Children’s
Liver Restorative

A guide to using BioRay’s organic products, clinical experience and expertise to safely and successfully restore liver function.
Function of the Liver

When the liver becomes overburdened and stagnant, unfiltered toxins circulate throughout the body and are deposited in the blood and fatty tissue. This may include the brain and central nervous system.

Common Symptoms of an Overburdened Liver Include:

~ Anxiety
~ Aggressive behavior
~ Unreasonable fear
~ Sudden mood swings
~ Difficulty staying asleep through the night

~ Yeast flare ups
~ Rashes
~ Constipation
~ Inability to tolerate detox

BioRay's liver restorative formula, Liver Life™, has been shown in laboratory testing to decrease histamine and immune response to foods that aggravate the nervous system and put burden on the liver.

Liver Life™ normalizes liver enzymes, restores healthy pH, balances Phase One and Two liver detox pathways, and modulates the immune system. Taken regularly, Liver Life™ protects against toxins and rejuvenates liver cells.

"Liver Life, NDF, and NDF Plus have been a huge benefit to our environmental detoxification programs. They are gentle enough to use with children - the results are impressive."

Dr. Robert Ellsworth, NMD

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The Kit & Benefits

BioRay Children’s Liver Health Recommended Guidelines

• Complete and keep BioRay Health Questionnaire and ATEC if appropriate for measurement of progress.

• If possible, ask your practitioner to request a Pre (before beginning this protocol) and a Post (upon completion of protocol) OAT (Organic Acid Test) from Great Plains Laboratory to see benefits and liver function results.

• For greater success, remove or minimize toxic products in your home and in your family’s foods.

What’s In the BioRay Children’s Liver Restoration Kit:

2-Month Supply for Average Child:

• Liver Life - 1 bottle / 4 ounces
• Oxy Powder - 1 bottle / 120 capsules
• pH Stix - 1 box / 90 test strips
• Activated Charcoal - 1 bottle / 100 Capsules

The Benefits of Liver Restoration:

~ Regular bowel movements
~ Improved absorption of nutrients from foods and supplements
~ Less gas
~ No more distended belly
~ Improved digestion
~ Feeling satisfied with less food
~ Clear and concise conversations
~ More mature interactions
~ Deeper level of understanding
~ Speaking more clearly
### Steps & Products

<table>
<thead>
<tr>
<th>STEPS TO A BALANCED BODY</th>
<th>PRODUCT</th>
</tr>
</thead>
<tbody>
<tr>
<td>1) Have your child’s bowels moving at least 1-3 times a day</td>
<td>Oxy Powder</td>
</tr>
<tr>
<td>2) Check first morning urine with pH sticks. Desired range 5.5 - 6.2</td>
<td>pH Stix</td>
</tr>
<tr>
<td>3) Support your child’s liver and kidney function, open Phase 1 &amp; 2 detox pathways,</td>
<td>Liver Life™</td>
</tr>
<tr>
<td>promote draining toxins and acidic waste through the urine.</td>
<td></td>
</tr>
<tr>
<td>4) Have an absorptive agent on hand if aggravations occur.</td>
<td>Activated Charcoal</td>
</tr>
</tbody>
</table>

“Things I’ve been noticing since starting Liver Life include: better eye contact, speech, language comprehension. He doesn’t fight with his younger sister as much, he’s much happier, longer attention span, asks more questions, and a few other things I can’t quite put my finger on. But he just seems more ‘normal’!”

Jennifer, mom to 6 year old John

“Love the stuff! Now I freak out if he misses his dose of Liver Life! No doubt the best change I have seen since the whole ball of wax started 5 years ago.”

Jeannine, mom to 7 year old Adam

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Diet

Based on clinical research and parental feedback, we recommend incorporating a Gluten Free / Casein Free diet as the first step in your child’s protocol. Emotional and physical discomforts are often related to diet. Children following the recommended dietary restrictions in a GFCF diet experience many benefits.

