



# BrainChild Nutritionals



## NATURAL APPROACH TO CHELATION AND DETOXIFICATION

Dear BrainChild Customers, Parents and Practitioners:

From its inception ten years ago, BrainChild Nutritionals has been dedicated to formulating the best nutritional “tools” to help you on your mission of recovering the children you care for. In pursuit of that objective, I am very excited to announce a thorough new alternative chelation and detoxification protocol I’ve recently developed for children on The Spectrum. I feel strongly from talking to dozens of other parents and practitioners alike and from my own observations over many years, that while heavy metal chelation with DMSA and DMPS has helped many children on their way towards recovery, it has also caused some moderate to severe regression in many others. What is the reason for this disturbing scenario?

I am deeply concerned that this has not been effectively addressed in a bigger picture analysis of this crucial issue. The time-honored Hippocratic credo of “First, do no harm” calls upon us as a joined community of parents, researchers and practitioners to find and utilize safer, more natural, and effective means of detoxifying and recovering our children. In order to accomplish this objective, we need to develop and implement better tools and protocols of recovery that more carefully take into account and nurture the imbalanced and delicate inner landscape of their unique biochemical terrain.

Over the last decade of fully recovering and subsequently maintaining the health of my two children formerly on The Spectrum and working diligently as a nutritional formulator and manufacturer to help other parents and practitioners facilitate the recovery of their own, six universal truths have become increasingly clear to me:

**First** and foremost, our children have *significant* impairments in detoxification that cause them to accumulate and then subsequently fail to adequately clear from the body, *many* chemical toxins *including, but not limited to*, heavy metals like mercury, lead, cadmium, and arsenic.

**Second**, that this rate-limited detoxification is directly linked to the actions of severe oxidative stress and the inability to recycle for multiple use, or the “redox” of glutathione and a broad range of other natural antioxidant and detoxification agents within the body.

**Third**, the aforementioned major biochemical impairments and their myriad resultant physiological manifestations are caused and perpetuated by the very chemical toxins our children have been exposed to and have subsequently accumulated.

**Fourth**, the collective effects of toxins on a broad range of sulfur processes throughout the body are the primary biochemical basis for the physiological array of imbalances in children on The Spectrum.

**Fifth**, conventional pharmaceutical chelation agents like DMSA and DMPS are toxic to the liver, immunosuppressive, dysbiosis-promoting, and broadly nutrient-depleting in their own right and may place an additional burden on a body facing similar challenges from metal toxicity. These chelators may also be liberating more metals from the tissues than can be effectively eliminated by a detoxification-impaired body.

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**Sixth**, and most significantly, if these toxins cannot be properly excreted, they can be transported throughout the body via the bloodstream until they can be re-deposited within and have compounded effects upon lipid/fat-rich target organs like the brain, kidneys, or liver. The normally antioxidant and sulfur-rich blood-brain barrier that exists to prevent or at least limit cerebral uptake of these toxins is likely under-sulfated and diminished in antioxidant potential as well, potentially facilitating passage into and accumulation of toxic metals within the brain.

These deeply troubling scenarios are more likely in children and adults with heavier metal and overall toxin loads and thus, more severe sulfur chemistry disruptions. If these situations develop, as I believe they have in many children I have seen severely regressing on chelation therapy, these toxins can hit even harder the second time around with potentially devastating consequences. My great concern is that traditional chelation protocols do nothing to address this and therefore may potentially be subjecting an unknown quotient of our children to more compounded harm via redistribution and accumulation of the original toxins.

**A more concise assessment of these critical issues can be summarized as follows:**

*While mercury and other chemical toxins may be the 'rocks thrown,' sulfur chemistry is the 'window' that they have broken.*

*Impaired recycling of glutathione and other antioxidants and oxidative stress are the 'tails' side of the coin of impaired detoxification, and potentially the greatest unresolved factors with children on The Spectrum.*

*In order to more safely and effectively facilitate the recovery of children on The Spectrum, we need to begin understanding them as detox-impaired FIRST, and mercury-toxic SECOND.*

I am concerned that these crucial concepts are not more widely understood in our community. After hearing a growing number of accounts from parents of children with serious negative reactions to conventional oral and even transdermal chemical chelation protocols, I feel compelled to speak out and bring this issue to the greater attention of parents and practitioners seeking to recover the children that they care for.

