

Summary:

The 8 Metabolic Types:

Slow Oxidisers / Hypoventilation (high blood CO_2 , low cell CO_2) / Adrenaline < Serotonin :

- 1) low adrenaline with normal serotonin
- 2) high serotonin and normal adrenaline
- 3) low adrenaline and low serotonin but adrenaline is lower than serotonin
- 4) high adrenaline and high serotonin, but serotonin is increased higher than adrenaline.

All these need to be corrected differently. You need to find out why you have low adrenaline, is it because of SAMe, or is it from a methylation block? These will cause high CO_2 in venous blood and will cause potassium to decrease in the cell thus lowering metabolism.

Off hand comment: "If you have a low metabolism you either lack progesterone (potassium) or you lack sympathetic nervous system which does not allow your potassium to rise."

Note: High CO_2 in blood means the body is getting too acidic, thus it will slow metabolism down and not produce CO_2 in the cell due to concern that it will not be able to expel the CO_2 fast enough in the breath, causing acidosis and death. The opposite is true of a fast oxidiser.

Fast Oxidiser / Hyperventilation (low blood CO_2 , high cell CO_2) / Adrenaline > Serotonin:

- 1) high adrenaline (e.g. COMT problems, overmethylating) normal serotonin
- 2) normal adrenaline low serotonin (increased MAO-A break down)
- 3) high adrenaline and high serotonin but serotonin is lower than adrenaline
- 4) low adrenaline and low serotonin but adrenaline is higher than serotonin.

In alklaosis (low blood CO_2), potassium goes inside of the cell and this increases metabolism, in acidosis potassium goes outside of the cell, it decreases metabolism. It is very obvious and logical, since metabolism increases acidity by creating CO_2 .

If you are more acidic then body will want to lower metabolism to decrease production of CO_2 .

and if you more alkaline body will want to increase metabolism to increase production of CO_2 .

"fast oxidizer has either COMT problems, MAO problems, or lack of magnesium or too sensitive adrenaline receptors."

Tests to check yourself, before you wreck yourself:

Hairtest, VBG (CO_2 , bicarbonate, electrolytes, standard test with the special machine in the hospital) and urine catecholamines with serotonin.

Every oxidation rate has its symptoms. the most energy you will get in the middle of oxidation.

This is why longevity answer is the balance, not faster or slower.

i.e. slow oxidisers have low adrenaline etc and can't handle carbs. If they exercise regularly this

will raise their adrenaline and their carb tolerance.

General Suggestions:

- 1) getting a hair mineral analysis (easy and non-invasive)
- 2) For hairloss: recommends 30mg zinc and 10mg manganese a day if androgenic pattern baldness
- 3) For Slow oxidisers:
 - He suggests exercising while fasted as being very healthy. "move more eat less" advice. Especially ocean swimming for more minerals.
 - Also recommends veggie juice or water only 40 day fasting protocol (or working up to it) followed by at least 20 liver flushes (Andreas Moritz style), one every month, following the fast. Refeed after fast with lemon egg rice soup.
 - recommends 'thorn extra nutrients' to increase methylation
- 4) Recommends against sugar and CO2 water!! He says sugar and CO2 will lower the CO2 in the actual cell = hair loss
"for your thyroid to work and for you to produce high CO2 INSIDE OF THE CELL. You need to utilize this CO2 well, breathing it out or converting it to bicarbonate with zinc based enzyme. This is why the worst thing you can do is sit on your ass and eat a lot of carbs. This way, your sympathetic nervous system is not active and you don't breathe out CO2 properly"
- 5) for fast oxidisers (rare) he recommends peat diet.
- 6) says any supplements will age you (don't use them long term). Fasting will balance your minerals even if diet has imbalanced them (Slow oxidiser) without aging. Zeolite + Fulvic will chelate minerals. Thinks seafood is a great chelator. Recommends ocean swimming for minerals (and even better while fasting, 2 hrs a day). Recommends Zeolite + Fulvic taken for a year to chelate heavy metals (if you have them, take hair test to see).
- 7) Recommends heavy drinking tomato juice for one week every month if you want to feel more 'androgenic' which works on a contrarian endocrinology approach.
- 8) Your oxidation rate will only change if you have deficiencies or infections. Normally your oxidation rate won't change, and you can only support it. "Your heart won't become bigger, or your kidneys will not raise blood pressure faster than you can physically. This is what oxidation rate is and usually you can't change it."
- 9) Don't take progesterone, take anti-progesterone:
this creates more 'progesterone receptors' so once you come off the anti-progesterone, you will feel better than before

Hairloss:

Cause:

Androgenic – too much DHT opposing estrogen, not enough progesterone. Signs: good sex drive, maybe too much, hair loss. Causes; zinc deficiency (means you can't make enough progesterone) often caused by too much ejaculation.

Sugar also wastes zinc and manganese, needed for insulin, thus you get hairloss.

*Post-finastride-syndrome is the opposite, using too much Progesterone to oppose estrogen and not enough DHT (usually resulting in no sex drive, and no hair loss).

Cure:

Lower your estrogen by chelating copper. Take zinc (30mg) and manganese (10mg). Zinc means you will produce enough progesterone, and manganese will make sure you don't over produce it to make your DHT not sensitive. He says you can also take "Thorn Extra Nutrients" instead of this combo. Red light chelates copper. This supplement regime should provide the correct hormone balance to allow you regrow hair, but the scalp itself may need work.

"The best thing to do is to get granulated salt go in the shower and take that salt and put it in your head. Scratch your head with it every day for a month. Sodium is a solvent, it keeps calcium in solution. this granulated salt will damage your scalp which will grow your hair like crazy. You need to damage your scalp if you lost your hair long time ago. Otherwise nothing will grow it again."

He also recommends putting lecithin on your hair, which "will emulsify the fats that clog up your follicles and phosphorus in lecithin will dilute calcium. It will take a year or so."

Lifestyle changes: "long fasts on Breuss protocol regrow crazy amounts of hair. All your head is in new hairs. since your venous blood CO2 falls down which allows your body to raise the metabolism in the cell."

Note: I assume you need to keep taking the zinc and manganese until you retest your hair and see that your copper is now normal. Gbolduev can you clarify?

Chronic Fatigue Syndrome:

He recommends exercising a lot for a year. Walking / running. Makes you hyperventilate and increase adrenaline and thus dump copper.

He also recommends fasting.

"Fasting does this very well, reloads adrenaline receptors, cortisol progesterone.

Fasting is a cure for CFS.(unless you have a methylation block) this you can tell from urine dopamine noradrenaline and adrenaline)

I do fasting with exercise. THIS IS SO NONPEAT. but results are crazy
fasting depletes you from PUFA in 30 days. NOT 4 years"

"Fast Oxidisers" shouldn't be fasting, however.

"Anyone with chronic fatigue can snap out of it in year if you just force crazy exercise.

Same as any one with certain cancers can get rid of it with running. I recommended this to many people with cancers and many got rid of cancers. they increased their sympathetic nervous system and hyperventilated , this caused you to dump copper. SINCE COPPER IS RETAINED when you are hypoventilating , your ceruloplasmin is low.

And ceruloplasmin goes up with a SHOT OF ADRENALINE. since if adrenaline is high , body will start dumping copper,since body will want to use serotonin"

SUMMARY:

Diet:

"I stay away from meat milk, cheeses, anything that has hormones in it. I eat only sea food(shrimps oysters, crab, mussels., eat some fruit. Drink almond milk that I make myself for calcium. I eat rice. I think rice is really good, It keeps me clean and absorbs toxins. that is why it is used during poisoning." He comments to keep fruit / rice low unless being active.

"Seafood has all the minerals. SOILS don't have all the minerals , they are all tampered with. SO cattle on those soils is also sick, milk is also bad(hormones), meat is bad(hormones). Fruits not that great.(lack of certain minerals and overload of others)."

On Aging:

"YOU AGE because

- 1) chronically eat the same foods, this creates imbalances
 - 2) chronically smoke or drink
 - 3) chronically take a multivitamin
 - 4) you take some minerals or supplements
 - 5) you take some hormones
 - 6) you have a certain life style where you repeat the same things over and over again
 - 7) too much sex
- etc

YOU see repeating is what ages you .

Fasting allows you to stop all these repeating processes while you are fasting.

You fast and you don't eat your normal food. lets say your food intake was overloaded into a copper side or zinc side or aluminum side.

While fasting you allow your body not to get toxic in this overload and it allows time to get balanced and to get rid of this directional imbalance that you were causing with your food intake.

fasting is like a laundry day. You don't allow new toxins go in and you get rid of old ones.

You don't chronically starve. that is why you cant look at fasting as catabolic process. Who cares what it is. It is a short term procedure. During which you get rid of your pufas, you get rid of toxic metals, you get rid of bacterias and viruses. And then you refeed .

If you swim in the ocean while fasting, your refeeding will be very easy since you won't lose any electrolytes. You wont lose HC

END Summary

Basically it is like this.

your SODs overwork (copper zinc) you create more hydrogen peroxide. If there is no manganese SOD, your catalase is not working since without manganese there will be no IRON. Catalase is iron based.

So, you have cases like that

Increased SOD (copper zinc) normal manganese= grey hair (happens in acidosis)

Normal SOD (copper zinc) low manganese = low catalase from low iron. = grey hair

Copper deficiency = low melanin= hair discoloration more like hair vitiligo.

This is why finasteride causes potassium to rise in the cell although body want to keep it down. And finasteride does not work for protein wasting hairloss.

Unfortunately, there is also protein wasting hairloss. And that is more insulin / cortisol issue.

Which Ray peats diet can fix. For androgenic hairloss, I think Ray Peats diet is bad.

calcification is correct. estrogen causes calcium get out of solution. And most of the conditions are caused by venous alkalosis with very high CO2 levels to compensate that alkalosis.

HAIRLOSS is caused by unemulsified fats mixed with chunks of calcium

I will try to explain to you how it happens.

Just take a glass of water. then put oil in there. And then put 3 things in there. 1) any kind of acid in there., or then put lye in a different glass with water and fat. (lye is very alkaline) . or baking soda. (mixture of CO2 and bicarbonate) in the third glass. Mix the oil very hard And see what will happen. In a glass with bicarbonate you will have CHUNKS that look like thrombs. So much for taking baking SODA LOL

If in your venous blood, you have high CO2 and high bicarbonate. FATS will become huge chunks. They won't emulsify, this mixes with calcium and blocks your hair follicles.

So much of CO2 being good for you. Your oil won't be in chunks in alkaline or acidic environment you will see this from this experiment., it will be chunks only in presence of CO2 which causes oxidation of lipids. LOL

Just do these experiments. take a glass, put water in there, put oil in there, and put bicarbonate in there. YOU WILL SEE what happens in your blood when it has high CO2 and high bicarbonate.

So, if you have high copper, you will have high lipids, DHT increases these lipids even more.

This is why when you have high DHT you get this condition of alkalosis in venous blood, with high CO2 and high bicarbonate.

This will cause all your fats to chunk up and causes your calcium out of solution, It mixes up and boom.

this is why long fasts on Breuss protocol regrow crazy amounts of hair. All your head is in new

hairs. since your venous blood CO2 falls down which allows your body to raise the metabolism in the cell.

this is the cause of the androgenic hairloss in detail.

This is why If I were to cure hairloss, I actually put lecithin on your head and try to emulsify all those fats. Plus, you need to fix your blood and get rid of high CO2 in blood, by lowering copper or increasing methylation. This is why zinc plus manganese work. Lecithin has phosphorus in it, so you need to put phosphorus on your scalp and lecithin will emulsify your fats and dilute your calcification., so it will fix your 2 problems at once.

So, take zinc plus manganese, or thorn extra nutrients, and put lecithin on your head. That is all. Also, salt works. very well in granules, since salt will dilute calcium, SODIUM is calcium solvent. and salt will emulsify fats. Also, when you damage your skin with salt, it speeds up the process, If you are bald already.

I think if you are completely bald, It will take about a year to reverse it

Take thorn extra nutrients, or zinc with manganese, plus put lecithin on your scalp.

Also, damage your skin with granulated salt in the shower by scratching your head with it.

This protocol will restore your hair to the level you would not believe

Also, stay away from calcium for a while. Your calcium will work as it is on its own from regular food. and if you take calcium in this condition you will make it worse, since mixture of unemulsified fats with calcium will just block all your scalp.

I would also recommend liver flushes using Andreas Moritz protocol. And no, those stones are not fake. I have zero stone formation now. This protocol will help you with your fat-soluble vitamins and you will not have to take any A D K E afterwards.

I dare anyone with androgenic alopecia not to grow hair on this protocol.

I would not use soy lecithin. sunflower may be

Any lecithin really will do the job > lecithin is used to emulsify fats. you can just use phosphoryl choline I guess, instead of lecithin if you don't want any PUFA

Fasting Protocol:

Fast on Breuss protocol. You will fix your hair and pfs all at once. but you need to be on it for 45 days.

Sleeping problems are only at first. then they disappear. I fast for 40 days. and I swim every day 2-5 km in the ocean while fasting. this saves your muscles and gives you needed minerals from sea water.

skin, energy eyes, everything is crazy after this. You get so much younger then it is not funny.

All these health gurus look like death with glasses no hair, grey. I have zero grey, long hair, no glasses, ideal skin. I am 40, but you will never ever guess my age. and I was just sick with 2 cancers, where I looked like 80 years old. All my beard was grey, I had grey side burns, crazy hairloss, almost bald. It is crazy transformation.

fasting and liver flushes are just amazing. Always drink malic acid before the flush or apple juice. I avoid fruit juices, so I drink 1 tea spoon of malic acid per 1.5 liter bottle of water daily while preparing for the flush.

I stay away from meat milk, cheeses, anything that has hormones in it. I eat only sea food (shrimps oysters, crab, mussels., eat some fruit. Drink almond milk that I make myself for calcium. I eat rice. I think rice is really good, It keeps me clean and absorbs toxins. that is why it is used during poisoning.

Hairloss I outlined how to fix for most people. But you need to see if you are a fast or slow oxidizer. Most people are slow oxidizers and Peats diet is death for them.

Only fast oxidizers do well on Peat, since fast oxidizers need calcium, copper, and all those that do good, they don't tolerate thyroid.

Like Haidut, his ceruloplasmin is high, he can't tolerate thyroid. he is a fast oxidizer. he does well on calcium, copper, Peat recs, but he can't take thyroid, since his thyroid effects is already too fast. LOL

And this person sits here and recommends Peat to others. same as Danny Roddy with his hairloss. He did not have androgenic hairloss. Vitamin D can't help androgenic hairloss. It will increase the hairloss. Danny Roddy is also a fast oxidizer and does good on milk, copper, calcium and I bet he does not take thyroid either LOL

but most people are slow oxidizers not fast. they don't do good on calcium copper milk. they simply can't do good in that. And if you force them on thyroid supplements this slowly kills them by ruining their blood vessels.

slow oxidizers have low sympathetic nervous system, you can't put them on thyroid hormone. It will slowly but surely ruin their blood vessels, since slow oxidizers wont be able to oppose oxidation stress since they are lacking SODs.

their thyroid effect is lowered in the cell for a purpose not to create oxidative stress. It is regulation and you can only improve their thyroid effect by increasing their sympathetic nervous system.

NEVER come off from the fast on sugar juices or fruit juices or fruit. NEVER. It is a mistake where people ruin the whole fast. Come off on slow carbs and protein. Like rice with eggs soups. for instance, Buckwheat. You want to make sure that you increase your sympathetic nervous system first to add any carbs.

Olive oil is mufa. If you do your preparations nothing will get stuck. Always drink malic acid before the flush or apple juice.

