a CYP. It is worth naming other enzymes that contribute during the phase I process such as Flavin monooxygenases (FMOs; responsible for the detoxification of nicotine from cigarette smoke); alcohol and aldehyde dehydrogenases (which metabolize drinking alcohol), and monoamine oxidases (MAOs; which break down serotonin, dopamine, and epinephrine in neurons and are targets of several older antidepressant drugs (Life Extension).

Phase II detoxification (enzymatic conjugation): Life Extension describes that phase I transformation, the original lipid-soluble toxin has been converted into a more water-soluble form, however, this reactive intermediate is still unsuitable for immediate elimination from the cell for a couple of reasons: First, phase I reactions are not sufficient to make the toxin water-soluble enough to complete the entire excretion pathway. Secondly, in many cases, products from the phase I reactions have been rendered more reactive than the original toxins, which makes them potentially more destructive than they once were. Both shortcomings are addressed by the activities of the phase II enzymes, which modify phase I products to both increase their solubility and reduce their toxicity.

The activation of the phase II enzymes is responsible for the anti-mutagenic and anti-carcinogenic properties of the metabolic detoxification system; it is widely accepted that phase II enzymes protect against chemical carcinogenesis, especially during the initiation phase of cancers (). At the genetic level, the production of most phase II enzymes is controlled by a protein called nuclear factor erythroid-derived 2 (Nrf2), a master regulator of antioxidant responses. Under normal cellular conditions, Nrf2 resides in the cytoplasm (the liquid inside cells within which the cell's components are contained), of the cell in an inactive state (Life Extension).

However, the presence of oxidative stress (triggered by the metabolism of toxins by CYPs) activates Nrf2, allowing it to travel to the cell nucleus. In the cell nucleus, Nrf2 turns on the genes of many antioxidant proteins, including the phase II enzymes. In this way, Nrf2 “senses” oxidative stress or the presence of toxins in the cell, and allows the cell to mount an appropriate response. Nrf2 regulates the activity of genes involved in the synthesis and activation of important detoxification molecules including glutathione and superoxide dismutase (SOD). It also plays an important role in initiating heavy metal detoxification, and the recycling of CoQ10, a potent antioxidant as studies suggested. Research indicates that certain dietary constituents (e.g., sulforaphane from broccoli and xanthohumol from hops) may also directly activate Nrf2 and stimulate antioxidant enzymes activity; this may partially explain their beneficial effects on detoxification as reported by the study. As Life Extension stated that there are several families of phase II enzymes that differ significantly in their activities and biochemistry. In several cases, phase II enzymes exhibit redundancy a particular xenobiotic or endobiotic can be detoxified by more than one phase II enzyme. Let us analyze it for better understanding:

