

Hypertension Options

The more I study preventative and functional medicine the more convinced I am that everyone needs to be on what Dr. Alex Vasquez calls his five-part nutritional wellness protocol. These five parts are the foundation to assure basic nutrients and phytochemicals are present. Certainly variations will change based on your understanding of the patient history and their ability to comply with the program.

His foundational program is designed to build cellular reserves. These five suggestions will: begin mitochondrial repair, downgrade inflammatory processes, provide adrenal support and reduce insulin resistance/metabolic syndrome.

1. Paleo-Mediterranean type diet that is rich in plants, fruits, vegetables, seeds, nuts, berries, high quality protein and allergy avoidance.
2. Complete multivitamin/multimineral combination like **ProMulti-Plus** (3bid) If you suspect vascular disease and price is not an objections Dr. Houston's formula **VasculoSirt** (5 bid for one month then 3 bid) would be an updated version.
3. Vitamin D like **Bio-D-Mulsion Forte** (each drop contains 2,000 IU of emulsified vitamin D3) use 2 drops or increase to optimal blood levels (50-80 ng/ml).
4. Combination fatty acid therapy. Dr. Vasquez likes **Optimal EFAs**; Dr. Houston likes **EFA-Sirt Supreme** (2-4 grams of EPA/DHA per day).
5. Probiotic of choice: **BioDoph-7 Plus** (2 per day at bedtime). **BioDophilus-FOS** comes in a powder and may be more economical (1/2 tsp per day).

The following treatment/testing options should be considered. Remember, if hypertension is present, endothelial damage is occurring. Also based on Dr. Mark Houston's work, the finite responses of inflammation, oxidative stress and immune dysfunction should be considered in your testing and treatment program. The products Dr. Houston developed for Biotics are highlighted in yellow.

1. **Bio-CardioSirt BP**, 1 scoop per day, reduced BP in 4 weeks an average of 16/11mm. May be taken all once or in divided doses, add to juice for taste.
2. **Potassium-HP with Magnesium** is a major alkalizer. Dr. Houston recommends 5 grams of potassium to 1500-2000 mg of sodium each day. Assess patient's diet and supplement balance with **Potassium-HP with Magnesium** to reach the 5 grams. Each tsp provides 1200 mg of potassium and 120 mg of magnesium in a citrate base.
3. Rule out heavy metals with blood, urine or hair testing. This is one clinical pearl that has been effective for me when I have been personally confronted with BP that is resistive to change.

4. Reduce all refined foods that will increase insulin. This should be covered in the basic five mentioned above. Remember **Insulin promotes renal retention of sodium which leads to water retention and the subsequent volume overload and systemic hypertension which logically follow in sequence.** Elevated or high-normal serum insulin along with chronic hyperglycemia is most suggestive of insulin resistance.
5. Elevated spot urinary micro albumin reflects endothelial damage. If positive this inexpensive test will show how serious the condition may be and how aggressive the treatment program will be.
6. **CoQ-Zyme 100 Plus**, 200-300mg, 12 trials with 362 patients showed reductions in BP 11-17/8-10.
7. **Garlic Plus**, 10 studies showed 8-16/7-9mm.
8. Exercise.
9. **Whey Protein Isolate**, 30 grams reduced BP 11/7.
10. **NAC** (N-Acetyl-L-Cysteine) at 500 mg bid is a natural angiotensin blocker and increases nitric oxide.
11. Food sensitivities will also cause sympathetic dominance elevating BP. Therefore for difficult cases consider food sensitivity testing. I like the spot testing that use drops of blood as opposed to venipuncture to use as screening. There are always false negatives; but if the test comes back positive, it really can make a difference. I use US Biotek Laboratories (206-365-1256). You can test 96 foods both IgA and IgG for around \$250.00.
12. **Aqua Mag-Cl**, See clinical notes by Dr. Harry Eidenier below.

Other consideration: Studies have shown B6, vitamin C, vitamin D, fish oil, olive oil, magnesium, etc. reduce BP to varying degrees. This reinforces the need for a high potency multivitamin mineral as discussed above. The lower the nutrient level the potential there is to increase blood pressure.

Additional Silver Bullets and Clinical Notes: By Dr. Harry Eidenier

Patients on beta blockers, calcium channel blockers, diuretics, ace inhibitors and thiazide drugs tend to be magnesium insufficient. These drugs can cause increased excretion of magnesium.

When **L-Arginine**, **De-Stress**, **Renal Plus**, **ADHS** and other nutrients known to lower blood pressure have all been used along with diet, exercise, stress reduction, etc. and the high blood pressure is not improving consider **Aqua Mag-Cl**. All of you who have a blood pressure cuff in your office should also have a bottle of **Aqua Mag-Cl**, which is magnesium chloride. Make sure you have a little juice in the refrigerator to mix it with as it tastes bad. But, if you have a hypertensive patient and you want to show the patient the benefit of magnesium therapy, take three tablespoons of the **Aqua Mag-Cl** and put it in a couple of ounces of the juice. Best juice is tangerine or pear which is generally available in most full service health food stores. Either of these juices will do a good job of masking the taste.