I avoid fruit juices, so I drink 1 tea spoon of malic acid per 1.5-liter bottle of water daily while preparing for the flush.

read again. rice and egg lemon soups. very easy on digestive system and rice will absorb all the toxins. I have done this for many years. This is the correct way. All those experts don't know.

I can tell you about fasting. You get rid of all your PUFAs in 40 days fast. You get rid of all toxic metals, hormones, viruses, sibo, bacterias. Your digestion become better after the fast. No one is saying that it is good to be on fast and run on stress hormones. But your receptors will be reset and after you come off of the fast, all your hormones will be low. And now when you sit on your ass and over eat sugar. All your hormones are not being used and your body lowers the receptors. So your levels of cortisol are high when you eat sugar all the time. and you have to

eat like 20 times a day. This is not practical.

I fast twice a year, one water fast, one breuss. After that I am all good for the whole year. I try not overeat.

Diet advice

Problem with people recently is that access to food is so easy and people are not mobile. They got sick since they already eat all this sugar on a daily basis. And of course, they are happy when Peat tells them to also eat it. But diet does not work for them. so then they have to take hormones with it where the whole forum turned into chemical lab selling hormones and supplements. LOL Ridiculous really.

I take nothing and I am good. NOTHING

Calorie restriction increases life span. It is a fact. Since your NAD stays high since you don't produce acetaldehyde from extra sugar fermentation. And 80 10 10 diet is horrible. Carb oriented diet will make you old and wrinkly and you will lose hair on it. Look at the 80 10 10 dieters

It needs to have a balance. I eat 30% carbs. I don't eat meat. I eat sea food ONLY. I don't eat milk, cheese. And anything with hormones.

Milk has hormones. Meat hormones. Cheese hormones and yeast. NO THANKS.

I follow closer to Okinawa diet.

And for those who tell that sea food has mercury. Bunch of BS, my glutathione levels are way up after sea food, and It looks like sea food chelates toxic metals, since my mercury in my hair fell on 2 years of sea food. At first it went up huge and then fell to nothing.

I love shrimp, crab, lobster, oysters, mussels, scallops. (amazing minerals content)and sometimes I eat pure fish but I prefer fish with little fats.

I do drink almond milk.

I love tomato's, tomato's keep me super androgenic.(contrarian endocrinology). but eat and drink tomato juice only for one week a month. Heavy heavy drinking of tomato juice.

I love apples (malic acid) and nectarines.

I like broccoli. And I do eat RICE. rice is a good absorbent. Used in food poisoning. I love it. and it never makes me fat or dirty. I always have a light feeling.

I do have carbs and actually eat a lot of carbs from fruit, but I always regulate my carb intake. If I move a lot I eat more carbs. If I sit a lot my carb intake goes to very low. I never want extra sugar present. since I don't want to make acetaldehyde. I want to keep my NAD levels high at

all times.
END

increasing estrogen actually increases progesterone sensitivity, this is contrarian endocrinology and actually already used by some people. This is what resveratrol does, which can't be taken all the time, but can be taken in cycles.

I used to do estrogen cycles for myself. And I experienced only good things from it. but of course, this is for certain body chemistries.

Hormones only need to be used as contrarian. let's say if you are a slow oxidizer-- you are high copper. If you take estrogen, that will chelate your copper (like resveratrol does). and when you quit estrogen, this will increase your metabolic baseline.

If you take progesterone, that will chelate your zinc. and after quitting progesterone your metabolic rate will be slower than before. Thus, this helps some fast oxidizers.

END

Endotoxins, acetaldehyde, bacteria, MAO, serotonin:

Endotoxin is not a biochemical term, it is a bio science. PH regulates the bacteria population. the endotoxin they are talking about is acetaldehyde mostly. This is controlled by enzymes ALDH and AO. And yes, this is what ages you and causes cancer since acetaldehyde stops MAO from working, it stops histamine break down. It has many bad effects.

this is exactly why your NAD levels fall when you age. Since your acetaldehyde levels increase and this puts pressure on NAD, since NAD is needed for acetaldehyde break down. ALDH has NAD as a cofactor. This is why people with cancer get intolerant to alcohol. And people with CFS are intolerant to alcohol also. Since metabolism of alcohols make acetaldehyde, this is what hangover is. Ethanol is turned into acetaldehyde and then into acetic acid. but if your enzymes ALDH is not working properly you are stuck with too much acetaldehyde.

In case of cancer, your iron is kept low by the body during cancer, since you have an infection. Body keeps iron low by lowering enzyme xanthine oxidase. Which is B2 and molybdenum based. AO enzyme which breaks down acetaldehyde is also B2 and molybdenum based. That is what happens during the infection. one of the enzymes breaking down acetaldehyde gets blocked. And the whole pressure goes onto ALDH enzyme which is NAD based. This is why NAD goes down in aging.

But if you control the bacteria you won't have any of these issues. And to control the bacteria populations you need to control the PH. And to control the PH you need to control all of your enzymes. So, minerals and vitamins is like programming language. You can program any code using them. this is how your body works and all the doctors, researchers recommending certain substances for all imbalances are simply wrong.

These are explanations of mechanisms of endotoxins. If you control PH, you won't have any endotoxins. And if you don't control PH you can't fix your endotoxicity with carrot salad. It is

impossible.

People talking about endotoxins, about adrenal fatigue, about SIBO, diabetes, cancer etc. are not scientists. It is all a bro science. To me human body' language is an enzyme interactions and you need to speak this language to actually describe conditions. And not some weird words like endotoxins and other made up stuff. different bacteria live in different PHs inflammation is a bro science also. What is inflammation, what is endotoxin. what is the exact mechanism of the inflammation. I know the answers to all of this, this is why I wrote to you that endotoxin is acetaldehyde mostly. Since acetaldehyde is what stops MAO from working, if MAO a is downregulated it causes high serotonin. THIS SEROTONIN is not what causes inflammation. It is a side effect of MAO A downregulation, MAO A is copper based, copper gets downregulated in case of high acetaldehydes and this causes DAO enzyme to drop which causes histamine overload and inflammation.

You see you have to explain things like that. Not some bogus serotonin causes inflammation stuff. NO SEROTONIN DOES NOT CAUSE any of that. SEROTONIN is a side effects of MAO A inhibition. END PRODUCT of MAOs is aldehyde, this is why if you have high acetaldehyde, MAO A is stopped by a feed back loop, this causes high serotonin. And causes copper dysregulation which decreases DAO enzyme and causes inflammation since too much histamine is retained.

The serotonin slows down your breathing and causes CO2 retention. This fights the bacteria. And this how your body fights this condition LOL Now tell me how serotonin is bad here. tryptophan will retain CO2. This is why it is anti thyroid, since anything that retains CO2 will lower your metabolism.

It makes no sense to me. Lower cortisol without thyroid? thyroid hormones requires sugar. This need for sugar will put pressure on cortisol, adrenaline and insulin.

People are confused. If you have high cortisol that means your adrenaline or insulin not working good or you already have high metabolism. Usually cortisol is high when you have problems with sympathetic nervous system. So, body is using a lot of cortisol to make sugar with. Or when you have problems with a pancreas and your protein digestion is impaired. (this is very common and this is actually what causes hypothyroid) this is why I rec liver flushes.

This causes high cortisol, since cortisol is HIGH. Body stops thyroid. Since thyroid will put pressure on cortisol. Adrenaline insulin. Thyroid needs sugar.

So, if you have high cortisol and you take thyroid, you will just turn your t3 into a reverse t3 as much as you can. Body will fight your thyroid hormone since body thinks that if cortisol is high, you are eating yourself. So, it does not want higher metabolism.

That is why thyroid hormone will work only with pregnenolone taken together in this case. Since pregnenolone will increase your cortisol.

One more time, high cortisol lowers thyroid conversions. but high t3 hormone requires more cortisol and adrenaline. I hope you understand this.

Cortisol calms people down. it provides sugar. Highly stressed people have pressure on cortisol. Cortisol lowers adrenaline obviously

Pregnenolone can convert to estrogen and lowers thyroid thus cortisol will also go down, since there will be less requirement for it.

I said that if you take t3 pregnenolone will provide needed cortisol. that is why people with adrenal insufficiency can't take t3. they won't tolerate it.

I think people are confused about cortisol on this forum. think of cortisol as sugar and protein.

If cortisol is high body thinks you have low sugar or protein. that turns off the thyroid so you don't eat yourself to bones.

but if you take t3 that will require more cortisol that is why if you take pregnenolone with t3 it will work, but if you take just t3, it will all convert into reverse t3 unless you eat tons of sugar and have very good insulin which most people don't. And no matter how much sugar you eat you will not going to be able to support high sugar levels from food. It is not possible.

that is why you need to have a metabolic rate which matches your ability to support the sugar. If you don't and if you force higher metabolic rate than you can handle, you get inflammation and histamine.

the lower your metabolic rate is the lower cortisol and adrenaline requirements you will have.

You simply will not need cortisol. Turtles have extremely low met rate and live the longest.

Oxidation rate is very low. So, all this kids metabolism when you get older is bs IMO. Not to have the inflammation you need a match between sugar (cortisol adrenaline glucagon insulin) and thyroid action. (T3 hormone, potassium, progesterone)

I saw many people force their met rate where they can't handle and all of them get older. You need thyroid hormone only if there is something wrong with your thyroid. Otherwise if you have low metabolism you either lack progesterone (potassium) or you lack sympathetic nervous system which does not allow your potassium to rise.

If you lack sympathetic nervous system you can have low adrenaline (low methylation, low SamE) or you have high copper

Ray Peat is covering one type of body chemistry. To know what is your balance you need to know arterial blood gases and you can't just test bicarb in blood alone or CO2 alone or bicarb and CO2.

If you have high bicarb in blood and it is not over 30. That means that in 80% chance you are in respiratory acidosis. If you have bicarb over 30, then most likely you are in alkalosis.

If your blood PH is low, you can have high bicarb in blood. If you have problems with acetylcholine or potassium and your breathing drive is impaired, you will have highest CO2 especially during **sleep and that will bring bicarb up in blood to compensate and also zinc will be raised and manganese will be used a lot.**

Most of the people fall in this category and I have no idea why Peat gives his plan to people if it matches the minority of cases.

Orange juice has potassium and copper and magnesium and lowers acetylcholine which will decrease breathing rate which will increase CO2. If you already have high CO2 I would assume it would be bad for you.

Tested about 100 people the last month for arterial blood gases. 80% --high CO2 20% low CO2. So once again I think Peats recs represent minority of people and dangerous. Since in respiratory acidosis you can't take calcium it will go right into your cell and lower already low metabolic rate.

In respiratory acidosis, which is 80% of population, your metabolic rate is lowered on purpose not to produce extra CO2 from metabolism. Your calcium goes up in the cell, magnesium goes

up in the cell, sodium and potassium kept low in the cell. This is done on purpose. When you eat salt and you take potassium and B vitamins you make it worse although you increase your metabolic rate and feel a little better energy but at the same time you are going into 4 highs in the cell. HIGH sodium high potassium higher calcium and higher magnesium since your CO₂ raises higher with metabolism rise.

That is why Peat says you live longer when you have high CO₂, since your metabolism is in the complete crapper and oxidation is low. All you do is sit on your ass))) since metabolism does not allow to do otherwise.

Bottom line, If you have high CO₂, body increases bicarbonate, body takes iron out of blood to slow down met rate, takes zinc out of blood to use for CO₂ to bicarb conversion, takes selenium out of blood to slow down thyroid, puts calcium and magnesium into ionized form into the cell to suppress sodium and potassium entrance and thus suppress absorption of vitamins and thyroid hormone sensitivity. ALL done to lower met rate to lower CO₂ production. This creates a low energy state but could prolong life)))

First you will lose your vision on this, secondly you will have low energy. Will have allergies big time.

Body needs to be balanced, and for some CO₂ is good for some poison, for some bicarb is good for some poison. For some salt is good for some poison. Aspirin is poison for ALL. It does not belong in the body.

Also, to know what is going on ABGs are not enough. You need electrolytes, insulin, progesterone, calcium magnesium and also you need RCBs to know what is in the cell since body will try its best to compensate.

IN majority cases, high bicarbonate that is acidosis not alkalosis, and usually the one caused by high CO₂ so in this case if you increase CO₂ and lower bicarb you will die since body will be using electrolytes from the cell to compensate for the acidity you created)) On hair tests it is called 4 lows pattern. where all major electrolytes are low in hair meaning, you have both respiratory and metabolic acidosis at the same time

IN Arterial blood gases, you have ideal CO₂ level. PH, bicarbonate. You will see there where your problem is and what your metabolism is. I have respiratory acidosis; my CO₂ is high and my bicarb is high my Ph is lower than ideal. Baking soda is a poison to me. It is good for sports people, since most sports people have metabolic acidosis not respiratory acidosis and low Co₂, not high. Since they constantly hyperventilate.

the ideal level of CO₂ does not really change, your activities can change your CO₂ level but it will be not ideal. If you hyperventilate in sports, obviously, you need to support your metabolism with sugar to keep Co₂ coming for oxygen.

When people age, normally CO₂ levels go up not down. Since their breathing drive goes down, since most people get copper toxic which lowers their breathing drive. If you check liver of 90% people you will find high copper and high iron in the liver and low copper in tissues. Copper stays in liver, since if you go in resp acidosis --high CO₂ state, copper will stay in the liver, since body will take it out of the blood, Copper lowers breathing drive body does not want that. That is why all candida people are copper toxic in the liver, since copper are antifungal, but candida makes so much CO₂ that copper stays in the liver and is not used to kill it. That is why molybdenum or zinc are used against candida, it is not because zinc kills candida, it is because zinc makes copper come out, since zinc converts Co₂ into bicarbonate.

I am talking about Normal CO₂ level, not lower not higher, I want it to be at ideal level. If you set it up higher than your bicarb will be up also. if you set it up lower, bicarb will be also lower in blood.

If you lower CO₂, it will raise metabolism, since calcium and magnesium will come out of the cell, and thus they will allow sodium and potassium to enter the cell. Sodium and potassium make your metabolism work. When CO₂ is high calcium and magnesium gets into ionized form, and enter the cell and block sodium and potassium entrance/ That is why zinc increases potassium in the cell, and manganese increases sodium in the cell. Manganese increases breathing drive and zinc increases bicarbonate.

One more time high CO₂ causes slower metabolism. Not slower metabolism causing high CO₂. Slower metabolism causes low CO₂. I have no idea why we are going circles about this simple thing.

Example for you Haidut, so there are no more questions or misunderstandings

Person has PH of 7.40.

His Co₂ is 35

his bicarb is 24

You eat sugar----your CO₂ goes up to 40 your bicarb goes up to 26 PH stays 7.40.

what happens with minerals in the cell;

before sugar they were perfect, sodium is perfect potassium is perfect calcium and magnesium are perfect

after sugar, calcium goes up, magnesium goes up in the cell, sodium and potassium go down. in the cell metabolism is slowed down.

Child is born with high sodium in the cell, high potassium, low calcium low magnesium. this is called fast oxidation. With aging oxidation is going down. Calcium goes up magnesium goes up, and sodium and potassium go down.

You don't quite understand the amount of CO₂ which is produced by yeast in our body. It is HUGE. SO when metabolism is slow, let's say your adrenal gland is not working. You will have tons of CO₂ in your blood and CO₂ is not only about metabolism, it is metabolism plus breathing plus yeast plus ecology.

Calcium and magnesium go up in the cell only if CO₂ is high. With aging 80% will have high calcium and magnesium in the cell. When they are ready to die, they will have low CO₂ but that is already crash period of life like last 10 years of life and their body chemistry is called 4 lows, in that case their calcium and magnesium will go down to buffer acids although they still have high CO₂, their CO₂ will show up low in blood as a compensation.