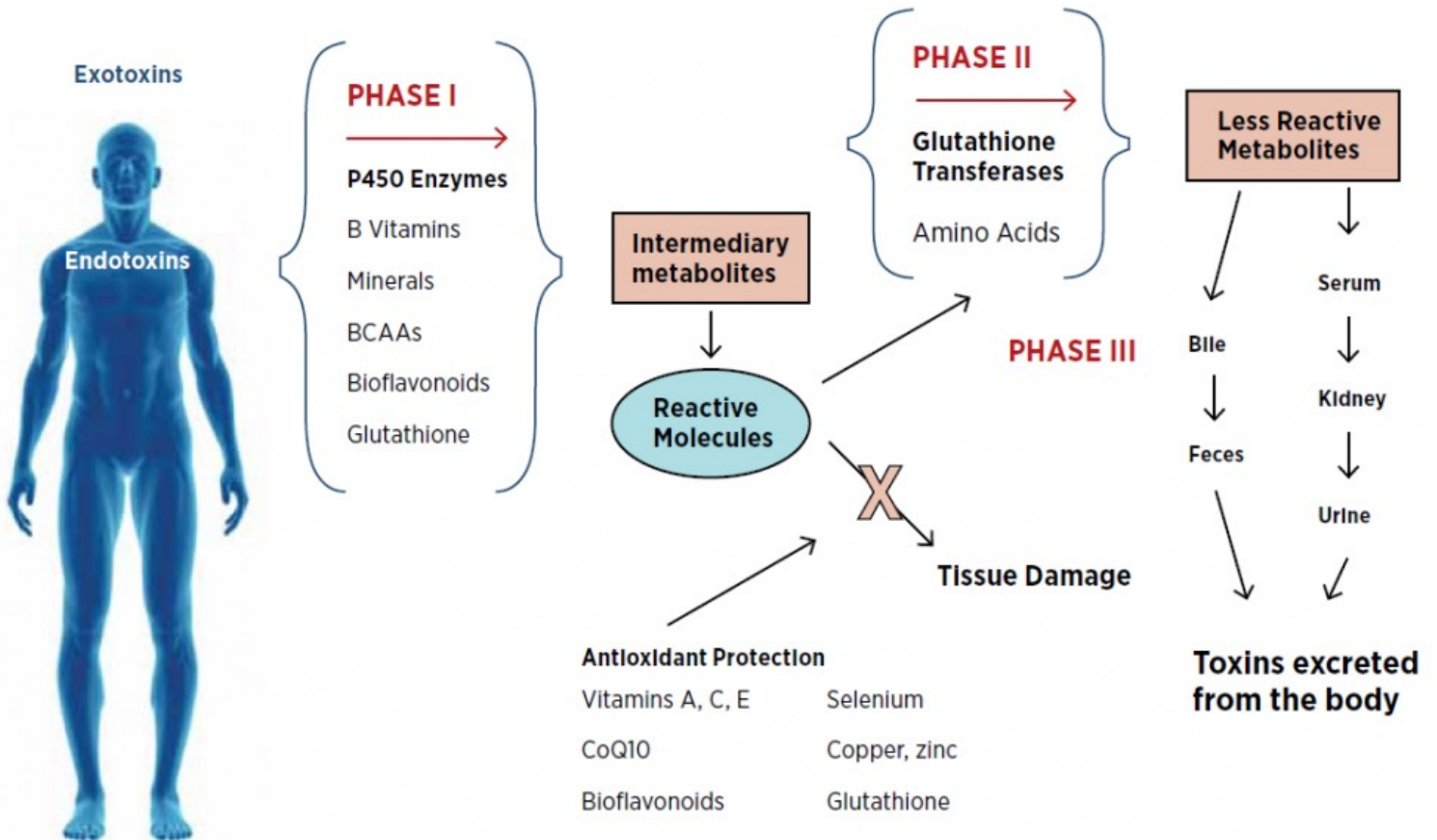
UDP-glucuronyltransferases (UGTs): In humans, these enzymes catalyze glucuronidation reaction, the attachment of glucuronic acid to toxins to render them less reactive and more water-soluble. There are several different UGTs that are distributed throughout the body, with the liver being the major location. In humans, many xenobiotics, environmental toxicants, and 40-70 percent of clinical drugs are metabolized by UGTs as the study indicated. For instance, the plasticizer bisphenol A and benzopyrene (from cooked meats) are two noticeable cases of UGT substrates (a substrate is a molecule upon which an enzyme acts). Intestinal UGTs may affect the oral bioavailability of several drugs and dietary supplements and may be responsible for chemoprevention in this tissue as pointed out by researchers.

Glutathione S-transferases (GSTs): Refers to a group of enzymes that catalyze the transfer of glutathione (an important cellular antioxidant) to phase I products. GSTs play a major role in the metabolism of several endobiotics, including steroids, thyroid hormones, fat-soluble vitamins, bile acid, bilirubin, and prostaglandins based on the study report. GSTs can also function as antioxidant enzymes, detoxifying free radicals, and oxidized lipids or DNA. GSTs are soluble enzymes that are ubiquitous in nature and in humans, forming about 4 percent of the soluble protein in the human liver and present in several other tissues (such as brain, heart, lung, intestines, kidney, pancreas, lens, skeletal muscles, prostate, spleen, and testes as studies reported). Products of GST conjugation can be excreted via bile or can travel to the kidneys where they are further processed and eliminated in urine and help the body less toxic. It would be appropriate to mention the name of some other enzymes that contribute in phase II such as sulfotransferases (SULTs), methyltransferase enzymes, arylamine N-acetyltransferases (NATs), and Amino acid conjugating enzymes.

Phase III detoxification: Involves the elimination of toxins from cells. In this phase, the products of phase I and phase II reactions are transported out of cells and into the bloodstream for elimination as reported by the website Isagenix Nutritional Sciences.

As a study suggested that phase III transporters belong to a family of proteins called the ABC.

THREE PHASES OF DETOXIFICATION



Source: <http://www.isagenixhealth.net/the-basics-of-detoxification/>

Benefits of detoxification: This means that the whole body feels healthy, cleansed from rust, dust, and toxins, that cause numerous health problems such as headaches, back pain, joint pain, memory fog, depression, lack of energy, brittle nails, and hair, frequent allergies, cancer, and other related health problems as points out by Drs. Michael Lam and Justin Lam “The Process of Detoxification & Adrenal Fatigue Syndrome”. However, the benefits of detoxification will provide:

- · Cleansed the digestive tract from both harmful chemicals and also bacteria that produce toxins.
- · Purify the blood from the toxins, which make it easy the job for the liver and kidneys through the detoxification
- · Enhance brain function, by eliminating the toxins from the body
- · Self-confidence and improve the habit to avoid sugar, alcohol, cigarette, caffeine, and processed food.
- · Boost energy and immune system.