Having not heard of any significant efforts to offer safer, more effective alternative protocols, I have carefully developed a natural chelation and detoxification program to better meet the needs of our children without all the adverse effects associated with DMSA and DMPS.

My intention is for this program to be used to naturally and safely support optimal nutritional status, sulfur and antioxidant barrier integrity and cellular membrane defense, glutathione supply and recycling, and ultimately, the detoxification of a broad range of toxins including, but not limited to, heavy metals. It is also possible to use this program in conjunction with a conventional chelation protocol, if that protocol happens to be working effectively for a particular child without side effects.

The program features progressive additions that culminate with the ongoing administration of all seven

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components until a lower intensity maintenance program may possibly be used with equal success. Modifications, deletions and/or substitutions can also be considered for children who have demonstrated intolerances to one or more of the suggested supplements. We are eager to hear what modifications work best for your children's individual needs so that we may better adapt the program to provide broader reach and benefit within our global Spectrum community.

## The Program

The program is a seven-component process that is designed to progress slowly with successive components added sequentially in the following manner:

1. **Normalize Vitamins & Minerals:** Normalize foundational vitamin and mineral status within the body to better defend against the effects of toxins and initiate a low level detoxification, strengthening metabolism for the gradually enhanced, yet infinitely adjustable detox rate facilitated by the successive steps of the program.
2. **Cell Support:** Provide ionic trace mineral nourishment, protection, oxygenation, and detoxification of the cells.
3. **Support Glutathione Recycling (redox):** Support effective recycling of metal-detoxifying glutathione and other crucial antioxidants, along with optimal functioning of the liver and other detoxification pathways.
4. **Supplement Glutathione:** Add *sodium benzoate-free* oral liposomal glutathione to enhance metal/general toxin clearance.
5. **Support Sulfation:** Provide additional cellular barrier support, free sulfur, and glutathione recycling support.
6. **Start Chelation of Heavy Metals:** Initiate a natural, biochemically compatible detox/chelation process with activated liquid zeolite.
7. **Enhance Chelation Process:** Enhance detox/chelation via nanonized, broken cell wall chlorella/fulvic trace mineral complex.

It is my intention that this program will evolve through the feedback and suggestions of those using it to meet the collective needs of our children better and better. I am very interested in collecting lab results and conducting a study with the accumulated data from any parents and practitioners who can establish both pre and post levels of urinary excretion of metals and possibly other toxins while using this program. Please consult the attached schedule and details of program steps and products, and also feel free to contact me directly if you have any questions or need any additional information.

With great hope,

All of Us at BrainChild Nutritionals

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## Michael Lang's Natural Chelation and Detoxification Program

### SUMMARY OF PROGRAM STEPS

Step #	Goal	Duration	Product(s) used (add each one to those previously implemented)
1	Normalize vitamin and mineral status	1 month (ongoing)	Spectrum Support Vitamins & Minerals (BCN) – check website product selection pg. or call BCN to select optimal formulas for your child.
2	Nourishment, protection, oxygenation & detoxification of the cells.	2 weeks (ongoing)	Cell Power (Positive Power Nutrition)
3	Support recycling of glutathione, liver and other detoxification pathways.	2 weeks (ongoing)	HerbaThione (BCN)
4	Add liposomal glutathione to aid detoxification	2 weeks (ongoing)	Lipoceutical Glutathione (Your Nutrition)
5	Provide additional sulfur and glutathione support.	2 weeks (ongoing)	IntestiMend GI tract and broad sulfur support supplement (BCN)
6	Initiate a safe, natural, biochemically compatible chelation process	2 months (ongoing)	Liquid Zeolite
7	Enhance safe, natural, biochemically compatible chelation process	Ongoing	NDF Plus (Bioray)

**Abbreviations Used:** BCN = BrainChild Nutritionals  
NDF = Nanocolloidal Detox Factors

**Note:** Continue giving all supplements introduced in each step, while adding those listed in each subsequent step. Example: when starting step 3, HerbaThione, continue giving BCN Vitamins and Minerals, introduced in step 1, and Cell Power, introduced in step 2. After the addition of step 7, NDF Plus, you may continue giving all components for six months, or longer, if desired, as determined by the child's remaining body burden of toxins, under the guidance of a medical practitioner.

