If you want more energy, it is easy to get attracted to advertisements for getting more energy. Energy drinks, food, supplements and how-to information are all out there.

Many of these products “work” - meaning, they give you temporary energy - but you have to continually take them. Good for the manufacturer, but not necessarily good for you. Furthermore, some of the energy food and drinks are loaded with sweeteners which are not good for your health and waistline.

Thus, you’ll want to get more energy in a way that is sustainable and addresses your lack of energy.

The ultimate solution is illustrated by the 1995 movie, “Apollo 13”. If you saw this movie, recall the part in the movie where the oxygen tank exploded, thereby damaging the spacecraft. The engineers in mission control were discussing how to safely bring home the astronauts. They were trying to determine the most important thing that should be done to try to save the spacecraft and the lives of the astronauts. During this discussion, one engineer abruptly interrupts and said something like: “You are all missing the point: Power is the most important thing! Without power, nothing will work! We’ve got to preserve enough power on the spacecraft long enough to get them back to earth! Apart from power, everything else is secondary!”

So, where in our body do we get the power for energy production? The mitochondria.

The mitochondria’s primary function is energy production for our cells. At the worst case scenario, if the mitochondria stop working, your cells will die. If your mitochondria are not working well, you will get less energy for your cells.

Our cells consist of specialized parts, called “organelles” (literally “little organs”). The mitochondria are special among all the cell organelles. They have their own DNA, distinct from the cellular DNA. The DNA is the genetic machinery of cells.

Depending on your diet and lifestyle you can increase the number of mitochondria in cells up to a certain level (a good thing!), as well as decrease the number of cellular mitochondria (not good!).
Healthy Mitochondria = Good Energy = Good Health!

Why Is The Health of My Mitochondria So Important?

Human cells have between about 200 to 3000 mitochondria per cell. The cells using the most energy, the brain, the heart and skeletal muscles have the most mitochondria. Heart cells are packed tightly with mitochondria ...about 50% of the volume of heart cells are mitochondria.

Mitochondrial damage in brain cells is a leading cause of the neurodegenerative diseases like Alzheimer's. No power produced, no energy to run brain cells and they die. Dying brain cells equals dementia.

Weak, sore, tight muscles?

Well, do everything you can to improve the mitochondrial function of the muscle cells.

What about skin? You can see the results of mitochondrial damage in skin. “Age spots” are an indication of oxidative damage to the skin cells mitochondria. The more age spots you have, the more cellular oxidative damage of your mitochondria. When you start to see these, you need to make serious diet and lifestyle changes to protect and improve your mitochondrial function.

So, if you want more energy, take care of your mitochondria.

Don’t Miss This!

If you are tired of dealing with lack of energy, get a special lab test to evaluate your mitochondrial function (see page 3). Work with a Functional Medicine doctor to help identify underlying causes of your insufficient energy, which could be hypothyroidism, adrenal dysfunction and even gastrointestinal issues that hinder nutrient absorption, etc.

For Women Planning To Have A Baby:

The DNA of the mitochondria comes predominantly from the mother. So you better do everything to improve your mitochondria function for your future child, and even grandchildren, great-grandchildren, and so on.

Get Your Energy Back

Thank you

Thanks to all of my wonderful patients and friends who graciously referred me to their friends and neighbors recently! My business runs on the positive comments and referrals from people just like you! I couldn’t do it without you! A special thanks to these fine folks who referred me:

Jennifer O’Driscoll, Myrtle Hodgson, Zest Bakery, Institute For Functional Medicine, Healthy Horizons Breastfeeding Center
How Good Is Your Cell Powerhouse?

Testing Your Mitochondrial Function

There is a special urine test that gives a good indication of mitochondrial function. The test is called the Organic Acid Analysis test.

The test measures the functioning of the cellular energy cycle, called the Krebs Cycle. The Krebs Cycle occurs within the inner membrane of the mitochondria, where most of the cells energy is produced. The Krebs cycle, also known as the tricarboxylic acid cycle or the citric acid cycle, is a multi-step cycle with intermediates known as organic acids. These organic acids can be painlessly, easily and accurately measured in this special urine test. This test shows what nutrients your mitochondria are deficient in and what nutrients are needed to help your mitochondria function better.