High metabolism people have high CO₂. High Co₂ people will have low metabolism. You don't get that CO₂ is not only from metabolism

It all depends on the PH of the blood. If you have low PH and you increase CO₂, your metabolism will go down. If you have high PH and you increase CO₂ your metabolism will go up.

If your PH is low, and you take potassium or sodium, that will increase met rate and raise CO₂ even higher. This will require more calcium and magnesium to keep it low. But your body energy production will not be ideal. I did not say you dont have to take other minerals, I balance people with minerals, and it is not about the alkalinity of those minerals, it is about what they do in the body for metabolism.

Cities have very high acetaldehyde rates which causes high CO₂ levels.

If you have candida you will have high CO2 also.

all hormones go down with aging. ON hair tests of aged or sick people estrogen influence is lower than progesterone. Sodium is lower than potassium usually. Meaning that progesterone is higher than estrogen, and that is understandable, we don't bind copper. Estrogen in blood causes copper to be bound. One of the reasons for copper not to bind is high CO2 levels. Copper lowers blood PH and if you have reps acidosis copper will be stored in the liver. also, Iron will be stored in the liver, since Iron raises metabolism and body does not want that with high CO2

That is exactly why people's livers are full of copper and iron when they die.

calcium lowers thyroid that is why, zinc increases thyroid, copper lowers thyroid. Peat is totally wrong on this. Calcium lowers potassium in the cell zinc increases potassium. Fast oxidizers have high potassium in the cell and you called them not zinc deficient. Potassium is what makes the cell sensitive to the thyroid hormone. So, when you take calcium, potassium will go down in the cell, and thyroid will have to produce more and convert more t4 to t3. Peat says thyroid goes up, WRONG.

If your thyroid is high and potassium is higher than calcium in the cell then body will use ceruloplasmin to cap off the thyroid, since copper same as calcium lower potassium in the cell. that is why for fast oxidizers taking thyroid will move ceruloplasmin. Copper is there to lower thyroid. To cap it off. SO when thyroid goes up copper will be raised to try to cap it. But if you have adrenal problems thyroid will be turned off with turning off conversion of T4 to T3 For most people, it has nothing to do with thyroid, the actual gland is fine. It has to do with subclinical hypo which can be from either low potassium or potassium not entering the cell, or too much calcium in the cell, pushing potassium out.

By the way Cortisol also makes the cell sensitive to thyroid. So if stressed your temps go up not down. Cortisol raises potassium in the cell, zinc raises potassium in the cell for slow oxidizers. For fast it is the opposite zinc lowers potassium.

That is why if you are deficient in zinc your cortisol will be upped to raise potassium in the cell instead of zinc. and that is why when you take zinc, it lowers cortisol. Cortisol supports thyroid in this case, and to lower cortisol in this case is like turning off your thyroid

Calcium increases sodium potassium ratio, since it lowers potassium. So, when people take vitamin D they can feel better than ratio of sodium to potassium in the cell rises. But it is wrong for slow oxidizer, since although the ratio gets better, metabolism gets slower. That is why you feel so tired if you spend a day on the beach and most people take a nap after (slow oxidizers of course) Fast oxidizers get more energetic since their sugar goes up in blood from the sun. For thyroid to work you need adrenals that can handle it for once. Then you need actual thyroid hormone T4 then you need conversion from T4 to T3. Then you need transport into the cell which is IRON. And then you need potassium and cortisol to receive it. If you have low glutathione for some reason, infection or toxic metals, then all your selenium will be used for detox to recycle existing glutathione. And the conversion of T4 to T3 will be down. This is just

one example of low thyroid. Another example if you have acidosis. During resp acidosis potassium goes out of the cell and that lowers thyroid, calcium enters the cell, since it turns into ionized calcium from total calcium.

But notice that I say this or that lowers thyroid. The actual gland production in these cases could be increased, I am talking about the effect of thyroid hormone on the actual cell, I don't care how much hormones thyroid gland produces, if calcium is really high in the cell, it won't be able to enter the cell. That is why people can have high T4 high T3 and body will be asking for more by raising TSH even higher, since calcium does not allow these hormones to enter the cell, or they are missing potassium or they are out of iron zinc selenium

END

Copper/Zinc Thread

Zinc lowers Magnesium which makes Copper bio-unavailable. This will lower your serum Manganese. Since serum Manganese goes down your IRON can't come out into the serum. IRON is what makes DHT sensitive.

Calcium Magnesium Copper Zinc Manganese supplement will fix you up. Copper alone 25mg will increase sodium too much and that will lower Magnesium and basically ceruloplasmin will tank, even if you take 25mg which is insane.

Bottom line, Copper when you take it tanks Potassium and puts pressure on Magnesium. When Potassium tanks on taking 25mg Copper, body will increase sodium extraction and will try to retain Potassium by increasing 3 beta HSD, and will retain Magnesium. Since you don't have enough Magnesium, you taking Copper is doing nothing.

This is the biggest mistake of people taking Copper. Copper only should be taken with Potassium and Magnesium and sometimes Manganese. Otherwise taking Copper will never raise your ceruloplasmin.

This is what happened to you. when you took Zinc, your Potassium in the cell went up since Zinc increases 3 beta HSD.

Then you took a little bit of Copper and your drive sex drive went up. But you took so much Copper that your Potassium tanks from high to low. Now body is retaining Zinc and getting rid of Copper LOL

For your body to retain Copper you need to support Potassium level with Potassium and Magnesium.

In any case, try supplement

Magnesium, calcium, d3, Zinc, Copper, Manganese, boron. It should fix you within a week or so.

Once you get your progesterone sensitive again. your copper will work on its own. just eat

seafood, oysters, shrimp stuff like that.

I mean you had amazing improvement in every department. Feelings, quantity of sperm (the more important) means that FSH is working again which depends on copper. and penis sensitivity. I mean that is in 3 days. this is very good signs. And these happened when you were not on the substance but off it. Which will stick.

people never have emotions back with PFS. I remember when I was sick, I did not care about anything, almost dead. I cared less about women but had sex with them. when I got back to normal, difference was night and day. most of you already forgot what compassion is and what normal feelings are. You are all logical now. NO FEELINGS. like robots. This is zinc oriented people. Copper is what gives those emotions. Hypoxia caused by alkalosis is terrible.

There is a guy called Freddd. He found that he had low copper and he took like 20mg of it.

Read this. His testosterone went up, his libido went up, his hairloss went up

Copper deficiency....?

But I think his copper is simply bio unavailable, since steroids progestins caused sodium retention and alkalosis with increased volume. Not in every case, but I saw it on many tests.

IRON

Retention of iron in the liver is due to low estrogen. Peat is super wrong on this. Women after menopause start retaining iron in their livers also, since their estrogen levels fall.

Basically, if you are stressed you will use a lot of pregnenolone to make progesterone for cortisol and aldosterone pathway and will have very little DHEA. That will put your testosterone and estradiol into the lower part of the range. And you will start accumulating iron and copper in the liver. The mechanism how it works is this.

To release iron from the liver you need xanthine oxidase which runs on vitamin B2 and molybdenum, then you need ceruloplasmin to oxidize iron and put it on transferrin.

SO here we can possibly have 2 problems, lack of B2 or molybdenum, and lack of DHEA from stress so there is very little estrogen made. LOW estrogen equals low ceruloplasmin which equals no iron on transferrin and tons of it in ferritin.

Another problem is suppressing estrogen)))) like Peat advices, and then you run low on zinc no matter what you do and you wear glasses as thick as a windshield in your car)). Estrogen is needed to make zinc bioavailable since without bioavailable copper that estrogen provides your zinc levels will be suppressed. And when you run low on bioavailable zinc your protein synthesis goes down the drain and what suffers first. Yes, you got it, the tiny muscles around your eyes. NOW we look at the thickness of PEATs glasses))) Can't see his eyes behind those. It is funny that I had the same when I got sick before I got into all this medical crap. I remember I was driving a car and I could not see the signs on the road and my eyes constantly got tired.

SO, the good idea would be to test your DHEA, Pregnenolone and B2 and molybdenum status. IF you have low pregnenolone, that is most likely you have SIBO in the gut, since pregnenolone is made from cholesterol and coenzyme A which requires B5 in its active form --pantethine and acetic acid(vinegar).

B5 recycling depends on the gut. That is why so many people are helped with simple vinegar plus brewer's yeast.

Also, iron chelation is good, but don't forget we have low iron in tissues but some free iron in the organs and tons of iron in the liver. SO, I think proper iron chelation would be by making iron bioavailable so it does not spill from the liver and making sure you have proper ceruloplasmin levels to make iron work.

Copper is needed to lower iron, most people have low bound iron in the cell, since most people have low bioavailable copper. Unbound iron is the culprit of the problems, bound iron is needed and very good for you. And everyone is low on it. Look at hair tests, 90 out of 100 will have low iron not high. SO, when you have ceruloplasmin iron will be put on transferrin and to me it has nothing to do with saturation at all. Iron is good in the cell, we don't have it there, we have it in the liver spilling into blood in free form and then it gets into organs in free form. That is way different.

If you will run low on iron, your thyroid will be down and ceruloplasmin won't rise. Manganese and copper lower iron in the liver by making it available to the body to the cell. Molybdenum and b2 are also needed for this. Since they mobilize iron from the liver stores and then copper converts it into usable form and then it is put onto transferrin.

it is not about chelating or stopping iron, you are low on it in the cell, as everyone else. It is about making it go into the cell, instead of growing bigger and bigger in the liver, decreasing and decreasing manganese and impairing detox and spilling into kidneys pancreas and other organs in free form

And ferritin says nothing about your liver stores, if you are low on manganese you simply don't make ferritin and you make much less ceruloplasmin. As an example, your ferritin says 10. Doctor gives you iron, and you kill yourself further. Your liver is full of it, you take manganese and your ferritin will rise without even taking iron since ferritin was not being made without manganese

Anemia of chronic disease does not have high iron in the cell. I had it. My iron was super low in hair nails. My ferritin was 400. My iron in the cell was low. I am not talking about plasma iron, free iron won't be in blood, but it will spill. Most people have iron overload in the liver. may be over 90 percent of them and most of these people are low in iron in the cell.

CELL IRON is low in most people, high or low ferritin. Ferritin does not correspond to even liver stores of iron. It is a fact. The best indicator that you are getting better on hair tests when your iron gets higher. Also, ferritin shows absolutely nothing. Just take T3 hormones and check it, you will be surprised, Ferritin will skyrocket WHY? Since if you are not hypothyroid, body will take iron out of blood ASAP Also if you have infection, body will store iron in the liver and take it out of blood, and put copper there.

Aspirin takes care of inflammation by making sugar go into the cell. That raises DHEA and lowers cortisol. Cortisol production is NEVER dysregulated. NEVER. And it does not need to come down. Cortisol can be raised for many purposes and not only inflammation. Inflammation is just one reason. Cortisol can and will be raised if you have pancreas problem, sugar problems, etc. And it is raised to save you. You live on cortisol let's say if you are insulin

resistant. And if you lower cortisol you will die.))) YOU NEED to lower cortisol not with a drug. You need to lower it by satisfying condition for what it is raised. Let's say no sugar in the cell. Satisfy that condition and it will fall. But if you lower it without satisfying that condition by some stupid drug or by inhibiting ACTH, that is simply silly/

Progesterone always goes into aldosterone and cortisol pathway)))) it is made for that reason. I said that if you give progesterone it will raise cortisol at first then it will lower it, if you needed cortisol spike. If you need cortisol at a constant rate, progesterone will raise cortisol. Don't forget progesterone increases potassium in the cell. Cortisol rises with potassium. That is why to raise cortisol people can use potassium supplements.

I am not saying to take cortisol supplements. I am saying that DHEA does not lower cortisol if you need cortisol. It will lower cortisol only if you had blood sugar problems. Also, progesterone will lower cortisol only if it was high and you needed more aldosterone.

Also, why would progesterone increase blood pressure, it wastes sodium. Also, try giving that progesterone to women with normal progesterone they will bleed to death.

Bottom line, it is not high cortisol that the culprit of a problem, it is the real problem that is causing high cortisol. And if cortisol is stuck up there, that means body can't fix that problem. OR cortisol did not spike high enough, and now it is high but not high enough/ That is why progesterone lowers cortisol, since cortisol spikes where it needs to take care of whatever it was doing and then it comes down.

DHEA will increase cortisol and it increases estrogen))) You can see many people here playing with pregnenolone and dhea and getting hairloss and acne etc. That is because if you increase DHEA too much or take it with pregnenolone, that will increase cortisol progesterone, Estrogen testosterone.

Why do you think DHEA is for anti-aging? WHY? I will tell you why. It increases estrogen)))) estrogen will chelate copper from the liver and it raises ceruloplasmin in blood. Read the study where estrogen totally clears liver from copper and puts it into the cells and brain basically fixing prions. Most people when they die have very high copper in their livers and zero copper in their body, since their DHEA production goes down which lowers their estrogen to very low. estrogen binds copper from the liver. Peat is saying that we are losing copper))) LMAO just do the biopsy of your liver and see how you are losing it)))) it will be full of copper and iron. And the only way to chelate copper and iron out of there is to increase estrogen. Ceruloplasmin goes up and then your liver copper goes down, that puts up molybdenum and manganese in there which will release iron thru xanthine oxidase which will be oxidized by ceruloplasmin. PEAT is totally wrong about this. And eating tons of copper has the same effect as raw food diet, first 6 months you do great on it then you crash hard. Since copper taken will stimulate adrenals and eventually they will burn out.

If you lower your estrogen, you won't be binding copper)))) YOU will suffer so bad it is not even funny.

As funny as it sounds, taking progesterone increases estrogen. Just look at the chart. you take progesterone, more pregnenolone is free and it gets converted into DHEA which will raise estrogen testosterone etc.

END

BALANCE is a key. Some people's metabolisms are fast and some are slow depending on their food activity and so forth. That is why for some PUFA is a miracle and poison for others. For some estrogen is bad and it is helpful for others

Yes. Especially liver. Liver is a NO NO for the slow oxidizer. LIVER IS full of copper. and slow oxidizers livers are full of copper. Fast oxidizers hyperventilate they have strong sympathetic system, they are getting rid of copper and their ceruloplasmin are high. they need more calcium and magnesium to slow down the sympathetic nervous system, this will stop their copper losses.

this is why when you are sick with certain cancer, you just go and run run run run / this will get rid of unbound copper, it will speed up your metabolism. and cure your cancer.

People don't become short on minerals, their life style makes them lose or retain certain minerals.

This is why light therapy works. It effects the mineral retention. Red Light therapy chelates copper since it increases adrenaline.

Red light is used in ECKS system to chelate copper.

Some people do good on blue light, some people do good on green light. Light therapy and contrarian endocrinology is the future.

Soon a machine will be created where you can get balanced on a daily basis just sleeping with certain light sequences. I am looking into this also. just imagine, you can get tested, if you are slow oxidizer, more red light sequences, fast oxidizers more blue light sequences. And you are balanced all the time.

this is very interesting and I know couple people already work with this with just amazing results. they created handmade machines with lights and also created a testing method on what lights to use.

To get healthy you need to change your life style. This way you won't need to take any supplements at all. I don't take anything. AT ALL, I eat a balanced diet.

I think you might have made yourself potassium deficient. I would try to take potassium with magnesium for a while to restore your insulin levels. then try to add some zinc and manganese or thorne extra nutrients.