*Some children may need to remain on each individual step for significantly longer periods or perhaps lower doses than suggested in the schedule above and the dosage ranges that follow. Any reactions to the introduction of a new supplement in the program can either indicate an ingredient intolerance/allergy or possibly a movement of toxins greater than a particular child is ready for. While we have taken every measure to make for a gentle transition from one supplement to the next, each child's needs and range of tolerance may vary.*

***If you have a special situation that may require a revised implementation of this program, please call or email us for a more customized approach to your child's issues.***

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## Michael Lang's Natural Chelation and Detoxification Program

### Step 1 – Normalize Vitamins and Minerals

**Goal:** Normalize vitamin and mineral status

**Duration:** One Month

The objective of step one is to normalize vitamin and mineral status, initiate a low level detoxification and better revitalize and prepare the body for the successive steps of the program. This one-month period includes a 16-day gradual, "low and slow" dosage increase process to the suggested dosage for your child's body weight. Continue for the rest of the month at the full suggested dosage before adding Step 2.

This can be accomplished with any combination of Brainchild (BCN) vitamin and mineral formulas, which have varying levels of nutrients and are available both flavored and unflavored, as well as ultra-sensitive formulations (for children with significant allergies or intolerances). BCN supplements have been carefully formulated by a parent-researcher and nutritionist for the recovery of his own children. They have been formulated from the start to meet the specific needs of children on The Spectrum, providing targeted gastrointestinal, neurological, immune, and detoxification support.

These easy to administer, good tasting and unique ultra-colloidal suspension liquids are intensively milled to the sub-micron particle size to promote unparalleled absorption through the intestinal tract and assimilation down to the cellular level. If you are not already using BCN vitamins and minerals, please go to the following URL: [www.brainchildnutritionals.com/Which\\_formulax.html](http://www.brainchildnutritionals.com/Which_formulax.html), or call us at (831) 465-0104 for help in determining which products are the most appropriate for your child. You will receive instructions with your first order for switching from the supplements you are already using to the new ones. If you are already using our multivitamin and mineral supplements, please proceed to the next step.

### WHAT ABOUT THE OTHER SUPPLEMENTS MY CHILD IS ALREADY TAKING?

Please note that you should continue any other supplementation your child was previously taking, such as probiotics, fish oil, digestive enzymes, or any other supplements you or your practitioner have decided are beneficial. If your child was previously taking other vitamins and minerals, the Spectrum Support supplements will probably be sufficient to meet these needs, and you may discontinue other vitamins and minerals, gradually, as outlined in the BCN dosage chart.

### WHAT IF MY CHILD HAS YEAST? SHOULD I WAIT UNTIL IT'S GONE BEFORE STARTING?

If you suspect that your child has candida or intestinal dysbiosis issues, please start now to get these under control as much as possible before you reach step 6 of this protocol, when active detoxification commences. Any DAN practitioner or naturopath can help you with this, or give BrainChild a call and we'd be happy to give you some suggestions for how to start. As heavy metals make the body more vulnerable to dysbiosis, you probably will not be able to completely make the candida go away before detox, but having it under control increases your chances of keeping your child happy and healthy during the detoxification process.

**Dosage:** Please consult BCN dosage chart (included with every order) for the suggested dosage for your child's body weight.

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## Step 2 – Cell Support

**Goal:** Provide nourishment, protection, oxygenation, and detoxification of the cells.

**Duration:** Two weeks

In this step, **Cell Power**, from Positive Power Nutrition, is added. Cell Power is an oxygenated trace mineral supplement, which delivers oxygen, minerals, enzymes and amino acids to every cell in the body. Cell Power utilizes a proprietary ionic formula that contains 78 trace minerals, 34 enzymes and 17 amino acids, and utilizes a unique water-splitting technology to release oxygen and hydrogen into the body. By both oxygenating and feeding the cells, it can cleanse and nourish all body systems throughout the day.