Five Great Ways to Support Liver Function:

~ **Eat Cooked Foods:** Cooked vegetables and fruits versus raw gives the GI a boost for many children experiencing moderate to severe gastrointestinal distress. Cooked foods open and nourish the digestion while raw foods close it down, due to their “cold nature.”

~ **Avoid Beverages during Meals:** Drinking during meals dilutes HCL and other enzymes that are required for healthy digestion. If a minimal amount of beverage is required for your child to enjoy his meal, ask him / her to sip it. Do not use ice or cold drinks.

~ **Chew:** Ask your child to chew food well. When food is swallowed in undigested pieces, they sit in the stomach and ferment or putrefy. Energy is lost on the body trying to get nutrition from these non-macerated foods.

~ **Minimize Grains:** Most people (kids & adults) don’t chew grains well enough to utilize their nutritional value. Limiting grain intake is also advisable during this protocol because many sources of grain turn into sugar, which feeds yeast, fungi, and parasites. Small amounts are okay, use common sense.

~ **Eat organic foods. Do not use a microwave. Drink filtered water.**

“I am using Liver Life with my patients in clinic and I am seeing remarkable results in many areas. The ASD children are more calm and relaxed, and I have noticed some of my adult patients with elevated liver enzymes have had a significant decrease in these levels after only two months on Liver Life. My patients that suffer from recurring allergies also report a decrease in allergy symptoms.”

Dr. Hitendah Shah, MD

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## Supplement Intake Guide

**Children’s Liver Restoration Supplement Intake Guide**

The following supplements are added into the protocol one at a time and the dosage is increased slowly to avoid and easily identify any aggravations.

<table>
<thead>
<tr>
<th>HERBS &amp; SUPPLEMENTS</th>
<th>SUGGESTED INTAKE</th>
<th>TIMES A DAY</th>
<th>OK TOGETHER</th>
<th>BETWEEN MEALS ON EMPTY STOMACH</th>
<th>WITH MEALS</th>
<th>AT BED-TIME</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oxy-Powder</td>
<td>1-3 caps or as needed</td>
<td>1</td>
<td>No</td>
<td></td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>Liver Life™</td>
<td>1 drop – 3 droppers</td>
<td>2</td>
<td>Yes</td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Activated Charcoal (As needed in the case of an aggravation)</td>
<td>1 - 2 pills As needed</td>
<td>No</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### How to Start:

1. Upon wakening, test your child’s first morning urine with pH sticks to get a baseline. Desired range is 5.5 - 6.2.

2. Give Oxy Powder™ until your child's bowels are moving at least 1-2 times a day. More is better.

3. Begin giving Liver Life™ once in the morning and once in the afternoon. Initial dose is 1 drop, between or before meals in 2 ounces of filtered water. Increase dose by 1 drop per day until your child reaches the recommended maximum dose.

   Sensitive individuals may want to start with 1 drop and increase dose as tolerated. Adjust dose to maintain a healthy first morning urine pH of 5.5-6.2 and ensure the elimination of acidic waste.

**Note:** This protocol addresses healthy liver function and does not include other support that may be necessary for metabolic balance.

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Note: This protocol addresses liver health and does not include other support that may be necessary for metabolic balance.

Length of Protocol

This is a 2-month protocol. The length of this protocol may vary and will depend on dosage tolerance, response and lifestyle choices. To evaluate progress at the end of the protocol, request that your child’s practitioner repeat initial labs performed and fill out another of BioRay Health Questionnaire and ATEC if appropriate.

End Note

This protocol guide was created to support the healthy function of your child's liver. The liver has over 500 different functions and is the only organ that can clean the blood. When the liver is unable to keep the blood clean, substances such as yeast, viruses, heavy metals, chemicals, pesticides, PCB’s, and residues from western medications can trigger an immune response. When healthy liver metabolism is restored, the entire body functions at a higher rate of efficiency.

"My youngest was on milk thistle forever and I never saw the improvements that we are seeing with Liver Life. He is definitely healthier, more aware and more connected."