Dietary modification and detoxification: The whole concept of detoxification is based on decreasing the level of toxins from the body. Consuming fruits and vegetables, whole grain, and nuts from the source of organic farming is an important step in detoxification. It is essential to have an adequate dietary intake of vitamins (such as B vitamins, vitamins C, and vitamin E), minerals (such as selenium, zinc, copper), and other bioactive nutrients such as coenzyme Q10 and polyphenols. Plant-based nutrients enhance and boost the body for completion of detoxification phases and provide antioxidants to support the body for optimum health. Isagenix Nutritional Sciences stated that plant-based medicines including ashwagandha, aloe vera, and turmeric, milk thistle, resveratrol, and other antioxidant vitamins and botanicals have all been shown to improve detoxification. It is important to understand that besides of these micronutrients, the detoxification system also needs an adequate source of the amino acid (cysteine), the sulfur-containing amino acid essential for glutathione transferase production as mentioned earlier. According to John C. Cline MD, Nutritional Aspects of Detoxification in Clinical Practice (2015), each following food group within the detox-focused core food plan contains foods that are selected for their unique array of phytonutrients:

Fats and oils: These foods are important because they provide excellent sources of energy for the detox and biotransformation processes. Especially oils such as olive oil, avocado, and coconut milk are high in medium-chain triglycerides.

Nuts and seeds: provide excellent sources of energy as well as fiber that assists in proper excretion and elimination. In addition, have a positive impact on the reduction of bacterial deconjugating enzymes.

Proteins: High-quality, bioavailable protein is important as a source of amino acids for the production of the phase I CYP enzymes, particularly glycine, L-glutamine, methionine, L-cysteine, and taurine. Protein is a good source of inorganic sulfate.

Legumes: provide a good source of soluble and insoluble fiber as well as a variety of amino acid precursors for phases I and II and antioxidant phytochemicals.

Low-fat dairy and alternatives: these foods provide amino acid substrates for the phase II pathways as well as inorganic sulfate and selenium.

Fruits: provide a wide variety of phytonutrients, such as β -carotene, lutein, and anthocyanins that have protective antioxidant properties as well as good sources of soluble and insoluble fiber, that promote healthy intestinal transit of toxicants. The high content of water in fruits helps in detoxification.

Grains: are an excellent supply source of soluble and insoluble fibers that are vital for healthy intestinal transit.

Vegetables: Like fruits, starchy vegetables provide excellent sources of fiber and phytonutrients.

The nonstarchy vegetables, including the Brassica genus, provide a wide variety of phytochemicals that impact detoxification and biotransformation. They directly impact many of the phases I CYP pathways in the metabolism of estrogens, favoring the production of the 2-hydroxy estrogens. **Fasting stimulated detoxification:** Fasting has been used as a healing, spiritual, religious, and purification process for many centuries in Judaism, Christianity, Islam, and Eastern religions. Socrates, Plato, Aristotle, and Hippocrates all used and believed in fasting therapy to recreate health where there was sickness. The mechanism behind the healing powers of fasting is that it is a form of detoxification from overeating and from the exposure of our bodies to unwanted toxins in our food and our environment. Although, we cannot live in a bubble in order to protect our bodies from these toxins, therefore, fasting correctly take advantage of its detoxifying effects as reported by Al-Arabia “Fasting: The secret to detoxing and improving health”.

Evart Loomis MD, stated in his book “Fasting Therapy” that fasting is the world’s most ancient and natural healing mechanism. Fasting triggers a truly wondrous cleansing process that reaches right down to each and every cell and tissue in the body. Within 24 hours of curtailing food intake, enzymes stop entering the stomach and travel instead into the intestines and into the bloodstream, where they circulate and gobble up all sorts of waste matter, including dead and damaged cells, unwelcome microbes, metabolic waste, and toxicants. All organs and glands get a much-needed and well-deserved rest, during which their tissues are purified and rejuvenated and their functions balanced and regulated.

The entire alimentary canal is swept clean. By rebuilding immunity, health is naturally restored and disease disappears. Indeed, fasting is the main tool for cleansing and detoxification for the health and prosperity of the human body. If health and immunity are thereafter conscientiously maintained, the individual is no longer vulnerable to disease and dieting becomes unnecessary. Fasting Therapy describes that surely one of the most overlooked and yet most valuable modes of healing that will be rediscovered in the future of the new medicine is fast. This is because of the increasing interest in looking to oneself for healing powers. For the fast is an inward process and cannot be entered upon only from an outer approach with any expectation of a lasting benefit. The person must invariably be involved with the overall results. This therapeutic encounter is in direct contrast to the usual non-involvement in the physician-directed, disease-oriented medical practice of today. <http://www.shirleys-wellness-cafe.com/Detox/Fasting> In addition, fasting assist in the reduction of fat mass- the primary target for toxin storage stimulates the release of toxins into circulation. Once in the bloodstream toxins are more easily metabolized and excreted from the body through detoxification phases. Indeed, when the body has the additional support of amino acids, vitamins, polyphenols, and other bioactive ingredients, the detoxification enzymes can perform high functions.