**Dosage:** Begin with two drops per day upon waking, doubling the dose every two days to a maximum of 12 drops, mixed into 8-12 ounces of purified water.

CELL POWER
<ul style="list-style-type: none"><li>• Oxygenates and hydrates cells</li><li>• Deeply detoxifies cells</li><li>• Nourishes the cells</li><li>• Increases energy levels</li><li>• Increases brain functioning, alertness, concentration</li><li>• Supports the immune system</li><li>• Is a powerful antioxidant</li><li>• Provides electrolyte activity</li><li>• Enhances digestion and metabolism</li></ul>

## Step 3 – Support Glutathione Recycling (redox)

**Goal:** Provide support for the recycling of glutathione prior to its direct administration in the next stage and metabolically set the stage for its optimal utilization and detoxification benefit.

Glutathione promotes the detoxification of mercury and other heavy metals and is also crucial in the detoxification of many other chemical toxins that may have accumulated within the body.

**Duration:** Two Weeks

**HerbaThione**, a gluten and alcohol-free herbal tincture by BCN, is used for this step. HerbaThione provides a therapeutic dose of the extremely beneficial organically grown herbs that are used in much lower doses in other BCN Spectrum Support vitamin supplements. It provides excellent support for the body's own natural detoxification functions and for glutathione production and synthesis (recycling). These herbs have a myriad of unique and synergistic effects towards the enhancement of plasma and hepatic glutathione and are also extremely safe and well-tolerated.

Please see Appendix A in this document for the structures/functions of the herbs in this formula. This information, along with bibliographic reference of scientific research articles supporting these functional claims can be viewed on our website at: [www.brainchildnutritionals.com/HerbDocx.html](http://www.brainchildnutritionals.com/HerbDocx.html)

**Dosage:** Begin with 1 full dropper under the tongue every day upon waking and again 30 minutes before dinner. After seven days, increase to 2 full droppers in the morning and 2 full droppers before dinner. Continue at this dosage through the remainder of the program. Note: A full dropper is approximately 4 milliliters or ¾ teaspoon.

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## Step 4 – Add more Glutathione and Detoxification support

**Goal:** Add liposomal glutathione to gently take detoxification another step further.

**Duration:** Two Weeks

In this phase, we supply modest amounts of safe sodium benzoate-free **oral liposomal glutathione** (or IV if already in process with your practitioner). We suggest using the only benzoate preservative-free lipocetual glutathione formula, developed by Dr. Tim Guilford. Sodium benzoate is a fairly toxic substance derived from the extremely toxic chemical benzene and originally isolated from petroleum. Benzoates challenge and inhibit both glycine detoxification and even the body's own glutathione synthesis itself and should be entirely avoided by children on The Spectrum.

As mentioned previously, glutathione is one of the body's own best natural defenses against both heavy metal toxicity and oxidative stress. Research conducted by Dr. Jill James has shown that children on The Spectrum commonly have low levels of reduced or active glutathione and high levels of its oxidized or spent counterpart. Herbathione is to be continued as well, to help recycle the backlogs of oxidized glutathione and help the glutathione provided in this step to be better utilized and more effective in pulling mercury and other toxins from the body.

**Dosage:** Start at ½ teaspoon twice a day, increasing by ½ teaspoon every two days, up to 1-2 teaspoons twice a day as tolerated and beneficial.

*Note: it may be difficult to administer oral glutathione in the presence of dysbiosis, bacterial or fungal overgrowth of the intestinal tract. There is mounting evidence that taking certain orally administered sulfur supplements may fuel pre-existing imbalances of flora. Discuss this issue with your healthcare practitioner, if indicated by your child's condition, before initiating oral glutathione.*

## Step 5 – Support Sulfation

**Goal:** Support GI tract sulfur cellular defense and glutathione recycling support.

**Duration:** Two Weeks

This step is accomplished using **IntestiMend**, by BCN. Intestimend is designed to provide precursor, multi-elemental and catalyst support for the cellular gut protective barrier called Glycosaminoglycans (GAGS), which are predominantly composed of polysaccharide sugar molecules bonded to sulfur-bearing amino acids and are very often structurally impaired in the presence of heavy metal toxins.