Without potassium, you can't make insulin. Also without ionized calcium you can't release insulin. For calcium to stay ionized you need to have magnesium. Without magnesium, your potassium will go down, since aldosterone will stay sky high.

Try this approach, I don't know your labs, but this is what I think happened.

Magnesium bicarbonate could have caused alkalosis. You can get tested and see where your potassium is. It could have gone all inside of your cell. If this is the case, you need to take HCL to fix this.

You did not tell me you were taking bicarbonate. Bicarbonate with potassium and magnesium would def do this. Try to take tons of HCL. and see how you feel.

I divided people in 2 cases here which in reality are 12. It was already posted here where for you to read about 12 cases. PH balance, ACID BASE balance. they are at least 12 imbalances

there which should eat different for every imbalance.

As generalization, people can be divided into fast and slow oxidizers. Fast oxidizers are the minority. These do good on Ray Peats diet, which is heavy on copper, calcium and sugar.

Slow oxidizers retain Co₂, and lack sympathetic nervous system they are overloaded with copper and calcium and will never do good on these.

Slow oxidizers got slow since inactivity, and overeating sugar. This is how you become a slow oxidizer.

This eating sugar caused them to retain tons of PUFAs in their tissue. And now they have insensitive adrenaline, this is why they retain sodium in the cell, and sodium in their hair and venous blood is low. Sodium in the cell makes them more sensitive to adrenaline

Slow oxidizers have 2 problems either adrenaline receptors or lack of methylation.

Slow oxidizers can't handle stress, since their cortisol and adrenaline is insensitive, so PUFA pours into their blood in times of stress and their cortisol and adrenaline is usually high, but not working, so they get inflammation.

Fast oxidizers usually hyperventilate, they are usually active people. they have high ceruloplasmin, they are losing copper since body is trying to slow them down, they have vitamin b2 deficiencies copper, calcium, since body is trying to stop MAO A from breaking down serotonin. Fast oxidizers will actually feel better on serotonin precursors since it will slow down their hyperventilation.

fast oxidizer has either COMT problems, MAO problems, or lack of magnesium or too sensitive adrenaline receptors.

the cure for the fast oxidizer is to lower his adrenaline sensitivity. this can be done by adrenaline mimics. You give adrenaline to lower adrenaline sensitivity when you come off.

Not what Peat recommends, he recs to lower adrenaline and then you get worse after you come off stuff that lowers adrenaline.

Basically, slow oxidizers are people that hypoventilate, fast that hyperventilate

Slow oxidizers are the ones who have sedentary life styles and eat.

Fast oxidizers are the ones who are more active

Good examples of fast oxidizers will be people who work out all the time.

Haidut is a fast oxidizer, he has a high ceruloplasmin and does not do good on thyroid

Danny Roddy is a fast oxidizer. which also does good on calcium copper and no thyroid.

Basically, most of Ray Peat promoters are fast oxidizers, including Peat himself

Fast oxidizers have acidic venous blood to compensate resp alkalosis inside of the cell, They have low CO₂ in venous blood and high Co₂ production in the cell. Usually their insulin is on the high note. since their cells want the sugar.

One more time. Slow oxidizer hypoventilate this means this he breathes slower than needed.

This can happen from 3 things

- 1) lack of adrenaline from lack of methylation (methylation block) and normal serotonin
- 2) too high serotonin and normal methylation and adrenaline
- 3) low receptors for adrenaline.

This hypoventilation causes slow oxidizer to retain Co₂ in venous blood. This causes the body to lower metabolism .

Fast oxidation is the opposite breathes faster than needed

- 1) lack of serotonin (does good on active B6) does good on serotonin precursors and normal adrenaline
- 2) too much adrenaline (lack of COMT) and normal serotonin.
- 3) magnesium deficiency
- 4) too sensitive adrenaline receptors.

Basically, ventilation goes like this. adrenaline is GAS, serotonin is a break. So, you can ventilate faster when your adrenaline is normal but serotonin is low. Or when your adrenaline is high but serotonin is low. These imbalances will need to be corrected differently.

This is why even among slow or fast oxidizers there are different correction protocols depending on why you are hypoventilating or hyperventilating.

Hypoventilation is when sympathetic nervous system is lower than parasympathetic, hyperventilation is when it is higher.

TESTS:

sodium potassium calcium magnesium chloride, phosphorus, zinc, copper. TSH, free t3, free t4, iron ferritin, ceruloplasmin, insulin, sugar, progesterone, estrogen, testosterone, cortisol.

this is what is needed to see a good picture.

After RU gets rid of alkalosis, then you can use Thorne extra with resveratrol (estradiol) with NAD with HCL, magnesium, potassium to get rid of hairloss.

have you taken progestins, if not. then it means you are too heavy on copper and your body increases progesterone to retain potassium now. You can get this from calcium and copper. You are probably a slow oxidizer and can't eat Peat, you are probably inflamed now and very aggressive, do you feel that your aggression went up?

You need more magnesium and zinc to get rid of this and then you need Thorne extra plus resveratrol plus HCL plus cofactors magnesium potassium to raise your metabolism properly.

Estrogen does not cause gyno, Prolactin does. when you take testosterone, you should never take AI, you should take cabergoline and you will NEVER HAVE GYNO

Any bodybuilder who is reading this. I say NEVER and I mean NEVER inhibit your estrogen, you will lose all the effects of testosterone, it is estrogen which is anabolic. Use cabergoline .25 every seven days. You will never have gyno and you will never have side effects from testosterone therapy, you can pretty much live on it. And never put big doses of testosterone they are not needed. Anabolism is from estrogen and if estrogen is too big, it will put pressure on your thyroid and you will lose your energy. It could be good to add a little progesterone to your cycle. The higher your progesterone production the more testosterone you can take.

Gyno side effect of estrogen therapy since estrogen increases prolactin. That is why you take cabergoline and even with high estrogen you won't have gyno. So gyno is from prolactin not

estrogen

taking progesterone chelates ZINC OUT and retains copper. Taking estrogen chelates copper. This is what resveratrol does, it is estrogen and it chelates copper.

Big difference between internal production and taking hormones from the outside.

this is where you mix things. Hormone high or low inside by your own production is based on the mineral level at a time. taking hormones from the outside will chelate that mineral.

As I said you take progesterone with testosterone so when testosterone converts into estrogen you bind some of that increased estrogen with progesterone and less with DHT and won't have hairloss. DHT will stay the same, some of the estrogen will be opposed with DHT (DHT won't be super high) and some will be opposed with progesterone.

progesterone makes you a ROBOT, you are wrong. ZINC (which increases progesterone thru 3 beta hsd) makes you a robot, copper which increases aromatase makes you love. ZINC makes you not feel anything you become logical. Copper makes you artistic and creative.

I used to regulate traders with zinc and copper. IF I saw someone scared I would give that person zinc, if I saw someone too cocky and irritable, I would give them person copper.

Usually zinc is very good for logical trading. but kills intuitive trading.

Feel traders did great on copper and technical traders did good on zinc.

I would rather get a Thorne extra with resveratrol plus potassium magnesium and HCL You don't know which minerals he is missing I would also use some fulvic minerals

ACV increases fermentation I never take that for that reason, it has acetaldehyde. Onions put pressure on SUOX, which is also molybdenum based. Molybdenum is used in both SUOX for sulfur and AO for acetaldehyde detox, plus molybdenum also critical in final stages of converting vitamin A into retinoic acid which then helps produce progesterone. and you already insensitive to progesterone. So, I assume this is a mechanism of your crash

You put pressure on molybdenum and you feel worse since it decreases progesterone synthesis.

Premature ejaculation is serotonin deficiency. I guess your MAO A is overworking, since you are missing methylation. MAO a is breaking down serotonin. I think RU has a chance of fixing this issue. I am not sure how minoxidil effects serotonin and MAO, but I think it does it thru NO

Estrogen chelates copper, copper is what MAO A runs on, if your copper goes down, less MAO A and more serotonin. So yes, estrogen can work.

Vitamin A goes in blood, only when there is zinc b12 and copper balances. otherwise it will stay in the liver. Same with any other fat soluble vitamins. Copper and vitamin A balance are responsible for D conversions.

You take tons of vitamin A only to kill your remaining potential. And you start writing about endotoxin poisoning. You take loads of it and you put pressure on NAD, while eating all this sugar nonstop and sitting on your asses all day long. For the first time, you DONT test, you guess. There are at least 12 body chemistries, Peat is ONE. People are not just deficient in vitamin A. Now tell me how is it going to be active if people's pancreas is shot for running low on

SODs and their digestion is ZERO? Cortisol goes UP so you don't die. It's there to save you))
This is when people take hormones to shut down stress. Guys, FOOD needs to be balanced.
Body is regulatory, you give retinol and you lower all the cofactors BIG TIME. It's not even funny

peat is wrong with salt thing. in slow oxidations, salt is used to increase adrenaline signaling.
Cell is overloaded with salt, hair is low in sodium, and venous blood low NA. Arterial blood HIGH SODIUM. Hair and venous blood gets rid of stuff. and in slow oxidizer salt is retained and not extracted. So, eating salt does not anything. It makes the imbalance worse.

High CO₂ CAUSES a decrease in the availability of O₂ at the lungs, decreasing oxygen supply to the tissues and therefore metabolism (alveolar hypoventilation increases further, positive feedback cycle).

High CO₂ CAUSES acidification of the blood, because it's CO₂ is an acid (easily forms carbonic acid) in and of itself, and every time it's converted to bicarbonate H⁺ is created. The excess demand for bicarbonate puts pressure on the kidneys and liver. The acidic CO₂ and H⁺ disrupts cellular homeostasis, because cells generally want to be a bit more acidic than their surrounding environment. So, cells are pressured to maintain acidity while also not disrupting their negative charge (this is difficult).

People taking multivitamins, anti-aging things, anything ARE PRO AGING, since they are imbalanced.

When I talk about zinc and manganese, these are for certain imbalances and for short term. This is why I like fasting and eating seafood. Seafood has all the minerals. SOILS don't have all the minerals, they are all tampered with. SO, cattle on those soils is also sick, milk is also bad (hormones), meat is bad (hormones). Fruits not that great. (lack of certain minerals and overload of others)

Fulvic is an amazing chelator, and I do recommend cycles with it and zeolite. I think this is what helped me. I chelated for a year with it.

Fasting and Breuss protocol is an amazing chelator. Sea food itself is a very good chelator. Swimming in the ocean is also very good.

I think it is very bad to overload the body with multivitamins. they are only like 12 minerals in those. You give copper, but where is your rubidium? Rubidium goes down, copper becomes bio-unavailable, you give zinc, but where is your strontium. And boom you get osteoporosis Gurus know about 1% of all interactions. That is not enough to balance the body. that is enough to pin point certain imbalances and fix them, but create other ones. This is like taking finasteride, you fix one problem and create another., This is like taking any kind of medicine, you fix one thing and created another.

That is why I like contrarian endocrinology or light therapy better than mineral therapy. Since contrarian endocrinology acts on minerals, and does not overload on certain ones.

Eck and ARL also miss this point. Yes, they balance the body to have more energy. But body needs to have all the minerals. This is why I think it is best to improve digestion, chelate, and feed the body sea food, so it can restore.

Zinc manganese are for copper chelation, it is an unbalanced therapy. I don't recommend it long

term.

I am very against multivitamins for long term. I use Thorne extra for methylation purposes and sometimes I add shilagit to it or plankton for people. not to create terrible imbalances with over RDA dosages of minerals in these multivitamins.

Bottom line, more stuff you take, MORE YOU AGE, since you can't control all the interactions. And that is why calorie restriction, fasting can keep people very young looking. since it does allow your body TIME to balance itself and get rid of overload of certain minerals. The best thing is to fast and swim in the ocean and drink a lot of water.

What this does, is make you sensitive to all hormones, it chelates all the unwanted minerals faster thru skin when you swim and at the same time, it feeds all the rare minerals into you from the ocean water. Try breuss protocol or water fast and swim every single day for 2-3 hours, be in the sea water. You will not recognize yourself. Your body will rebuild so much

YOU AGE because

- 1) chronically eat the same foods, this creates imbalances
- 2) chronically smoke or drink
- 3) chronically take a multivitamin
- 4) you take some minerals or supplements
- 5) you take some hormones
- 6) you have a certain life style where you repeat the same things over and over again
- 7) too much sex

YOU see repeating is what ages you.

Fasting allows you to stop all these repeating processes while you are fasting. You fast and you don't eat your normal food. let's say your food intake was overloaded into a copper side or zinc side or aluminum side. While fasting, you allow your body not to get toxic in this overload and it allows time to get balanced and to get rid of this directional imbalance that you were causing with your food intake. fasting is like a laundry day. You don't allow new toxins go in and you get rid of old ones.

You don't chronically starve. that is why you can't look at fasting as catabolic process. Who cares what it is. It is a short-term procedure. During which you get rid of your PUFAs, you get rid of toxic metals, you get rid of bacteria and viruses. And then you refeed. If you swim in the ocean while fasting, your refeeding will be very easy since you won't lose any electrolytes. You won't lose HCL

Yes, Biotin is involved with copper directly. biotin seems to block estrogen production, which is copper dependent. That is why if you give a pregnant women high dose biotin, she this will block her estrogen, and progesterone production will go down and she can lose the baby. That is why if you take estrogen your biotin in blood will double, but in the liver, it will fall. biotin binding protein will go up in low metabolism and won't go up in fast metabolism.

So, is biotin good to use for a PFS suffer? I think if it blocks estrogen it should make you feel worse. *Must be good for hair.*

Yes, you increase methylation, you increase ventilation. if you had high Co2, this ventilation increase starts ramping up your metabolism, it requires potassium, since body immediately looks for potassium to put in the cell to make CO2.

Just imagine, you have high CO2, body compensates and increases bicarbonate. then all of a sudden you breath out CO2. boom in are in severe alkalosis, this is so called start up process of

methylation and it lasts until

1) body retain enough potassium so more Co2 is created

2) body gets rid of bicarbonate which was used to buffer extra CO2 (you can help this by taking HCL)

it depends on hairloss and grey hair reason. I found that sometimes if you take copper for slow oxidizers it can cause more hair, since it increases SOD which then will require iron (catalase) to get rid of hydrogen peroxide. I found that if you take manganese and zinc, grey beards go away. For some people, it can be frank iron deficiency. (HCL deficiency)) For some frank copper deficiency. All these are hairloss causes.

Q: What is your opinion on why things like dopamine agonists (bromo, caber, lisuride etc.) or things that can lower prolactin can regrow and recolor hair? Are they chelating some mineral of some sort?

I think it makes manganese more available. Since manganese is what raises prolactin in blood since manganese lower 3 beta hsd. Zinc makes manganese available. Zinc lowers prolactin

Q: well any serotonin agonist will get rid of symptoms of PSSD. isn't it counterproductive?

it is like giving cortisol to cortisol insensitive person. More and more will be required?

Same as nandrolone (progestin) will get rid of symptoms of PFS while you are on it.

I think people with PSSD, should force the body to become sensitive to serotonin again.

This can be achieved by increasing adrenaline. this is why if you go on methylation for a while, and then get off of it, you will have serotonin increased with serotonin more sensitive.

If this substance increases serotonin requirement somehow by a feedback loop. Then I agree it is what is needed. Caffeine in really high doses may be.

this is why people who smoke pot, crash in a while after smoking pot with the similar problem as PSSD suffers (they hypoventilate on pot, since pot is a sedative) this causes the body to be much less sensitive to serotonin. And if this person stops pot, boom PSSD. and I had couple of reports that if those people used cocaine instead for a while. they totally got rid of those side effects of smoking pot.