Dana, mom to 2 year old Owen and 4 year old Liam

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Specific Foods for the Liver

Phase One & Phase Two Detoxification Pathways
There are two major detoxification pathways in the liver, Phase One and Two, which neutralize toxins in the body.

Boost Phase One:
The Phase One Detox Pathway changes a toxic chemical to one that is less harmful. The antioxidants beta-carotene, vitamins C and E, selenium, and many different phytochemicals found in fruits, vegetables and whole grains assist the Phase One pathway in the liver. Glutathione is the most powerful internal antioxidant and liver protector. It can be depleted by large amounts of toxins and/or drugs passing through the liver as well as starvation or fasting. The B vitamins, including folic acid, are also very important in this Phase One process.

To boost detox during Phase One, include at least 3 of these foods each week:

<table>
<thead>
<tr>
<th>Whole Grain Bread</th>
<th>Oranges</th>
<th>Prunes</th>
<th>Squash</th>
</tr>
</thead>
<tbody>
<tr>
<td>Apples</td>
<td>Tomatoes</td>
<td>Apricots</td>
<td>Broccoli</td>
</tr>
<tr>
<td>Beets</td>
<td>Mango</td>
<td>Cantaloupe</td>
<td>Spinach</td>
</tr>
<tr>
<td>Carrots</td>
<td>Watermelon</td>
<td>Pumpkin</td>
<td>Eggs</td>
</tr>
<tr>
<td>Red Peppers</td>
<td>Peaches</td>
<td>Sweet Potatoes</td>
<td>Beans (Kidney, Lentil)</td>
</tr>
</tbody>
</table>

Boost Phase Two:
Many chemicals are converted in Phase One to intermediate forms that are then processed by Phase Two. During the Phase Two, the liver adds a substance to the now less harmful chemical to make it water-soluble. It can then be moved out of the body in urine or feces. Foods rich in sulfur are needed.

To boost detox during Phase Two, include at least 3 of these foods each week:

<table>
<thead>
<tr>
<th>Arugula</th>
<th>Watercress</th>
<th>Collard Greens</th>
<th>Napa or Chinese Cabbage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Broccoli</td>
<td>Bok Choy</td>
<td>Mizuna</td>
<td>Horseradish</td>
</tr>
<tr>
<td>Cauliflower</td>
<td>Turnips</td>
<td>Tatsoi</td>
<td>Radishes</td>
</tr>
<tr>
<td>Brussel Sprouts</td>
<td>Turnip Greens</td>
<td>Rutabaga</td>
<td>Kohlrabi</td>
</tr>
<tr>
<td>Cabbage</td>
<td>Mustard Greens</td>
<td>Daikon</td>
<td>Kale</td>
</tr>
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Frequently Asked Questions

1. Why do I need to start so slow?
   If your dosage of Liver Life™ is too high some of the excess acids may not be able to drain efficiently; this may result in a mild healing crisis. Symptoms your child may experience as a result of a healing crisis are flu-like symptoms and/or skin rash. If your child experiences any of the symptoms listed above, lower the dose by half; if symptoms persist supplement 2-3 doses of activated charcoal to absorb excess acids, then continue Liver Life™ protocol at reduced dose.

2. How long should Liver Life™ be taken?
   Liver Life™ should be used until the saliva pH has stabilized between 6.8 and 7.2. Once the pH balance is restored, continue to monitor pH by occasionally (every 2 weeks) testing saliva and urine. This helps to ensure the pH is staying in optimal range. Supporting the liver throughout detox is essential to a successful outcome. In polluted areas, when using poor quality or chlorinated water to cook, bathe in or drink, eating inorganic foods and during emotional stress, when indigestion or mild constipation is present, it is beneficial to take some Liver Life™ a few times a week. This can also be gauged according to pH. If the urine pH is at 5.5 - 6.2, but the saliva is staying out of range (less than 6.8, greater than 7.2) resume the Liver Life™, as more acids need to be drained.