The healthy gastrointestinal tract is lined with a protective barrier of sulfate that provides resistance to many biological, viral/immunological, dietary, inflammatory and toxicological challenges. Compromises in sulfur chemistry from toxin exposure diminish natural resistance that normally provides a protective cell barrier in the GI tract as well as the other organs and tissues of the body.

IntestiMend is an innovative sulfur, gastrointestinal, and detoxification support supplement. Its active ingredients are sulfur-rich biotin, glucosamine and chondroitin sulfates, MSM (Methylsufonylmethane), and a very small amount of N-acetyl cysteine as a synergist, along with calcium D-glucarate, which detoxifies the gut and catalyzes the formation of glycosaminoglycans; N-acetyl glucosamine and organically-grown slippery elm infusion as anti-microbial and gut anti-inflammatory agents; and D-ribose, the sugar molecule backbone of ribonucleic acids of DNA/RNA.

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Many parents of children on the Feingold Diet have reported that IntestiMend completely halts their children's severe reaction to foods *within 20-30 minutes*. While this has not been yet demonstrated, it may function similarly for unintentional gluten or casein food ingestions for children on the GFCF (gluten and casein free) diet as well. IntestiMend also works very well as a daily sulfur support supplement for children with low sulfur/sulfate and can also raise plasma glutathione levels.

**Dosage:** Dilute 1-2 ounces (6-12 teaspoons) of Intestimend in 4-6 ounces of juice or water. Mix thoroughly and take twice a day on an empty stomach, 30-60 minutes before breakfast and dinner for maximum absorption.

## Step 6 – Start Chelation of Heavy Metals

**Goal:** Initiate a safe, natural, biochemically compatible chelation process

**Duration:** Two months

### Liquid Zeolite Cellular Defense (LZCD)

has been clinically formulated to help support a healthy immune system, remove heavy metal toxins and balance the body's pH levels. LZCD is comprised of an activated, liquid form of a naturally-occurring zeolite. Zeolites are natural volcanic minerals with a unique, complex crystalline structure. This cagelike structure of cavities and channels works at the cellular level trapping, heavy metals and toxins. Because they are one of the few negatively charged minerals in nature, zeolites act like magnets, drawing heavy metals and other toxins, capturing them and removing them from the body.

DOSING		(do not take after 6pm)
Days	Dosage	Maximum suggested dosage for:
1-4	1 drop, once a day	
5-8	1 drop, twice a day	
9-12	1 drop, 3 times a day	
13-16	2 drops, 3 times a day	
17-20	3 drops, 3 times a day	
21-24	4 drops, 3 times a day	Age 5 or younger
25-28	5 drops, 3 times a day	Age 5-7
29-32	7 drops, 3 times a day	Age 8-10
33-36	8 drops, 3 times a day	Age 11-13
37 on	10 drops, 3 times a day	Age 14 and over

LZCD has been shown to remove mercury, lead, cadmium, arsenic and other heavy metals. Research has shown that it also helps balance body pH. A slightly alkaline body environment helps stabilize the immune system.

**DRINK PLENTY OF WATER** when taking LZCD. We suggest that you mix the drops with a 4 to 6 ounce glass of water each time you give them throughout the day. LZCD eliminates toxins through the body i.e. sweat, mucus, urine and bowels in so doing, you will lose water along with them. If using a diuretic when taking LZCD please start with a very low dose and drink extra water. If you live in a dry climate where dehydration is already an issue, you'll need more water than usual. A good general rule is to drink half your body weight per day in ounces.

To enhance the beneficial effects of LZCD, you may wish to give 500 mg of vitamin C per day, in divided doses, along with the LZCD drops.

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If the recipient is experiencing excessive detoxification effects (i.e. hyperactivity, inability to sleep, anxiety, dark circles under the eyes, lethargy, diarrhea, rashes), or any other symptomatic concern at any time, you may wish to consider discontinuing giving LZCD temporarily. Stop for 1-3 days, and then start back at the next lower daily dosage, maintaining the lower dosage for at least two weeks before attempting to administer the suggested dosage again.