So it is a balancing act with hypoventilation from pot, with hyperventilation from stimulants.

This is why so many people on this forum do well on Caffeine and lowering serotonin. Caffeine increases adrenaline = gas of sympathetic nervous system, lowering serotonin decreases the break of your sympathetic nervous system. Both of these increase the ventilation rate and lower CO2 levels. This allows the body to turn on the metabolism by putting more potassium in the cell.

Potassium goes in the cell when the venous blood is more alkaline. Thus, in alkalosis potassium goes into the cell. This potassium is a receptor of a thyroid hormones and increases metabolism which increases CO2. Thus, when you increase ventilation this causes the venous blood become more alkaline and this causes potassium go into the cell, increasing your metabolism And this whole forum says the opposite. LOL Ray Peat recs some correct things, but explains them wrong. He had to go on caffeine since he ate so much sugar and calcium. He had to lower serotonin since he was overloading himself with CO2.

As I mentioned a person can have slow ventilation if

1) high adrenaline (let's say COMT problems, over-methylation) normal serotonin

- 2) normal adrenaline low serotonin (increased MAO-A break down)
- 3) high adrenaline and high serotonin but serotonin is lower than adrenaline
- 4) low adrenaline and low serotonin, but adrenaline is higher than serotonin.

** COMT - Catechol-O-methyltransferase is one of several enzymes that degrade catecholamines, catecholestrogens, and various drugs and substances having a catechol structure.*

All this needs to be corrected differently. Low adrenaline is not corrected with caffeine. You can find out why you have low adrenaline, where is your problem, is it with the SamE, or is it from methylation block. And all these will cause high CO₂ in venous blood and will cause potassium to decrease in the cell thus lowering metabolism

*SamE - S-Adenosyl methionine is a common co-substrate involved in methyl group transfers, transsulfuration, and aminopropylation. Although these anabolic reactions occur throughout the body, most SAM-e is produced and consumed in the liver.

Just understand in alkalosis, potassium goes inside of the cell this increases metabolism, in acidosis potassium goes outside of the cell, it decreases metabolism. It is very obvious and logical, since metabolism increases acidity by creating CO₂.

So, if you are more acidic then body will want to lower metabolism to decrease production of CO₂. and if you more alkaline body will want to increase metabolism to increase production of CO₂.

Blood test:

For myself I usually get hair test, VBG (CO₂, bicarbonate, electrolytes, standard test with the special machine in the hospital) and I get urine catecholamines with serotonin. This gives me full picture for myself if I am doing everything correctly.

If you are fast oxidizer, you are low CO₂. those examples were for hypoventilating slow oxidizer people. Not active, sitting at homes and eating sugar

Fast oxidizers who stimulate their nervous system a lot by exercise by moving a lot. Need a lot more carbs. and they need to slow down they sympathetic nervous system, either by lowering adrenaline or by increasing serotonin. It depends where their problem is.

hyperventilating people will have low CO₂ in venous blood, this will cause their metabolism to increase and produce more Co₂ in the cell. the reason why they hyperventilate is this.

B5 overdose will lower biotin and cause hairloss

alcohol is not good since it creates acetaldehyde and lowers NAD levels. That is the main concern with beer.

Q: Any idea why dopamine agonists, anti-prolactin drugs restore hair color?

I think I answered that question, i think they increase manganese bioavailability which makes iron to work. this increases catalase

I think some people are really confused about vitamin D. I mentioned it once to some member that vitamin D levels don't depend on the sun exposure. That is all. Active hormones are the ones which need to be measured. there is no doubt it, it is not even debated. Nobody measures d3 in blood any more. If you want to read about vitamin D metabolism it is all there in a biochemistry book. You can get any good book and read metabolism of most vitamins and it will match everything that these worthless studies will find.

It is not about vitamin D metabolism or vitamin A metabolism; all these are known and you act like it is something new. It is about interactions of vitamin D conversions with the other 100 systems. This is not known and you can't get it from reading studies. Vitamin D levels will depend on 100 systems and prolactin regulates calcium absorption mainly, but it will also depend on other 100 systems.

PTH can be low vitamin D is low, it can be the opposite PTH high, vitamin D high, it is not direct feedback loop. It has nothing to do with being low on calcium. D3 levels can be low when you low on calcium, but it can be high when you are low on calcium, it has to do with the PH. When you are low on calcium your pth goes up, and your calcium goes up from the bone. but most people that I tested have low pth and low vitamin D. Since they are in resp acidosis and compensatory metabolic alkalosis, if you give people like that calcium= heart attack.

Cell is already overloaded with calcium with slow oxidizers. this supports their sympathetic nervous system. It makes their heart go faster. You don't want to give slow oxidizer calcium and copper, you want to make slow oxidizer release those and actually lose them.

On ARL programs it takes a year for you to start dumping copper. Copper is retained by slow oxidizers to support the adrenal gland. When methylation and adrenal gland becomes better, copper is being dumped with calcium. That is why don't stuff yourself with vitamin D supps. this will lower your ceruloplasmin and won't allow you to use copper properly.

Vitamin D is regulatory same as vitamin A. don't overload on vitamin A also. otherwise it will lower your zinc. Zinc and b12 what takes carotene and take it from the liver and turns it into A, also vitamin A binding protein is zinc based. this is what starts the metabolism of retinoic acid. taking all these active vitamins you are screwing yourself over.

Body works by feedback loops. If you take any active vitamins or hormones, you better understand what you are doing, since you are by passing body regulation

People lack basic understanding of the vitamin and mineral metabolism, then they read studies and make conclusions. All these are already known. All basic interactions and forward line metabolism are known and written out already. You don't need to read studies about, you read books about which were collected and written from millions of studies and practical experiences. And properly interpreted by professionals not some bro science preachers or internet researchers

To study complicated interactions, you then can read some studies if you want, but you should read like 100 studies of vitamin D interactions let's say, to tell approximately how it interacts with other body systems. And to make the right conclusions, you will need to study mineral metabolism first (separate known metabolism chain which is described in every biochemistry book)

How vitamin D will react on prolactin increase, PH change magnesium balance. hypokalemia
You see how complicated this is. You will never be able to regulate yourself like that.

So, stay away from supplements you will be aging with them and making yourself worse. find out your metabolic rate and then adjust your diet and your activity to it. That is all. Try not to supplement anything. Unless it has full array of all minerals in it.

How to increase steroids:

RU486 will increase steroids insanely, your testosterone dht estrogen and prolactin will all go up like crazy. Ru will force up 3 beta 17 beta like crazy.

3 beta HSD depends on zinc and NAD, but mostly zinc regulated. I have no idea what you are talking about. I took RU. and I gave it to about 15 people so far. All steroids increased like crazy. It works much better to start up steroid axis then clomid. Some very smart body builders are using it for a start up after progestins like nandrolone.

As I told you NAD is ph dependant. People here are in alkalosis with volume expansion same as after corticosteroid withdrawal. Since finasteride acts as progestin.

Estrogen does not inhibit 3 beta hsd, that is nonsense. copper tanks potassium, copper increases aromatase. which will cause elevation of 3 beta hsd if you are low potassium. Copper is what causes LH to increase. Only exogenous estrogen inhibits 3 beta hsd. You mix things again.

I am not using RU to antagonize progesterone receptor. I am using RU here to modulate progesterone receptor, since RU acts both way on the receptor antagonizing and agonizing it depending on progesterone level. Same as progestins do. Progestins act both ways on the receptors depending on potassium and progesterone level.

That is why there are 2 cases of PFS.

Georgi, I researched this substance I know what it does. Your testosterone levels DHT sensitivity everything will increase like crazy. You block cortisol and progesterone your insulin sensitivity, 17 beta requires sugar and phosphorus will fly. 3 beta will fly. AR fly. I am not quite sure why you are telling me what this substance does. LOL

Estrogen is progesterone receptor agonist not antagonist. since estrogen lowers thyroid by tanking potassium. And progesterone rises to retain the potassium. Taking copper will lower progesterone only if your potassium was high in the cell, and it will increase progesterone if your potassium is low it the cell.

In case of potassium deficiency progesterone receptors will be upregulated and progesterone level will be up. Georgi, man. This Peat stuff continues now into this thread LOL

Anti-estrogens kill PFS people. it is proven already by many people. And people get rid of PFS

symptoms by taking estrogen with DHT. If you take just DHT it does not work. But if you take estrogen with DHT= NO PFS

It will not stick if you take DHT with estrogen, but it will work while you are on it. This proves that without estrogen there is no DHT. That is why no one should ever block estrogen on testosterone cycle. Just use cabergoline, and if you are feeling low potassium symptoms you can use a little progesterone.

But to block estrogen is suicide. You will lose all the good stuff

Haidut. Serotonin blockers like cypro, actually increase serotonin signaling. Cortisol blockers actually increase cortisol and cortisol signaling.

Peat is saying to eat sugar so cortisol stays down. This lowers adrenaline receptors and cortisol receptors. And then this causes high levels during stress. This is the burn out pattern for a slow oxidizer

This is opposite of Peat that we are doing here.

And actually, you are doing everything opposite of Peat that works for you. taking adrenaline agonists this hyperventilate you. taking cortisol blocker this increases cortisol signaling.

(increases your cortisol action) not decreases and kills it. I fast for exactly same reasons. to increase cortisol signaling.

this will cure hairloss also. since hairloss in some cases are from lack of cortisol. And cortisol cures MPB in those cases, since exogenous cortisol frees up iron.

Never take cortisol supplements, since this will lower cortisol signaling after you come off unless you stay on them forever. People taking caffeine that hyperventilates them on this forum. This is completely opposite of Peats explanations.

I suggested anti-serotonin for PSSD here also thinking that SRRI overloaded the receptors with the serotonin, but it does not work, since SSRI effected progesterone receptors also which caused alkalosis and similar condition as PFS. So, until they get rid of volume, serotonin will never go back up online since sodium stops it. Progesterone increases serotonin turn over. So, after your serotonin gets insensitive, body will decrease progesterone sensitivity not to turn it over.

It is not high serotonin they are suffering from, but low insensitive serotonin. That is why PSSD gets better for some people on SRRI and on SJW but it does not last.

Serotonin blocker does not help here, since it is too late. Serotonin blocker would work when you come off of it. And serotonin blocker INCREASES SEROTONIN ACTION (ANTI PEAT) It is the same as PFS. PFS completely goes way on nandrolone, which is a progestin, same a Finasteride. This takes care of insensitive progesterone by feeding something that is stronger than progesterone which is nandrolone. but after you come off a progestin it will come back and will be worse. Since now your progesterone is even more insensitive. It will never stick. IT Can't. Same as PFS goes way on actual finasteride. You should understand if you block something, that something becomes more not less after you get off the blocker

And if you are missing something like progesterone action or DHT action. You never take DHT or progesterone. you take anti DHT and anti-progesterone

This is where Peat is wrong. and I use contrarian endocrinology. And you also doing these good things to yourself, but explaining them wrong. All the things that you are doing are in line with my understanding.

It is funny. How slow oxidizers try to hyperventilate with tons of caffeine on this forum, and that is what helps them the most. This is against Peats theory. Peat had to use caffeine since he was killing his metabolism with all the calcium and aspirin and stuff like that. this is where all these patches came.

Caffeine will eventually make slow oxidizer much worse, unless slow oxidizer increases dosage constantly. Slow oxidizer needs to kill adrenaline to increase it. And fast oxidizer like you, which is a fast metabolism not slow. Needs to increase adrenaline to kill it. that is exactly what you did with the adrenaline agonist. But sorry to tell you did all that with anti-Peat strategy.

they give you insulin to put potassium back into the cell

I told you what it is. You look at t3, t4 I look at thyroid effect in the cell.

Fast oxidizers are running on fats, not slow. Slow oxidizers have tons of sugar in blood. they don't need fats. They store fats. You eat sugar, you store fats. Majority of people overeat and don't exercise, this is what stores PUFA. Peat's diet causes you to store PUFA. And you can't not eat PUFA, it is everywhere.

That is why fasting is so good. You burn all your PUFA in 30 days. and then if you don't overeat, you never store it, and you don't have too much of it pouring into your blood stream during stress.

What FDA approves, I disapprove. they have no idea what they are doing. (or do they)

As I stated to you. Fast oxidizers have lower thyroid value labs. It does not mean they are hypothyroid. they are hyperthyroid. this is where all these people are confused.

I look at thyroid effect in the cell, not some thyroid hormones which you interpret not correctly thru 1000s of hair tests and blood tests, I can assure you fast oxidizers have high insulin levels, slow oxidizer rarely has high insulin, only can get it high on PEAT's diet. Since they are forcing metabolism higher without the sympathetic nervous system. and taking calcium with copper and aspirin. this causes the body to increase insulin but they body does not need this. It does not want to increase metabolism. Sugar metabolism increases too much Co2. Sugar is kept low inside of the cell. Thyroid is kept low in a slow oxidizer ON PURPOSE. People will be losing hair getting fatter if they try to increase metabolism in slow oxidation without solving sympathetic nervous system problem. Thus, if all these people don't take tons of caffeine, they are screwed. And caffeine makes them screwed over time also. Since it desensitizes their adrenaline receptors which are already low.

Looking at hormone levels in blood is wrong. You need to understand how to read the

metabolism. High serotonin = means fast oxidizer not slow in most of the cases. Since serotonin is the trying to slow down sympathetic nervous system effect. Estrogen that is made inside with copper lowers serotonin. since copper increases MAO-a. Exogenous hormones do the opposite of what they do inside of your body. Since they are regulated by the minerals inside of the body. And if you take the hormone from the outside you chelate that mineral.

that is why you should never take hormones. EVER. this is what creates all the problems.

Since it bypasses mineral regulation.

let's say you take progesterone, this will chelate and lower your zinc. This will create too much Co2, but will not allow zinc to convert that Co2 into bicarbonate. that is why progesterone needs to be raised only with zinc and 3 beta hsd and never progesterone from the outside since zinc in 3 beta hsd and other enzymes by raising progesterone satisfies other conditions which allows zinc to raise progesterone like increased insulin (zinc dependent, increased CO2 bicarbonate conversion, zinc dependent, increased SODs to handle oxidative stress) You take progesterone or any other hormone or a supplement you ruin and by pass all this.

this is why you can't take anything that speeds up slow oxidizer, without actually supporting anti-oxidation system. this will ruin their blood vessels. I saw people on thyroid hormones with ruined blood vessels in 5-6 years.

That is why some slow oxidizer can have severe shortness of breath on progesterone. since they need zinc not progesterone. and their progesterone levels will go up on zinc, but at the same time this will offer a support for their CA enzyme.

You can't create the solid picture of metabolism without extensive picture of the PH and mineral regulation in different compartments.

Probably next week, I will outline rules diet for certain oxidation types. I will explain why I use this or that for a certain type. And you will see that everything I will outline will match your experiences, but with different explanations to why this is happening.

SLOW oxidizers can fast with no problems. Fast oxidizers - NEVER FAST

testosterone is not going to be low after fasting. I have it at 800. I fast 2 times a year for 4 years. very very long fasts. 40-50 days. My testosterone is quite high since my cortisol sensitivity is good and body can handle anabolic energy. **I am a slow oxidizer.** fast oxidizers need to desensitize their adrenaline, thus NO FASTING

Easy to see in most cases:

high ceruloplasmin: fast oxidizer

low ceruloplasmin: slow oxidizer

High ceruloplasmin people do good on Peats diet. they hyperventilate. And have fast metabolism and retain water. Thus, think they have slow metabolism they can't handle thyroid supplements, since their thyroid cell action is already high. they might have high TSH numbers, they have PTH high, since calcium is buffering their venous acidosis

Slow oxidizers will do better on methylation zinc manganese potassium. magnesium. And increased exercise.