Conclusion: Detoxification is the process that assists our body's cells, tissues, organs, and whole systems to get rid of the toxicants that are deposited in our bodies and every adult person should perform per year, except children, pregnant women, travelers during their trip and elderly people. Without a doubt, human's cells, tissues, organs,s, and whole systems, every day face many challenges and are constantly in a battle to get rid of the toxins that are consumed through food, water, drugs, and air breath it and also various personal care cosmetic products we use on our skin. Either, its internal toxins or external toxins. For example, internal toxins are the waste products that are formed inside of our bodies during their daily exposure to an adverse environment, and the response of cells, tissues, organs,s, and whole-body functioning. These reactions that carry toxins occur during biochemical, metabolic, and cellular processes and need to be eliminated through detoxification. Studies have revealed, that human thoughts, emotions, and stress can also produce biochemical toxins. However, external toxins are any toxic substances that come directly from outside. It is important to understand the types of toxins: Heavy metals, Persistent organic pollutants (POPs), Microbial compounds, and Breakdown products of protein metabolism.

Indeed, all cells have the ability to detoxify toxins, the most important organ for detoxification is the liver- known as the body's filter with its remarkable purification system, along the intestines, kidneys, skin. Detoxification consists of three phases during Phase I enzymes begin the detoxification process by chemically transforming lipid-soluble compounds into water-soluble compounds in preparation for phase II detoxification.

During phase I numerous enzymes family participate, but the primary family of enzymes is called the cytochrome P-450s (CYPs). CYP enzymes are relatively non-specific, each has the potential to recognize and modify countless different toxins. Phase II reactions conjugate speed up the solubility of toxins substances with different phase II types of enzyme catalyzes such as UDP-glucuronyltransferases (UGTs), Glutathione S-transferases (GSTs), sulfotransferases (SULTs), methyltransferase enzymes, arylamine N-acetyltransferases (NATs), and Amino acid conjugating enzymes. Phase III: Involves the elimination of toxins from cells. In this phase, the products of phase I and phase II reactions are transported out of cells and into the bloodstream for elimination. Diet modification and fasting play crucial roles in approach to toxic elimination and gaining optimum health, because the Creator of creations Almighty God perfectly understood and designed our bodies to perform detoxification to eliminate both toxins from our bodies and also perform prayers to eliminate the sins from our heart, brain, and to ask for forgiveness and purification of our physical, mental, and spiritual health.

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Dr. Nadir Sidiqi Trip to Mecca (Makkah al-Mukarramah) Kingdom of Saudi Arabia

On November 25th, 2021, had a trip to Mecca (Makkah al-Mukarramah) Kingdom of Saudi Arabia. He is extremely thankful to the Creator of creations Almighty God for granting him the great opportunity with his beloved mother to travel all the way from Los Angeles, California to perform Umrah (is the name given to a pilgrimage to Mecca, a shorter version of the annual Hajj gathering), as well as Madena Munawara the Masjid al-Nabawi (Prophet Muhammad Peace be upon him Mosque).

In addition, on December 21, 2021, Dr. Nadir Sidiqi had a wonderful opportunity to meet Dr. Abdulaziz R. Alharbi and Dr. Muien Qaryouti at the National Research and Development Center for Sustainable Agriculture (Estidamah) at the King Saud University Riyadh Kingdom of Saudi Arabia. Dr. Abdulaziz Alharbi has given an informative introduction about Estidamah and followed a presentation by Dr. Muien Qaryouti on the "Greenhouse Technology Programs" that adopt different research approaches to support vegetable production in the Kingdom of Saudi Arabia particularly tomato.

Also, Dr. Nadir Sidiqi share his presentation "BioNatural Healing: An Approach to Plant Health and Human Health" which was greatly appreciated and acknowledged. During his trip, Dr. Sidiqi was accompanied by his cousin Eng. M. Abdul Hai Siddiqi who is residing with his family in Jeddah, Kingdom of Saudi Arabia.



From left to the right Dr. Abdulaziz Alharbi, Dr. Nadir Sidiqi, Eng. M. Abdul Hai Siddiqi, Dr. Muien Qaryouti,



Dr. Muien Qaryouti explains to Dr. Nadir Sidiqi about the greenhouse's future projects. 12/21/2021 Estidamah Riyadh KSU.



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