3. What positive changes should I expect to see in my child?
   As a result of adding Liver Life™ to their child's detox protocol parents have reported better social skills, improved communication, appropriate speech, more focus, better comprehension and ability to do school work, much more calm, consistency in day to day abilities, better absorption of nutrients from foods which enables them to decrease mega doses of vitamins and minerals, decrease in food sensitivities, and better stools.

4. Why does the Liver Life™ protocol say that I need to decrease other supplements as I ramp up the dose?
   When the liver is working properly we are more efficient at assimilating nutrients from food. A concentrated supplement may suddenly become too much for your child. During the first week, as you ramp up the dose of Liver Life™, it may be necessary to decrease additional supplements. Our clinical research has shown when the mineral and vitamin supplement doses are reduced by half, children experience more significant gains.

5. What other things can be done to help balance pH?
   Many foods can assist in restoring pH. Fresh squeezed lemon juice is one of the most effective alkaline forming foods. For additional alkaline forming foods you can go to http://www.essense-of-life.com/info/foodchart.htm.

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Frequently Asked Questions

6. If pH is in range, can my child still benefit from Liver Life™?
   Yes. In addition to restoring pH, Liver Life™ decongests the kidneys and liver, normalizes liver enzymes and restores liver functions. Better eye contact, speech, comprehension, social skills, ability to focus, better moods, and increase in conversations have been reported from patients and parents continuing Liver Life™ after a healthy pH balance is restored.

7. If my child’s pH is in range with 2 drops of Liver Life™, do I continue to ramp up the dose?
   We’ve noticed that increasing the dose of Liver Life™ even after the pH’s are in range has enabled children to make additional gains. Continue to test the urine pH as you ramp up the dose of Liver Life™.

8. What is the maximum dose of Liver Life™ for Children?
   The maximum child dose is determined by weight:
   - 40 pounds or less: 30 drops per day (15 drops, twice a day)
   - 40-75 pounds: 4 ml./squirts per day (2 ml./squirts, twice a day)
   - 75 pounds or more: 6 ml./squirts per day (3 ml./squirts, twice a day).

   The maximum dose should not be given as the starting dose of Liver Life™. To avoid regressions and aggravations, it is essential to start with just 1 drop, twice a day. (Follow Liver Life™ protocol for dosing instructions) Starting with a higher dose can sometimes lead to these common symptoms of a “healing crisis”: flu-like congestion and body ache, aggression, irritability, regression in skills, rashes, inability to concentrate, and painful urinations. To ensure your child gets the most out of Liver Life™, start slow and ramp the dose up. If, at any time, your child shows aggravations, decrease the dose.
About Stephanie Ray and BioRay

With twenty years of experience in herbal medicine, Stephanie brings to her position as CEO of BioRay Natural Detox Company a wealth of formulating knowledge, clinical experience and a commitment to providing the highest quality organic products along with comprehensive information and excellent customer support. BioRay’s customers are like family. “At BioRay we are dedicated to environmental and social responsibility on every level. We conduct research, provide support and educate our customers based upon the philosophy that we all live downstream. It is our desire to inspire our customers with our formulas and help create vitality in their lives.”

BioRay began as a collaboration between Stephanie Ray and her then husband, Dr. Timothy Ray, OMD, L.Ac. Together they operated five traditional Chinese and Biological Medical Clinics in Santa Monica, California over a fourteen-year span of time. Founding BioRay in 1991 was a beautiful synergy of clinical experience and formulating knowledge. Stephanie is one of BioRay’s three formulators. She lectures and writes about the impact environmental toxins have on children and adults, and works to partner BioRay with other environmentally concerned industries and companies that share her vision.

BioRay products were created in clinic and are manufactured by integrating clinically tested ingredients with proprietary methods. Committed to quality and maintaining the integrity of each formula, BioRay blends its products in small, personally attended batches. BioRay utilizes the extraordinary balance of nature and science to create whole food supplements that support health, vitality and our environment.

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