NO THYROID should be taken, NO hormones increasing met rate like progesterone, they will make you feel better but will create oxidative stress that slow oxidizer can't handle
Progesterone increases potassium. potassium receives thyroid hormones. Potassium goes too high, thyroid gets downregulated since less of it needed

When you fast all your hormones will be lower since they become more sensitive. You don't want them to be high. What is the reason. You will be super androgenic after fasting. Like a kid. bodybuilders going after high test level, inhibiting estrogen and get old wrinkly and die. You should never touch estrogen. People that do sports are deficient in it. they are losing copper since copper lowers serotonin. Another thing where Peat is wrong.

Copper lowers serotonin. Copper increases estrogen production. So internally produced estrogen equals lower serotonin since internally produced estrogen = copper. Exogenous estrogen chelates copper and increases serotonin. That is a huge major mistake in Peats biochemistry.

Read these statements carefully

Sports people are losing copper since they have active sympathetic nervous system, this causes lower Co2 levels and this causes the body to raise serotonin to oppose your sympathetic nervous system. Thus, sports people lose calcium and copper from their bodies and drop dead sometimes from aneurysms.

I don't think it is low estrogen, I think RU caused sodium to go down and water left with it. Now actually estrogen will be allowed to rise and it will pull DHT with it. Estrogen raises sodium, so when sodium is high like in volume expanded alkalosis, this stops copper from working. and thus, DHT is not sensitive

So, when you take RU or acetazolamide to get rid of this alkalosis, you can experience low sodium effect until estrogen goes back up. That is why one of the suggestions that I made how to deal with PFS was taking magnesium (to lower sodium) and then take copper with potassium. to increase estrogen.

I think this is the mechanism. that is why we should eat very well on Ru and take a multi to body takes what it needs. I think it will be zinc copper manganese and so on. Think about it this way. Corticosteroids progestins, they cause alkalosis with volume expansion, meaning sodium is retained and aldosterone is increased.

Estrogen increases sodium inside of the cell. SO, if sodium is already high, estrogen is not allowed to rise. If you lower sodium, then body is asking for copper to raise this sodium. And it finally takes the copper out of your liver and puts it to work (of course if you have it there)

As soon as estrogen is build back up DHT starts working. and this starts to spill over to prolactin. I think this is approximate mechanism how it will work to restore everything

I posted exactly the same for a steroid cycle in PFS thread a week ago. I said that if anyone would take steroids, they should take testosterone with progesterone. Since taking testosterone alone will tank 3 beta hsd. taking androsterone inhibits 5 alpha reductase that is why it works for PFS. I am anti-Peat, I don't take any ideas from Peat

I block cortisol (or increase the need for it) to increase it sensitivity. Peat says cortisol is evil. and to lower it. I want cortisol to be more sensitive. DHEA does not block cortisol. It lowers pregnenolone conversions. Thus, tanks the whole glucocorticoid branch. Thus, many people crash on it and get hypokalemia.

Progesterone binds to cortisol receptors and activates glutamine synthase only at 21% of cortisol but agonizes cortisol receptors. That is why in cortisol deficiency, you get anxiety. this is understandable, since exogenous progesterone or progestins lower 3 beta hsd and zinc, and zinc is needed for glutamine synthase as active b6 depends on it.

Many women use progesterone to lose their muscular hands, progesterone will tank testosterone = NO MUSCLES

There is no anabolic supplement. Some people need more catabolism and some people need more anabolism. Read Revici work, some cancers are in anabolism and some in catabolism. All you guys do here is opposite of what Peat says. You block cortisol, you make it more sensitive (I SAY THAT). It is not like you constantly block it to zero. Just block it to zero and live with it. YOU will die. Block serotonin to zero and live with it. You will die from it.

You are doing completely opposite of what you are saying. You are blocking cortisol for a week. This makes it super sensitive. Then you get off and don't take the supplement. This is what fasting does.

You block serotonin receptor, then you get off the supplement. Serotonin becomes MORE not less.

And now you claim the opposite. LOL NO it is not me stealing the ideas, it is you will be stealing mine soon and spinning Peat into my understanding.

I don't rec any steroids. since if you take testosterone with progesterone, this will make your zinc bioavailable and many other vitamins and minerals bioavailable.

Your PH regulation will be screwed up. since zinc is used in many enzymes. All these steroid cycles are nonsense and will ruin your health. Even taking pregnenolone will cause problems, since when you take pregnenolone. You make iron bio unavailable since you tank 450scc

When you tank your bio unavailable iron, you tank your progesterone to cortisol conversion, since you need iron in 11 beta. You also tank your 5 alpha. since DHT requires iron.

So pregnenolone will cause estrogen to go up, to oppose progesterone rise from pregnenolone

intake. since conversion of progesterone to cortisol goes down. If iron was there, then metabolism could have gone up. since cortisol conversion depends on IRON.

This is why no one can tolerate thyroid with low iron level. WHY? since iron is needed to convert progesterone to cortisol, and without cortisol, you will have thyroid resistance.

Zinc will increase progesterone levels, THIS INCREASES CORTISOL IN SLOW OXIDIZERS and LOWERS IT IN FAST OXIDIZERS.

Progesterone and progestins also will always act differently on the receptor depending on the cell potassium level.

If you keep your venous blood acidic, and cell alkaline, calcium will never be in the cell. Just put calcium into alkaline solution and see what happens with it, it will be all chunks. NOT IONIZED. and now put calcium into acidic solution you won't see it there, it will all dissolve.

So, when your venous blood is alkaline from too much bicarbonate, but your cell has too much CO2. this calcium goes into the cell. that is why when you are a slow oxidizer, you don't want calcium you retain it like crazy. You want to decrease Co2, so body compensates CO2 decrease with metabolic acidosis, this will cause your calcium to lower in the cell and go into venous blood, and it will be dissolved there since the blood will be acidic.

If you feed calcium to a slow oxidizer you will be getting older and older looking.

This is why after fasts you can look much younger. Since Co2 goes down during fast, and also you go into met acidosis, ideal for decalcification. Fast oxidizers are the opposite.

Prolactin regulates calcium. Zinc lowers copper, this lowers estrogen and this causes prolactin to decrease. Zinc increases progesterone.

Bases some of his ideas on Dr. Paul Eck's work:

http://www.arlma.com/About_ARL_Research_labs.html

Recommends reading a basic anaesthesiology textbook.

man you just take care of progesterone sensitivity first then you take zinc. If you take zinc with insensitive progesterone this will raise your progesterone and will never break this loop.

I hope that lhatofin results stick and that will just solve everyone easy . For my sake it will be easy since that thing will work for both case, and I won't have to explain anything to anyone LOL

Fasting def helps. I had one guy who had terrible POIS, crash after orgasm. Fasting totally cured him. I love fasting. what I usually do I fast and I swim for long distances. this forces the

body into the shock state, You would not believe how my body transforms. I fasted for 65 days once and swam every single day in the ocean. After that people from my gym could not recognize me man. Neighbor were cracking up since I got so young . It was funny, skin face, eyes, everything. Just back to under 20. And I am 40. it was incredible difference. So I always swim in the ocean when I fast. I guess body takes what it needs from the water to rebalance ideally under stressful situation. If you are near the ocean you should try this.

This is so anti Peat. but this stuff works big time. And then when you come off the fast, you need to eat sea food. So you get zinc and selenium in so your metabolism speeds up faster.

People are stupid when they break the fast, they start eating carbs, you cant do it. You need to eat more sea food protein. to speed up the metabolism otherwise you will gain weight.

Also funny part is that when you swim every day , your muscles dont disappear on the fast.It looks more like cutting not fasting.

PH disregulation. Could be tons of things. All people have different PH problems. PH is what controls bacterial population. Bile problems mostly I would say .

Bile is what cleans out the intestine. People eat too much which causes low bile.

it is a start. Fasting is really good for that. It kills all the stupid bacteria.

I also love liver cleanses by Andreas Moritz. I did 80 of them. that incredibly helped my health. I started to have zero problem with fat soluble vitamins. Like A E D K

I did 80 of these liver flushes and have zero stones coming out now. But had tons of them before.

Basically liver flushing and fasting will fix 80% of all your problems. I gaurantee your relatives won't even recognize you in a year if you do 80 flushes and fast at least 3 times with long fasts.

You will get super young like a kid. I am not sure how old you are. but at my age it is just incredible. I am 40 and no one can give me more than 25. They always ask for my ID when I bet them they will not guess my age.

And this is a person who looked 80 when I was sick with cancers.

Try liver flushes. Making your bile clean you out, makes you very young..

I beilve in theory of overmineralization. this is why I don't take anything now. No minerals no supplements, NOTHIN

Thorne is just to fix you. to methylate you and lower adrenaline receptors.

Liver flush:

Dont use apple juice. Use clean MALIC ACID. just buy it. and use one tea spoon for a water bottle of 1.5 liters. And drink this during the days. using a straw. If you are planning to do liver flushes, you cant do 2 or 3. you will make yourself worse.

You need to do at least 20-30 to the point where there are no more bilirubin stones.

I did one flush weekly. You need to drink this Malic acid constantly, daily

Malic acid alone will improve your energy in an incredible way.

I dont like orange juice. I dont like sweet juices, I think it is bad for you. Only veg juices.

Breuss protocol is very effective. You can last very long on it with very little sides.

If you cant swim daily in the ocean on breuss protocol. take a bath daily with sea salt. and make sure you put your hair in it.

Breuss protocol will grow your hair. You will notice that in 40-45 days on it, all your head will be in new hairs.

I stay away from meat as much as possible and eat sea food mostly , I eat fruit in small amounts. I dont drink dairy or any dairy products, I try to stay away from anything that is made by a man. . Like cheeses , milk, meat, all have hormones inside. NOT GOOD. I stay away from anything that can have hormones inside.

I make milk from almonds.

I eat anything , but I try not to have too much carbs. I keep carbs at 30%. I try to eat less. So intermittent fasting.

I eat more okinawa style diet.

I love shrimps, lobsters, crab , oyesters, mollusks. I eat those daily. They are full of minerals. Selenium especially . All the mercury talk is bs. Selenium binds mercury and that is why people saw Mercury excretion and assumed see food is full of mercury

Most meat has hormones. Milk has hormones. I stay away from anything that has hormones. taking hormones screws up your minearls. Since it is minerals that make hormones not the opposite.

I live in Cyprus. So meat is good here and everything else is good. But even here it has

hormones. they even grow chicken on hormones now.

Meat in the US is just terrible. All hormones, all this organic meat is bs . organic meat does not exist. All those animals are on hormones and antibiotics.

I have the infra red light sauna. When I started ARL they required it in their programs. I had a special case, but that sauna spread my cancer like crazy and I quit it.

I saw one person regrow hair with it, he just sat at his computer and put light on his head and hair regrew nicely , so it worked for that.

try the multi and resveratrol after you do RU. RU will get rid of alkalosis and then you will need methylation thorne with res with hcl to get rid of hairloss from RU

Try Breuss fast for 42 days . really good for hair. All your head should be in little new hair after it.

Salt thing is mostly for those who lost their hair. You need to take care of you metabolism mostly.. And then it will all be dense, Since if you still have hair, calcification is not that big. You should understand that hair is the least part you have to worry about. If these fats with calcium block your hair follicles, they block everything everywhere.

You just eat well. and move

I would recommend for you to swim in the ocean all the time. but I guess that would be hard to do. Ocean supports hair amazingly

I like rice, and some potatos, no sea salt, I eat sea food remember. butter I don't use much . Here and there. you could use butter no problem

if I eat sea food, I dont use sea salt. You can if you want

sensitivities was a part of PFS for me. i could not even be in places, my MAO just did not work, since zinc was not working for me. and MAO was inhibited since body needs constant activation of adrenaline

I think once you let go for MAO, it will just go away.

This causes sensitivities to oxidative stress, chronic fatigue, low androgens, anemia, chronic low grade infection, high acetaldehyde burden, etc. How can I go about fixing this based on the framework provided?

MAO is inhibited for a reason. Copper will only work when progesterone and zinc will work. MAO is copper based.

Understand it like this, If there is no cortisol sensitivity , your zinc does not work. If zinc does not work and your progesterone is insensitive you you dont have enough progesterone action, If there is no progesterone action , copper is not working. NO copper No MAO. it is feed back reaction.

I think after first little round of RU, it will all go away.

I hope this RU works for every case , bud. that would be such a relief for me, since that will be very easy.

No, IDO inhibitors, I was one of the first people who was doing this. I think I posted on this forum like 3-4 years ago about it.

I did fasting also, but mostly IDO inhibition got rid of it for good. and my health become really good. Plus I used chelators, since I got poisoned by lead and asbestos which is why my wife died and I got really sick with lymphoma and melanoma, melanoma is basically aspergilles niger infection.

IDO is an enzyme. read about it , that breaks down tryptophan. I used rosmarinic acid also

during cancer you have too much inflammation and because of this inflammation body stops the immune system. Usually this happens when you have virus and bacteria at the same time. And body cant use copper, so your SOD goes down, and your body induces IDO to kill the immune system.

If you use copper your virus will just explode, I had both cancers lymphoma - viral , and aspergilles - fungus.

So I could not use copper or iron, both caused the cancer to grow, and if I chelated any of them the other cancer grew. It was a very complicated case. Very anemic condition and you I could not even go into acid or alkaline state to cure the cancer since the other cancer grew right away.

Now I would probably cure it with huge dose antibiotics. and antiviral at the same time.

minerals from mother, genetic build of every organ. size of the organ. toxicities at birth. Many things.

that is why you see fat little kids , skinny little kids, red little kids (acidosis) pale kids alkalosis. they are all different.

So the sooner a kid learns how to balance himself, the better.

B2 is a part of the enzyme xantine oxidase. this enzyme puts iron into blood. When you have cancer with bacterial infection. taking b2 will spread it like you read about. I had it I know. After taking b2 , my tumors trippled. Body inhibits xantine oxidase in case of bacterial infection and cancer, and this lowers MAO, since body goes into met acidosis to fight against bacterial infection, and this requires more adrenaline to compensate this metabolic acidosis, thus MAO is

inhibited.

Unfortunately when you have the bacterial infection, body lowers conversion of the b2 into the active form, and this also effects the enzyme AO which breaks down aldehydes(the endotoxins everyone is talking about) And the whole pressure is put on ALDH enzyme to break down aldehydes which is NAD dependant. This is why nicotinamide helps people with bacterial infections.

Do these people make their studies up or something. OR they are trying to kill people on purpose.

you have high blood pressure when you have high sodium in the vein, not the cell **Slow oxidizers** have low sodium in the vein. high sodium cell content, makes **slow oxidizer** balloon in the water. Since that salt attracts water into the cell.

He was taking separate amino acids. Like histidine etc. I am talking about ARL and TEI> they give tons of glandulars to support needed amino acids . If it is enough of not I dont know.

Electrolytes protocol has all electrolytes. and all amino acids. Electrolytes protocol talks about low systemic proteins .

in slow oxidation body is losing calcium and magnesium, so the minute oxidation rate goes up person needs those immediately

I think electrolytes protocol is for all oxidations.

This is why in calcium shell, when calcium and magnesium are really high. ARL gives double calcium and magnesium . since people have zero those minerals in their cells. And the minute they start up their oxidation, lack of magnesium and calcium stop the speed up. since magnesium is needed to activate all Bs, and calcium is needed to process sugar.

Usually slow oxidizer retains sodium in the cell. And starts losing sodium the minute he is able to produce adrenaline.

This is why if slow oxidizer goes into the sea, just retains tons of water. since sodium concentration in the cell is big.