The maximum dosage is age-dependent. When the child reaches the maximum suggested dosage, the child will stay at that dosage unless no benefit or excessive detoxification reactions are seen. If there have been no positive benefits observed for a period of at least two weeks at the maximum dosage and the child is tolerating the product well as determined by you and your practitioner, then, under the guidance of your practitioner, the dosage may be steadily increased until: (a) positive benefits are observed, (b) adverse responses require a reduction in dosage, or (c) a maximum daily dosage of 45 drops per day (15 drops per dose) has been reached.

**NOTE:** If an excessive detoxification reaction occurs with as little as 1 drop, then dilute a single drop in 2 teaspoons of purified water and then administer 1 drop of the dilution. If well tolerated, continue to increase drops of the diluted solution by doubling every four days until one drop from the bottle can then be accepted.

## Step 7 – Enhance Chelation Process

**Goal:** Gently enhance the chelation process by adding NDF Plus (Nanocolloidal Detox Factors) by Bioray.

**NDF Plus** is used to assist in detoxification of heavy metals. It is a special formulation ("nanonization") of broken-cell-wall chlorella, probiotics, fulvic and hyaluronic acids, for exceptional absorption directly into body tissues. It is safe for use by children and those with intestinal dysbiosis issues. NDF Plus should be started very low and slow... one drop per day to start with, gradually increasing to the suggested dosage, as tolerated.

NDF Plus contains 25% probiotic predigested drainage and support ingredients: milk thistle, horsetail, himmematzutake (agaricus blazei), reishi (ganoderma lucidum) and cordyceps; thus also providing the necessary bioavailable immune support factors, the enzymes and ionic trace minerals for their utilization, and most important, fulvic acid for bioactivation. Chlorella has other beneficial effects, augmented by putting it through this process, including: increased elimination of toxins, growth hormone regulation, a powerful nutritive impact and protection from radiation. NDF dislodges, binds to, and is used up by the first free radicals it encounters on its way into the body. If a person is currently exposed to chlorine, NDF will bind to chlorine before it binds to metals.

**Dosage:** Start with 1 drop a day in a glass of water, in the morning (may be given in the same glass as LZCD). Slowly increase by one drop at a time as tolerated, up to no more than 10-20 drops a day maximum. Every child may have a specific "sweet spot" in the dosage progression where a few drops less reduces the observed benefits and a few drops more may initiate faster detoxification than the child can tolerate. As with each previous step of this program, either reduce the dosage or eliminate a supplement step at least temporarily in the event of any negative change in the child and call us and your practitioner for more information.

**NOTE:** If an excessive detoxification reaction occurs with as little as 1 drop, then dilute a single drop in 2 teaspoons of purified water and then administer 1 drop of the dilution. If well tolerated, continue to increase drops by doubling every three days until 1 drop from the bottle can then be accepted.

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If you have any questions or require additional information about this program, please contact BrainChild Nutritionals at 831 465-0104, or email us at [orders@brainchildnutritionals.com](mailto:orders@brainchildnutritionals.com). Information on all the included products may be found at [www.brainchildnutritionals.com](http://www.brainchildnutritionals.com). We look forward to talking to you more about our origins and our mission at BCN and how we may help you on your path of recovering the children you care for in your family or practice.

## APPENDIX A: About the Herbs in HerbaThione

Herbathione provides a stronger therapeutic dose of the beneficial herbs that are used in much lower doses in our other Spectrum Support supplements. It is an excellent support for the body's own natural detoxification function and for glutathione production and synthesis (recycling). All the herbs have been extensively evaluated for safety with children in ongoing administration. Each of these certified organically grown herbs have been included in this broad detoxification support formula for the following singular as well as collective synergistic effects:

### **Ashwaganda Root**

*(Withania Somnifera)*

Known as "Ayurvedic Ginseng", Ashwaganda has been used for centuries as a nervous system rejuvenator/protectant, for immune support, and for support of sleep disturbances, wasting diseases, failure to thrive in children, joint and nerve pains. It supports detoxification via its antioxidant function in the recycling of glutathione and support of superoxide dismutase.