This Organic Acid Analysis test also gives indicators of the existence and level of oxidative damage of the DNA. One marker, urine 8-hydroxy-2-deoxyguanosine is an established indicator of DNA damage.

High levels of DNA damage are associated with the development of deadly diseases such as cancer, congestive heart failure, dementia and significant damage to the lining of the blood vessels. Measuring urinary 8-hydroxy-2-deoxyguanosine via an Organic Acid Analysis gives an early indication of damage.

The damage can be altered by making dietary and lifestyle changes to reduce oxidative damage and thereby, reduce your risks for those serious chronic diseases.

WAYS TO GET MORE ENERGY

To get more energy, take care of your mitochondrial function. If you haven’t read the article, “Want More Energy?” on page 1, read that first.

What can you do to improve your mitochondrial function, prevent mitochondrial damage, and even increase the number of mitochondria in your cells?

• Get at least 7 to 8 hours of deep sleep at night, getting to sleep no later than 10 pm most nights
• Exercise with about 40 minutes strength training and about 20 minutes aerobic training 4 to 6 days per week
• Eat at least 5-6 servings of dark, green leafy vegetables each day
• Eat at least 3 servings of deeply colored bright red and purple fruits each day
• Drink about a half ounce water per pound of bodyweight each day
• Take supplemental Coenzyme Q10, also known as ubiquinone or ubiquinol
• Supplement with the additional mitochondrial energizers:
  1. L-carnitine and acetyl-L-carnitine amino acids
  2. alpha lipoic acid
  3. vitamin C in the form of mixed mineral ascorbates
  4. vitamin E in the form of d-alpha, d-beta, d-delta, and d-gamma tocopherol
  5. vitamin D3 (cholecalciferol)
  6. N-acetyl-cysteine (NAC)
  7. essential fatty acids EPA and DHA from fish oil
  8. extra B vitamins: B1, B2, B3, B6, B12, folate (All should be in the bioavailable active forms, for example B6 as pyridoxal-5-phosphate, rather than pyridoxine hydrochloride)
  9. phosphatidylserine
  10. D-ribose

Need help with supplement dosages and the best supplement brands for any of the above? See a Certified Clinical Nutritionist.

“Most people spend more time and energy going around problems than in trying to solve them.”

- Henry Ford
Dr. Doug uses proven natural methods to resolve health conditions, not just manage symptoms, so you can feel good, have more energy and enjoy life. He helps people with various chronic conditions, including hormonal imbalances, thyroid problems, adrenal/chronic fatigue, PMS, menopause-related issues, digestive issues, and heart-related issues, such as hypertension, diabetes, and metabolic syndrome.

He is a Functional Medicine Doctor, Clinical Nutritionist and Doctor of Chiropractic.

Dr. Douglas Husbands
Holistic Health Bay Area
(650) 394-7470

In all systems, energy is essential. Likewise, without energy, our bodies can’t function properly.

Special Message from Dr. Doug:

Even while we are in the Information Age, many are not completely aware of the power of diet, nutrition and lifestyle changes to resolve pain and chronic health issues.

Together with identifying the root causes of health problems, we use this method, because we get...

**Remarkable Results**

such as the following account from a mother with two daughters:

“I had poly-cystic breasts that caused me so much pain that I’d cry in the middle of the night. The conventional doctors had told me there was not much to do about the pain, I had to learn to live with it.

After very thorough tests, Dr. Husbands found the root cause of my problems and started me on supplements combined with a diet aimed at reducing pain, inflammation, & hormonal balance. Within a month I saw a great reduction on the pain on my breasts, even on my period time nothing would hurt!! I was very happy that I could sleep an entire night without crying of pain!

Then there were my 2 daughters with irregular painful periods: One would skip her period 1-2 months; the other one had uncontrollable pain, fainting spells, migraines, and sometimes her period would come twice in a month!
They followed Dr. Husbands recommendations and their periods became regular, no pain, no fainting spells, migraines disappeared, even their hair stopped falling!”

- Amparo, Redwood City, CA

Read the rest of this account on our Facebook page: [https://www.facebook.com/holistichealthbayarea](https://www.facebook.com/holistichealthbayarea)