I see slow oxidizers balloon like crazy in water.

So calcium for slow oxidizers is questionable at first. Some like ARL give it right off the bat, and TEI does not.

I see some people complain about calcium def symptoms like teeth enamel weakness , I had that personally. on TEI.

Slow oxidizers are low in delivery of oxygen into the cell. This happens, because of actual hemoglobin problems. glutathione problems, or sugar metabolism problems.

No oxygen no oxidation. Carbs become lactic acid.

Slow oxidizers usually have problems either with glutathione, or with the oxygen delivery.

If glutathione is down and they cant get to cysteine, their thyroid does not work. Or if they have hemoglobin problems then oxygen does not get delivered

Keto is just a stil to feel less lactic acid, I dont think it is good for slow oxidizers, since it slow oxidation even more. but takes care of some problems like lactic acid. and some feel better

the idea for a slow oxidizer is to increase oxygen delivery and you feel better, this is why you run which increases breathing and you increase oxygen delivery .

I think you should try to follow what me and Matty came up with for you.

And you will need to eat carbs, and when carbs make you feel good and stonger, then we will know that your oxygen delivery is going well.

I have been dealing with many people in PFS. some of them have very low calcium non existant in blood, like in my case. but my 1.25D was high. overexpressed AR is suppressing VDR.

and some of them have very high calcium and high 1.25D also.(usually slow oxidizers) probably because of lack of break down by CYP24

I have a neighbour who is PSSD, and slow oxidizer. very high calcium on hair. slow oxidizer, PSSD

If calcium is constantly retained, this slows down thyroid. and body raises progesterone to retain potassium. to fight this.

When progesterone is RAISED, this wastes all your sodium. into the urine. Since sodium is low. then sensitivity of adrenaline is very low in the cell, since sodium makes adrenaline work better. And thus Magnesium is also lost since magnesium slows down adrenaline. And that would be bad.

So body has to ramp up adrenaline production, thus there is tons of activation of dopamine into

adrenaline.

So because 1.25 is high , this retains calcium , retains potassium, wastes sodium, and gets rid of magnesium. and all of this increases dopamine to noradrenaline and adrenaline conversion, since sodium is being wasted. and sensitivity of adrenaline is low in the cell.

SO as an idea, if slow oxidizers some how increase break down of 1.25D hormone, by CYP24 enzyme. then this lowers calcium in blood.

and body stops potassium absorption by lowering progesterone, the minute progesterone goes down, sodium goes back up.

the minute sodium goes up, adrenaline activation stops. and magnesium goes into the cell.

My neighbour did feel better on magnesium and potassium etc , but he has been taking them for years, and it did nothing for his PSSD, since calcium activation never stopped. So it does not matter that you are taking these things. calcium keeps going in .

Sods/GSH mechanisms:

Thyroid helps with the energy. But it makes the situation worse. Eventually body will get super toxic in copper and other metals, since there will be no histidine left to hold them. Since taking thyroid when there is no histidine and SODs will create oxidative stress. This is why we see huge copper toxicity after Ray Peat diet. And diabetes. We see this more and more from people after years of Ray Peat. Since Ray Peat tells people to take progesterone and thyroid. and stay away from cysteine and histidine. both of which can lead to diabetes. same as steroid diabetes. Body breaks down protein via cortisol to get to those)) this is why they are the component for the zinc finger.

This diabetes stems from histidine deficiency. **Once histidine deficiency occurs, Sods cant bind copper and copper goes free**, also there is no MNSOD in mito, so sugar metabolism just closes down even if you take T3))) and you burn fats and protein. and your serotonin goes up to make sure you dont breathe.

To open up sugar metabolism and to keep metabolism high you need to feed all components of end detox systems. **Glutathiones, bile acids, sulfations, glutathione transferases , glutathione peroxidases**, And this goes backwards to the sugar entrance. Basically all these enzymes will contain all the stuff what insulin is made out of, what SODs are made out of. etc.. So if one component is missing , sugar metabolism goes down. And you can not open sugar metabolism with the thyroid.

Also , when sugar metabolism closes down, if you are missing detox enzymes. body will go into

alkalosis. It will use hydrogen for detox, it will use niacin for detox. to make molecules like NADH , like NADPH. So tryptophan and tyrosine will be used for that. This is why you see low tryptophan and IDO activation in people. And MAO A will go down. to keep serotonin high. this serotonin makes sure you don't breathe . Since all hydrogen is used for detox, and body closes down sugar metabolism, it will try to increase CO₂ by not breathing, since this will allow the body to use fats for energy. So extra CO₂ will allow body to use FATS for energy. since extra CO₂ will allow adrenaline. Without CO₂, there is no adrenaline. Since adrenaline will activate sympathetic nervous system and blow out the CO₂.

this is why you see high CO₂ level on most people blood tests. with CFS, diabetes, etc. Body is retaining CO₂, to have tiny amounts of adrenaline. Those people are hypothyroid with high CO₂ levels. If you increase CO₂ levels of those people, it allows them to burn fat instead of protein. But it lowers sugar metabolism further. This is why it helps in cancer. It gets rid of ammonia in a situation when sugar metabolism is closed. AND giving CO₂ cant open up sugar metabolism, since it is a diuretic)) it lowers potassium. same as any CA inhibitors, like acetazolamide.

But main source of energy in closed sugar metabolism will be protein, **thus you have high ammonia problems, and this is why people see too much ammonia in mercury toxicities etc.**

Increasing CO₂ in this case will allow the body to use fats for energy. And thus cortisol falls. It has nothing to do with sugar metabolism. high CO₂ from outside decreases sugar metabolism. SO if you want to burn fat, you increase CO₂ from outside.

Ideal metabolism is when you have sugar metabolism working creating CO₂ in the cell. This high CO₂ will allow you to use fats. SO you will be using sugars and fats at the same time. And protein will be used only for detox and anabolism . if you use sugar and fats at the same time, you will have solid stress response.

In case of heavy metal toxicities sugar metabolism closes down, body uses hydrogen for detox, this leads to alkalosis. Now body can use only protein for the energy source. So the body has to retain CO₂ to be able to use fats for energy source also . For that it raises serotonin)) and lowers MAO A. This increases your parasympathetic nervous system and you breathe slower.

Now these people lower serotonin with drugs))) and take thyroid. that is LMAO. This basically increases metabolic rate and forces the body to use only protein.

since serotonin is not there, you will be breathing faster. you will have lower CO₂ levels. Bag breathing wont help this.))

Thyroid cant open sugar metabolism/ Sugar metabolism can be opened only if the end pathway detox enzymes are working(antioxidant enzymes) . SO giving t3 leads to higher cortisol than before)) And higher stress response. And higher ammonia levels.

Met rate of burning fats will always be higher than met rate burning protein. this is why when people increase CO₂, they think they increase met rate via sugar oxidation LOL

This is why hydrogen water is so exciting. It takes huge load off of hydroxyl radicals and this always increases sugar metabolism. As sugar metabolism increases, this makes more Co₂. This extra Co₂ allows you to use fats for energy. So you are using sugar now and fats. And cortisol falls, since body does not need histidine and cysteine and does not need to burn protein for energy. Ammonia falls.

This increases your adrenaline, and increases MAO A and lowers serotonin, since serotonin is not needed anymore, and you get tons of melatonin instead. and IDO goes down.

After drinking hydrogen water, there is not even lactic acid after exercise. [Pilot study: Effects of drinking hydrogen-rich water on muscle fatigue caused by acute exercise in elite athletes](#)
Sugar metabolism depends on antioxidation IMO. Vitamin C and vitamin E are not antioxidants. They are free radicals very close to hydroxyl radical. they need to be reduced to become antioxidants. **And ascorbate goes way down in disease states**, since body is in alkalosis and ascorbate goes down not to convert dopamine down adrenaline. **Since tyrosine is being used for glutathione transferase.**

this is why any metal toxicity you get hypothyroid (since body will use tyrosine to activate glutathione in gst) and also ascorbate will be in oxidized state . Since you will be in alkalosis. **Lactic acid in this respect allows you to use fats in case of emergency energetic pressure. so does Co₂.**

Basically you increase Co₂, this will allow adrenaline and this will allow lipids to be oxidized. Most people have impaired mito lipid oxidation.

IMO you simply cant turn off lipid oxidation. Since sugar will never keep you going all on its own. In times of stress, you will always burn protein for energy. And this can create problems. (ammonia, cancer , etc)

And if you kill cortisol with drugs and kill fats, you will be an ever eating monkey))) eating like 25 times a day))

This is why if you eat sugar all the time in huge amounts. You will have low stress tolerance. but if you fast for 30 days. You will be solid as a rock. There will be no stress response. Your tolerance to stress will be much higher than before the fast.

SO I agree, oxidation of sugar should be the main fuel, but lipid oxidation should be present secondary and should be working. and it will be only working if there is no alkalosis, since lipids need adrenaline. And alkalosis will happen only when extra hydrogen goes from NADH to make NADPH for redox reaction. So it is not about NAD NADH ratio, it is more about NADH to NADPH ratio. You make NADPH instead of NADH in krebs cycle using malate etc when there is too much oxidation since pentose pathway is closed. (thiamin goes into the urine, not to create free radicals.)

So when you make too much NADPH at the expense of NADH, NADH goes down and it cant donate hydrogen into mitochondria and you have chronic fatigue. since there is no waterall like

energy out of mito. **And body asks for more extra NAD and makes that from tryptophan .**

instead of pentose pathway , which makes 12 NADPH. and very effecient, you are stuck with making NADPH in krebs cycle this is why you need to take niacinamide and b vitamins.

[The role of malic enzyme as the provider of NADPH in oleaginous microorganisms: a reappraisal and unsolved problems](#)

this is why malic acid increases libido. And detox. and used in liver flushes along with niacin.

We dont know about all of this. We are just guessing, but here is my guess.

I have no idea what you are taking about excess hydrogen. **Hydrogen is being spent in cancer to make NADH, since NADH is being used to make NADPH.** instead of pentos. This is why if you give H₂. this allows the body to go from alkalosis to normal state and puts oxygen into the cell. **In alkalotic state oxygen is bound onto hemoglobin more tightly.** There is no oxygen delivery , since there is no free hydrogen. All hydrogen is being used up in NADPH and NADH . And those are being used up to recycle stuff.(since thiamine is not allowed.) **thiamine would have made 12 NADPH in pentose.** but instead NADPH is made with malate and NADH. This is why you need extra NAD constantly in cancer , and extra Hydrogen, to make NADH. to have any kind of energy. If there is no NADH , then there is no delivery of hydrogen into mito. No hydrogen in mito, there is no energy there. NO waterfall. This is why you get chronic fatigue.

I do think in cancer body chemitry body is asking for more NAD. and all if it will be turned into NADPH and NADH if needed. that is what happening/

Cancer state is when you can not use NADPH and create it in pentose pathway. And same as in diabetes you lose thiamine into the urine. in diabetes thiamine and zinc are lost in the urine. It is not a deficiency it is regulation. Sugar delivery into the cell is CLOSED on purpose. Why? since there is a problem with some antioxidant system. Mainly SOD. or peroxide enzymes. **Diabetes is lack of and histidine selenium cystein.. and glutathione.** This is why metabolism is closed down, Same happens in cancer.

When glutathione transferase upregulated in some mercury or other toxicities or when there is too little MT you lose tyrosine and serine since it is needed to activate glutathione. transferase. You also lose glutathione. When you go down on tyrosine , your thyroid is down. So body is switching off thyroid not to create more oxidative stress, since if glutathione transferase is upregulated that means glutathione peroxidase is down. Since it is simply missing glutathione and selenocysteine . since glutathione transferase took all of it. If glutathione peroxidase is down, you end of with hydrogen peroxide. and sugar metabolism closes down. Since SODs creates hydrogen peroxide.

Selenium and riboflavin ARE NOT pro oxidants , they are main ANTIOXIDANTS. that is what I am talking about, And I recommend all of them in my protocol.

NADPH is not sitting around)) If NADPH would be available you would have high testosterone low cholesterol. but sick people have little testosterone and high cholesterol. NADPH is what converts cholesterol into pregnenolone)) This is why when it is used for antioxidation in cases of free metals toxicities, all your steroids go down, or if you eat too much sugar - same happens. since it will be used excessively.

When you create oxydative stress, NAD to NADH ratio will get worse.)) why would it sit around. IF Peat says that NAD to NADH is already low. Then how feeding superoxide will make that ratio backwards)) low NAD and NADH ratio is in oxidative stress. So how adding more oxidative stress will increase this ratio. If there is a need for NADH , NAD will always be all used up. This is why body super activates IDO. And this causes depression since actually serotonin is low. Now those people get put on SSRIs.

Feeding nicotinamide, B vitamins , selenium , cysteine. Provides antioxidation. And this allows oxydation.

Selenium gets rid of hydrogen peroxide. It is the main antioxidant(glutathione peroxidase is on selenium) ., Riboflavin recycles glutathione via NADPH along with thiamine, that keeps glutathione in the reduced state. When the body can break down hydrogen peroxide , it allows to run SODS., if it is allowed to run SODS, it is allowed to turn on oxygen. And all problems go away

I tell people to take all SODS components, and all glutathione enzymes components. THOSE components are all what thyroid activation insulin activation and sugar activation consists off.

And as I said, everything you feed for oxydation or you say so . Must be a component of anxioxidation. . This is why you look at components of the down the line antioxidation enzymes. And all those components will be components of the chain of oxidation.

As an example. Insulin is made with copper zinc and histidine and cysteine and aspartate. SODS are made with copper zinc histidine cystein and aspartate. SO if one component of SOD is down. insulin will disappear.

For instance, glutathione peroxidase is made with selenocysteine and activated by glutathione and glutathione is recycled by ribo and thiamine. So if you miss selenium , then glutathione peroxidase will be down. And your t4 to t3 conversion goes down. Since D1 enzyme is selenocysteine enzyme. And your thyroid is switched off .

SO feeding all these things is mainly feeding antioxidant systems. Which then allows you to go into sugar oxydation and create superoxide and immune response .

Basically you have to look at the end of the metabolism to see what you need and there you will see all the things that are needed to promote oxydation.

Hydrogen water cured cancer in 3 people who I know. Hydrogen peroxide and ozone, just killed tumors in them . They tried it , works for tumors, but they come back. Cancer is not tumors. Cancer is the body chemistry. Tumors are also killed with oxidation with chemotherapy. but then what happens)) As I always say if you do oxidative chemotherapy , you are pretty much dead. Laser therapy also does that.

After chemo all your tumors come back 5 times usually since all your antioxidant enzymes went down. SO you created extra immune response and killed the tumor in the moment. But how is that a fix.

I think in cancer patients it is good to implement first huge oxydative therapy to kill the bugs with ozone. And drink hydrogen at the same time. And feed all the components of antioxidant systems and detox systems. Those components will always be the components of pro oxidant systems.

As far as hydroxyl radicals. Yes they can be created even in hypoxic conditions, but mainly are created with peroxide. Free iron is a bad guy , same as free copper. When do iron and copper get free? lack if glutathione and mt. This is why those are activated in cancer. And this causes growth of stuff. Since MT and glutathione transferase consume all glutathione for the purpose of the detox. ANd there is none left for glutatione peroxidase. And this kills all sugar metabolism. Since if there is too much peroxide , body closes down all the stuff that makes it. And that is SODS. if SODS go down. insulin goes down. No sugar delivery into the cell and stuff starts growing and protein is being used for energy slowing getting you intoxicated in ammonia.