### **Burdock Root**

*(Arcticum Lappa)*

A mucilaginous herb that reduces inflammation and controls bacterial infection in the GI tract and functions as a very mild laxative. It also supports lung, kidney, spleen, pituitary, lymphatic, thymus, and immune health. Also a blood cleanser and purifier, it's often used with skin and inflammatory conditions of chronic toxicity. Promotes bile flow, liver cleansing, and enhanced liver glutathione.

### **Astragalus Root**

*(Astragalus Membranaceus)*

A nourishing tonic that stimulates the immune, circulatory, lymphatic, and urinary systems, supports the spleen, lungs, adrenals, liver, lowers blood pressure and blood sugar levels. It also aids digestion, promotes healing of GI inflammation and ulcerations, and inhibits lipid peroxidation of cellular membranes possibly via its support of increased levels of glutathione peroxidase.

### **Fennel Seed**

*(Agastache Foeniculum)*

Fennel is a sweet aromatic flavoring herb that also promotes gastrointestinal motility and peristalsis, and supports the functions of the liver, kidneys, spleen and respiratory system. It also relieves abdominal pain, colon disorders, gas, and gastrointestinal tract spasms, and is an excellent natural sulfur source.

### **Ginkgo Biloba Leaf**

*(Ginkgo Biloba)*

A powerful antioxidant, Ginkgo dilates bronchial tubes and blood vessels, specifically increases cerebral and cardiac

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blood flow and available cerebral oxygen, controls asthma and allergic inflammatory responses, and improves cardio-pulmonary function. It also has anti-fungal and antibacterial energy, is helpful for depression, and cerebral insufficiency. It improves digestion, increases cellular glutathione levels and liver-specific glutathione S-transferase.

## **Gotu Kola Leaf**

*(Centella Asiatica)*

This wonderful herb improves circulatory problems in the extremities and speeds healing. It also is a rejuvenating herb that facilitates wound healing in ulcerative conditions, and supports depression and other nervous disorders. It improves muscle tone and cardio-pulmonary function and normalizes blood pH. It supports overall liver and adrenal function. It is also known in Sanskrit as *brahmi*, meaning, "bringing knowledge," and has been used to instill a sense of well being in Indian mystics prior to meditation. This historical usage may be attributed to its effects of significantly boosting calming cerebral acetylcholine. A potent antioxidant, it can raise levels of glutathione and antioxidant enzymes including catalase, cell-protective glutathione peroxidase and superoxide dismutase.

## **Gymnema Sylvestre Leaf**

*(Gurmar)*

Gymnema lowers blood sugar levels and helps to curb cravings for sweets by diminishing the taste bud to brain "sweet taste" response to sugar and supportive for normalizing blood sugar. Used in India as a daily garnish with meals. It also has been shown to increase fecal excretion of toxins via enhanced bile flow and inhibits mast cell release of histamine and hyaluronidase in allergic reactions.

## **Milk Thistle Seed**

*(Silibum Marinum)*

Milk Thistle protects the liver against toxins, and inhibits lipid peroxidation of cell membranes, and is an herbal antioxidant/free radical quencher. It is powerful in the detoxification of poisonous deadly mushrooms, alcohol, drugs, and other chemical toxins. It is also a leukotriene inhibitor, relaxes spasms, regenerates liver cells, and stimulates bile flow. It is an excellent sulfur source and assists in the regeneration of glutathione and restoration of cellular thiol status. It provides kidney and adrenal support, aids inflammatory bowel disorders, and weakened immune function.

## **Sarsaparilla**

*(Smilax)*

A cooling, alterative herb that has antibiotic, anti-inflammatory, diuretic effects and has been used extensively in traditional Chinese medicine to clear toxins, particularly mercury and other heavy metals, and for liver, joint, skin, and urinary tract support. Sarsaparilla enhances the activities of antioxidant enzymes catalase, superoxide dismutase, and cell-protective glutathione peroxidase.

## **Schisandra Fruit**

*(Schisandra Chinensis)*

Schisandra regulates the secretion of body fluids, moistens dry and irritated tissues, and acts as a tonic for the nervous, urinary, and cardiac systems. A potent liver protectant, it is used traditionally in traditional Chinese medicine for asthma, night sweats, urinary disorders, chronic or early morning diarrhea, palpitations, insomnia, poor memory. Schisandra also supports detoxification via its recycling of glutathione.