Take their blood pressure before giving them the **Aqua Mag-Cl** and have them sit in the waiting room for about fifteen minutes and then take their blood pressure again. On average you will see 10 to 20 mm reduction in the systolic blood pressure. It's amazing what magnesium chloride will do.

Another consideration with hypertension is nitric oxide precursors. Nitric oxide will, in many cases, help to lower blood pressure and this is one of the reasons that Viagra, etc., is not recommended for patients on certain types of blood pressure medications. Viagra will lower blood pressure and this in combination with many of the blood pressure medications will cause the blood pressure to go too low. Therefore, **Argizyme** which is a nitric acid precursor and **NitroGreens** another nitric acid precursor should both also be tried with unresponsive hypertension.

Portal congestion is another issue with high blood pressure. In other words if the portal system is congested then the blood that should be there must go peripheral and when this happens, blood pressure must increase. **Beta-TCP** and **MCS-2** should be considered with portal congestion and we can assure you that portal congestion is one area that is missed very frequently by many allopathic physicians.

When all else fails, consider the use of neonatal thymus (Cytozyme-THY). Please don't misunderstand us. Use the therapy most likely to work such as magnesium and so forth; but if they fail, try the **Cytozyme-THY** at 4-6 tablets twice a day. In stubborn cases this may be your silver bullet. Finally with hypertension, it goes without saying that patients who are overweight, patients who have metabolic syndrome and patients with glandular hyperfunction are patients that will frequently have hypertension. These areas must be addressed in addition to the other areas mentioned previously.

Patients on beta blockers, calcium channel blockers, diuretics, ace inhibitors and thiazide drugs tend to be magnesium insufficient. These drugs can cause increased excretion of magnesium. This information is right out of the American Journal of Cardiology. Many of the doctors we deal with have been successful in taking the patient off of these drugs with the use of magnesium as **Aqua-Mag Cl**. Also remember magnesium will bind with any fat that is present in the digestive tract, therefore it is always best to dose it at bedtime and always increase it every night to bowel tolerance. If the patient is unable to handle the taste of the **Aqua-Mag Cl** even with adding it to juice then magnesium orotate (**Mg-Orotate 500**) can be used; however, **Aqua-Mag Cl** is always the first choice and unless the patient is in an acute phase, magnesium should be dosed on an empty stomach.

Remember drugs can cause hypertension. For example, estrogens generally tend to promote sodium and water retention, which promotes volume overload and the development of hypertension.

For women with "estrogen dominance" due to excess endogenous production or exogenous administration of estrogens, supplementation with pyridoxine 50-250 mg/d (nearly always co-administered with magnesium 600-1,200 mg/d or to bowel tolerance; pyridoxal-5-phosphate [p5p] might also be used) and/or natural progesterone.

The following testing options are suggested based on Dr. Mark Houston's work. Remember, if hypertension is present endothelial damage is occurring. These tests reflect the finite responses of inflammation, oxidative stress and immune dysfunction. Clearly it is not necessary to do all the tests, they are listed for reference. However, the greater the damage the more the tests will be outside of their ranges.

FINITE RESPONSE TESTING: INFLAMMATION

- HS-CRP
- Fibrinogen and Ferritin
- Interleukins IL-6 , IL 1b, TNF- alpha, IL-8, IL 10 and CAMs,
- MPO (myeloperoxidase)
- ESR
- Omega 3 Index
- Homocysteine
- Waist circumference, visceral obesity % fat and total body fat
- Lp-PLA 2
- SAA (serum amyloid A)
- NFkB
- PAI- I
- AGE's

FINITE RESPONSE TESTING: OXIDATIVE STRESS

- Ox LDL and glycated LDL
- MPO
- GGT
- GSH and GSH/GSSG(reduced/oxidized ratio)
- MDA (malondialdehyde)
- TBARS (Thiobarbituric acid reactive substances)
- F2 isoprostane and 8-OHdG(deoxyguanosine)
- Hexanoyl Lysine (ELISA) and lipid hydroperoxide: Lipids Ox
- Protein Carbonyl
- SOD 1 and 2 and Catalase
- Lp_PLA 2
- WBC with diff
- Uric acid
- Haptoglobin
- Oxidative Defense: TAS (total antioxidant status), Spectrox

FINITE RESPONSE TESTING: IMMUNE VASCULAR DYSFUNCTION

- Thyroid antibodies
- TGF b-1
- IL 1b, 4, 6,10,12, 17
- Interferon gamma
- IgG , IgE and IgA
- TNF alpha
- C4a, C3a, C3 and C4
- T lymphocyte subsets
- Total and epitope specific IgE and IgG-type 4
- NKC percent
- CBC with diff
- ELISA –ACT
- ACTH/Cortisol ratio
- MMP-9 and MMP-2
- VEGF

Infectious disease profile with IGM and IGG antibodies such as H Pylori, CMV, EBV, Lyme, Mycoplasma, HSV, Chlamydia, Hepatitis A, B, C etc.