But you are also can be correct saying that super oxidative therapy , might upregulate the Glutathione enzymes. And this will then after you finish the oxidative therapy have more antioxidation action and allow oxygen delivery. (so some short term ozone is good) Chemoteraphy proves it wrong though. Laser therapy also proves it wrong. Those are the things that cause oxidative stress. If they were good for you , they would be curing stuff. but they dont. they just deal with tumors. My wife had laser and chemo. It was crazy what happened in half a year. Metabolism crashed. tumors regrew all over and she died. same happens with ozone. Once you go off ozone tumor regrow and actually regrow faster. Since ozone made you lose even more thiamine and zinc in the urine.

People think if they take thyroid they can bypass this. How? body will just stop all the conversion of vitamins to its active forms. And also will take potassium out of the cell, and put tons of calcium in it. Just look at Raincoast hairtest)) see what happened to him after Peat. He took thyroid. Peat said that thyroid will cause low calcium)) Nope. thyroid will cause high calcium since body will be fighting it.

Peat does not rec zinc by the way. It is antiPeat, so raincoast was eating tons of copper , with having low thyroid. See what happened on his hairtest. This is typical body chemistry I have seen after Peating. WE have numerous hairtests like that. And now after feeding right things for this metabolism. Raincoast is cured of diabetes, CFS , PFS and all other things.

In any case, it is all trial and error at this point. Also there are many different people some are with too much oxidation and some are too slow oxidation. Slow and fast oxidizers. This is why we do hairtests and see what those people need.

Look at Antonio. He was totally screwed up. tried all kinds of things. thyroids, oxygen, cannabis , hydrogen peroxide.

Sulphoraphane increases glutathione by a lot and is used to increase sulfation enzymes in Gilbert's syndrome, Also it is used to get rid of COPD. Since COPD is a disease of hydroxyl radical overload in which body stops the oxygen delivery and chooses not to breathe. This retains a lot of CO₂causes very slow metabolism hypoxia and glycolysis. In this body chemistry thiamine and zinc are directed into the urine and people experience low acetylcholine symptoms.

This body chemistry of COPD cancer, POIS, PFS are all very similar.

PFS screws up with NADPH and kills glutathione recycling. this is why vitamin b1 and b2 help, and increase concentration etc

Also when your glutathione recycling goes down, your vitamin C goes down.

Same thing happens with hairloss. in hairloss people have too many free metals like copper and iron and may be other metals like lead and they require a lot more glutathione recycling. For this purpose body increases phosphates and uses a lot of hydrogen to create redox molecules like NADPH FADH

The free metals create fenton reactions with peroxide and even without peroxide and this creates constant overload with hydroxyl group. This causes 2 things. Fibrosis by actual hydroxyl radical breaking down proteins proline lysine histidine arginine and proteins containing iron and copper. and calcification since body is using a lot of phosphorus

Body to fight this, stops oxygen delivery , so it goes into hypoxia. Also body takes all the hydrogen and uses it up , so vein will show alkalosis and high bicarbonate, also a lot of lactic

acid is created. Also body turns off the thyroid, so metabolism is slowed down and reverse t3 is increased

Since body is using a lot of phosphorus and goes into alkalosis, you get low ionized calcium and you get calcified with calcium phosphates. This is the reason for hairloss. You get calcified with calcium phosphates and also you get fibrosis from hydroxyl radical

This is why organic acids like malic acid citric acid can be used to decalcify in this situation.

Sulphoraphane seems to control this and by increasing glutathione and sulphation it opens up oxygen delivery and increases glutathione and this allows metabolism to go back online.

This is why many doctors use thio sulphate to decalcify the body . Thiosulphate increases glutathione recycling also. This is how hydrogen water decalcifies the body also. molecular hydrogen binds hydroxyl radicals and this allows the metabolism to go back up from alkalosis.

Cancer has the same body chemistry , cancer is the excessive shutdown of sugar metabolism since there is too much hydroxyl radical present.

This closes down the production of hydrogen peroxide. And if you feed things like vitamin b1 b2 sulphoraphane vitamin C , along with zinc it all goes way .

So I wonder who tried this and who used it for COPD or other disorders.

Glycine lowers metabolism. If you are taking potassium chloride that is why gelatin works. usually gelatin lowers libido . this is why it never worked for people on Ray peat forum.. Since glycine is excitatory when chloride is not there/

You killed your potassium with all these sups. hence leaky gut

Look at health protocol. it is explained about gelatin there , glycine and all other stuff. Be good amigo

If you keep taking MSM you will have crazy food sensitivities. And allergies, be ready. MSM kills molybdenum and killed moly will turn off aldehydes enzymes

YOu keep taking all these things in random order. It does not work this way, you always go from one imbalance to another. Just take balanced stuff. Sulfur will fall if moly is not present, then sulfur can cause hypoxia. It needs to be balanced.

Remember sulfur lowers chloride. Sulfur lowers oxygen. Glycine needs chloride. Without chloride all these wont work. Chloride needs potassium.

If you take potassium chloride alone, your scalp will be prickly without all other supps..

Glycine is a NDMA receptor agonist , same as DHEA. It is the potassium chloride which allows you to tolerate it. I never understood how people on Ray peat forum tolerated glycine with all that milk and calcium that they were taking. It just made it all worse.

When you take potassium chloride , you can tolerate glycine and tolerate dhea. Glycine does not increase 5 alpha. It lowers 5 alpha on its own. That is why gelatin caused crashes for PFS people

I would lower NO production and fix hypoxia for MS . Otherwise current rate of free radicals wont allow you to reverse hypoxia. And I would reduce all of this with zinc finger thing.

I would pretreat with carnosine or histidine with cysteine, selenium and zinc finger protocol and then use viagra. cycle . And I dont think it will come back. And then I would stay on zinc finger and not allow hypoxia to happen. Since there are tons of studies that zinc finger stuff , histidine protects even from chemically induced hypoxia in the brain. zinc finger is MT plus glutathione support.

WE are talking not preventative, but fixing the actual case. Preventative you need to fix and not allow hypoxia and you wont have any multiple sclerosis.

But as you told me about radiation, causing all of this in canada. You cant really stop any of the conditions that caused it , you can only support your glutathione and MT and this will keep hypoxia at bay , and will not cause NO overstimulation, since once NO starts, inflammation wont allow you to fix hypoxia

One question why would you use ebselen, instead of natural route? You know that long term ebselen will cause imbalances. Same as long term selenium

Manganese does lower chlorides by the way. If you have low chlorides it could be your problem. Manganese does that by increasing acetylcholine , worsening your CO2 retention.

Arginine increases acetylcholine release and increases its breakdown at the same time. Manganese decreases break down of acetylcholine

you take it in high amounts and it kills methylation. to zero. you have viral infection, which means that all your methylation cycle goes into glutathione side, means very little is left for adrenaline, you dont have adrenaline, thus your cortisol goes high

Copper chelation slow oxidizer:

This is what you get when you eat Ray Peat, I had so many people with this high copper on ray peat. People have problems with glutathione . You eat copper you increase SOD. you increase antioxidants in hypoxia. Sod's end product is hydrogen peroxide. Copper will cause SIBO. This is not good. as a slow oxidizer you need to exercise. And improve your methylation and redox.

If you this toxic in copper, you might need to take zinc carnosine for a little bit. Or zinc manganese with plenty of b2.

Slow oxidizers are low on B2. This causes high lactate. If ventilation is increased they are lucky. Some have already failed sympathetic nervous system and not able to increase the ventilation. And this causes complete potassium waste from the cell and CFS

I would take magnesium potassium ,b2, b1 zinc carnosine. manganese. and molybdenum. And may be add some methylation with thorne extra and taurine. if you are a woman could add some iron

Also do liver flushes.

zinc CARNOSINE much faster will take care of free copper.much faster

You can just add l- carnosine.. Carnosine will chelate brain and liver copper very fast.

copper creates hydrogen peroxide. since SOD is copper based. SOD creates hydrogen peroxide. and when you take copper you can get very grey if you are low on b2. potassium. Since iron wont be available to you until potassium goes up

taking copper causes severe diarrhea if taken alone in most people if there are problems with b2

try to take what I told you. carnosine should bind free copper

You cant take b2 alone. it will lower your cortisol, you already have low cortisol . thus you need to take what I told you all together.

You have wasted tons of potassium from the cell. Potassium is regulated by cortisol and progesterone. If potassium falls from the cell, cortisol goes DOWN and thyroid is not working. You take potassium, this increases cortisol.

This cortisol requirement will increase a need for iron and b2. Taken b2 alone without iron, will cause cortisol to fall.

Take all I told you to take together.

The antioxidant system depends on production of NADPH for proper function. Its three major components in cells are the glutathione system, catalase, and superoxide dismutase [36]. The first is dependent on production of reduced glutathione by glutathione reductase that depends on NADPH. Catalase does not need NADPH to convert hydrogen peroxide to water but has an allosteric binding site for NADPH that maintains catalase in its active conformation. Superoxide dismutase does not use NADPH to convert superoxide to hydrogen peroxide but if this is not adequately reduced chemically by catalase or glutathione the increased hydrogen peroxide levels will quantitatively increase and inhibit the superoxide dismutase. Hence the entire

antioxidant system depends on NADPH. As previously described, the need for NADPH from G6PD in embryonic stem cells with a complete knockout of G6PD made them highly sensitive to diamide (a potent oxidant) and led to more cell death than in cells with wild type G6PD activity [32]. This indicates that other cellular enzymes did not supply enough NADPH to protect the cells from cell death.

Need to concentrate on glutathione and catalase. I guess

NADPH will be increased only if potassium goes up and thyroid goes up. Since it is thiamine driven enzyme. manganese increases thiamine also which will increase NADPH also.. **So zinc and manganese magnesium iron and b2 selenium iodine moly , could be an option to try. along with NAC and Nicotinamide**

Glutathione redox needs FAD. and Fad will also depend on molyb and selenium. without them it wont be formed.

We need to try to speed up metabolism so G6PD starts working, this will increase glutathione redox. this will lower peroxide, which will allow SODs to work . once SODs are back online copper will be used.

DAO needs copper as a cofactor along with PQQ . may be lack of PQQ, is what causes methylation problems?

Ceruloplasmin goes up only in fast metabolism. You need to speed up metabolism. and feed the things at the same time. Since if you feed iron alone, your metabolism will go even lower. Since cortisol will go up. this is why people get constipation from iron pills.

I think you need to follow what I told you . You see everytime copper comes out with the bile, you have a leaky gut from IBS and copper and other metals enter the blood again free and cause problems.

May be you can try to use some kind of binders for the detox. like algin?

Everytime copper dump happens your potassium tanks. And that makes copper biounavailable. You need to support amino acids like wuf does, at least it will help with the detox.

RainCoat was in your situation with high copper. He followed copper detox , and as I remember UC and IBS went away

Just have to go with it. I guess. And keep your metabolism high .

As we know we have slow and fast oxidizers here. Some would do better on ozone and some would do better on hydrogen water. Ozone should be short term I would assume.

[@Amazoniac](#)

Also I do think that sometimes the short term oxidative therapy can upregulate glutathione enzymes. And could be used in oxidative stress disorders. But it has to be fed with all the components of antioxidative enzymes. like b vitamins, selenium , etc glutathiones etc zinc copper manganese

So for PFS people , some could try breathing ozone for a week. and then feeding B vitamins minerals to try to upregulate NADPH faster.

Most people's oxygen metabolism is closed. like in COPD. Those people benefit from short term ozone therapy plus spraying liquid glutathione. Also now there are studies that they benefit off of hydrogen water. [\[Full text\] Hydrogen coadministration slows the development of COPD-like lung disease | COPD](#)

[Hydrogen gas: a novel antioxidant for chronic obstructive pulmonary disease? - ScienceDirect](#)

This is [@Amazoniac](#). An example of how hydrogen increases oxydation. By improving antioxidation. in COPD body refuses to take up oxygen, since there is too much oxidative stress, and things that recycle glutathione increase oxygen saturation in blood. that is why liquid glutathione increases blood oxygen saturation. and helps those people.

Most sick people have a COPD like state. Where their CO2 is very high in venous blood.(all chronic fatigue people) old people. since zinc goes into the urine along with thiamine not to create super oxide.

Which direction they benefit the most , no one knows. is it oxidation or antioxidation. All of those enzymes are run on same things. I think it all depends on the metabolism. Some people need more oxydation and some more antioxidation.

Sometimes , body has so much hydroxyl radicals, that it closes the sugar metabolism and oxygen to a point that you think you are going to die.

may be there is a balance between these 2. Which will create ideal situation. Like drinking hydrogen water all the time for instance, but ozone once a week.

Fasting mechanisms:

being bald is a mutation, at one point in your life you got to the point of missing some nutrient that the body had to mutate the organ, not the skin, but some organ. So now basically you live in the mutated state and it is a compensatory state. meaning shaky. this is what aging is , a mutation. to me it is unbalanced and not a healthy state . person will always need to compensate for it.

the only antimutate therapy I know is fasting and extreme fasting not some 10 days worthless

stuff. Like 100 days, or 50 days, after that you are reborn.

fasting is anti mutation thing. that is what RPF does not get. If you tell me your hair wont grow back after series of 50-100 days fasts. I would say NO WAY. It will. And you will look like you are in high school . Peat says that fasting breaks down heart, spleen kidney. Great, that is what I want. I want to fast to the point when fasting starts breaking down organs. Only then it works. All this 5- 10 day fasts to me are worthless and waste of time. Plus you need to be in the ocean while fasting, since body take what it needs to rebuild.

feeding the body nutrients from food in a mutated state, does not fix the mutation. Crazy manipulations are needed to change the mutation and you have to be really good at it. And have a lot of courage since to change the mutation you will need to do yourself harm . this is what ARL does. it harms you to get you better. And people never go by that. they go by things that make them feel good. Which to me is worthless in a mutated state.

In Russia every child knows if you get sick you just fast for 40 days. this is the first thing people do. Doctors will never fix your mutation. If you eat normally and you dont get balanced to the point of having a strong buffer and your hair does not grow back. You are mutated, there is no question about it. It is an accelerated aging path now , since any mutation will cause an imbalance and if you smart enough you can compensate for imbalance, but it is never compensated to the full extent.

The thing is fasting cures PFS also.

basically fasting is anti aging. You are reborn, and rebuilding just like a kid. I think aging is you carrying all these mutations on you . You look older and older, and you get bald and you get wrinkly skin. But after 2-3 series of long fasts. Your skin and you will be young again. your hair will grow, your skin will glow. to me fasting and swimming in the ocean is the best anti aging there is.

People just eat garbage , and then they build their kidney heart etc with mutated aminos. but once you are in the mutated state, eating healthy does nothing. need to fast first and fast extreme.

Matty, i fasted long and short fasts, short fasts don't do anything in my opinion at all. I think it starts after day 25. After second acidic crisis.

I dont even get a crisis until day 15. first crisis to me is day 15. second crisis day 25-27(this is when the fast starts working.) and last crisis when you quit. day 45-50. I am talking water fast. Breuss you need 60-70 days.

I tried to fast short fasts first, it does not work. It does not renew you . When I started to go over 40 days, that is when mutations were gone. Like it actually changed you.

I think short fasts are ok, but not for anti mutation. they are ok to clean your body and have less

stress from toxins like ammonia etc . but to me it did nothing for regeneration.

I think it is better to wait and find some time for a 40 day fast, then do many 10 day fasts. one 40 days fast does it, but 3 - 10 days fasts , do absolutely nothing . This is in my personal experience.

to me baldness is the same mutation as cancer strength wise. So I think it needs the same organ renewal degree to get fixed.

Some people fast to kill cancer or infection. I fasted to get the mutation out so my body could kill the cancer later on its own.