Back To Chiropractic CE Seminars

Nutrition: The Big Five ~ 4 Hours

Welcome to Back To Chiropractic Online CE exams:

This course counts toward your California Board of Chiropractic Examiners CE.
(also accepted in other states, check our website or with your Chiropractic State Board)

The California Board requires that you complete all of your CE hours BEFORE the end of your Birthday month. We recommend that you send your chiropractic license renewal form and fee in early to avoid any issues.

Exam Process: Read all instructions before starting!

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Please retain the certificate for 5 years. DON'T send it to the state board. If you get audited and lose your records, I'll have a copy.

I'm always a phone call away... 707.972.0047 or email: marcusstrutzdc@gmail.com

Marcus Strutz, DC
Back To Chiropractic CE Seminars

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Nutrition: The Big Five ~ 4 Hours

–Presented by John B. Campise, D.C.–

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I'm always a phone call away... 707.972.0047 or email: marcusstrutzdc@gmail.com -Marcus Strutz, DC, Back To Chiropractic CE Seminars

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John B. Campise, Doctor of Chiropractic

john@drjohnusa.com 559-285-4121 (Cell)

EDUCATION

-Doctor of Chiropractic, March 2001 – Life Chiropractic College West, Hayward, CA
-Undergrad 90 quarter hours, June 1997 – Santa Clara University, Santa Clara, CA

CHIROPRACTIC TECHNIQUE ADVANCED STUDY

-Neuro-Emotional Technique Certification, January 2006, Dr. Scott Walker, D.C., NET, Inc., Carlsbad, CA
-Applied Kinesiology Certification, May 1999, Tim Francis, D.C., ICAK USA, Sunnyvale, CA
-Carrick Institute Chiropractic Neurology Diplomate Course: 250 hours audited, May 1999

John B. Campise, Doctor of Chiropractic

CONFERENCE PRESENTATIONS

-Neuro-Emotional Technique “Success Seminars” 25th Anniversary. *24 hour clock acupuncture theory correlations to NET and homeopathic support of the chiropractic adjustment.*

CHIROPRACTIC PRACTICE

-Campise Chiropractic private practice, June 2001 - Present, Fresno, CA. General Practice with a focus on nutrition, wellness, and rehabilitation of traumatic brain injuries.
-Dr. Kotsonis, D.C., DACNB Chiropractic Office, Jan 2015 - Dec 2015, Clinton Township, MI. General practice with a focus on stroke rehabilitation. For 2 weeks every month Dr. Campise was trained by and filled in for Dr. Kotsonis while he recovered from lumbar spinal fusion surgery.

Nutrition: The Big Five – 6hrs Overview

The five nutrients covered will be:

1) Vitamin D
2) Omega 3
3) Vitamin C
4) Protein
5) Iodine

Each nutrient has the following sections:

-Testing
-How to supplement
-Alternatives to supplementation
-High Risk Patient Profile
-Symptoms of insufficiency
-Conditions made worse by insufficiency
-Diseases caused by deficiency
-Biochemistry of nutrient
-Overdose risks/Other dangers

Nutrition: The Big Five – 6hrs

Definitions:

Deficiency: A state whereby the patient has such a low level of the nutrient in their body that it causes a disease state.

Insufficiency: A state whereby the patient does not have a frank nutrient deficiency disease, but has suboptimal levels of the nutrient in their body. Insufficient (suboptimal) levels of nutrients can cause various sets of symptoms or may aggravate existing conditions.

Vitamin D

Vitamin D: Testing

Blood test to order:

25(OH)Vitamin D

(Do **NOT** test 1,25 (OH) vit D, this is a test for kidney failure patients.

This is a common mistake that even medical doctors routinely make.)

Vitamin D: Testing

"Normal blood test range":

According to Quest: 20-70 ng/ml,

According to Labcorp: 30-100 ng/ml

Vitamin D:
Testing

"Optimal Level" for blood test,

according to the average vitamin D researcher:

40-60 ng/ml minimum

Vitamin D: Testing

"Optimal Level" of Vitamin D according to Dr. Campise:

80 ng/ml

Vitamin D: Testing

<u>How often to test:</u>

Test every 30 days until the patient's blood reaches optimal level then…

Vitamin D: Testing

<u>Ongoing testing routine for adults:</u>

Test every 6 months,

(Spring and Fall)

to ensure optimal dosing and find differences between summer and winter sun exposure.

Vitamin D:
Testing

<u>Testing for children:</u>

Pinprick blood droplet testing is available:

https://www.grassrootshealth.net/

Vitamin D:
How to Supplement

-Supplement with vitamin D3 orally, it is best to take it daily.

-Patients can take their vitamin D once per day, spreading out the daily dose over the day is **not necessary**.

Vitamin D:
How to Supplement

-Anywhere from 2,000 to 20,000 iu of daily vitamin D may be needed to reach optimal blood test results, depending on each patient's unique situation.

Vitamin D:
How to Supplement

-Dr. Campise starts patients with 4,000 iu daily then rechecks their blood in 30 days.

-If they are still below 80 ng/ml, then he increases their daily dose and rechecks in another 30 days.

-Repeat as needed.

Vitamin D:
How to Supplement

-There is no way to know how much vitamin D a patient needs to take daily in order to reach a blood level of 80 ng/ml.

-There are some guidelines (skinny short patients tend to need less, and overweight tall patients tend to need more), but you never know, without testing the blood, whether the patient is taking the right dosage of vitamin D.

Vitamin D:
How to Supplement

-Take vitamin D supplements with a fatty meal for best absorption.

-Any brand of Vitamin D should work fine.

Vitamin D:
How to Supplement

-If patients forget to take their vitamin D one day, they should take a double dose the next day and so on.

-A large 7X dosage, once per week, can partially work, but for optimal health results, the best routine is daily intake.

Vitamin D:
Alternatives to Supplementation

Sunbathing:

-Lay out with bare skin exposed at solar noon for 15 minutes face up, then 15 minutes face down. (Time varies depending on skin type and degree of tan).

Vitamin D:
Alternatives to Supplementation

Sunbathing:

-Do not use sunblock while sunbathing:

it blocks vitamin D absorption.

-Be sure not to burn. Sunbathing is healthy as long as you don’t burn.

Vitamin D:
Alternatives to Supplementation

Sunbathing:

-Depending on the time of day, latitude, time of year, altitude, smog levels, local ozone layer thickness, cloud cover, age, and skin color/darkness of tan, the amount of D produced in your skin varies between 0 and 10,000 iu per 15 minutes of sun exposure. (Natural upper limit is 20K iu, as UV light begins to break down the excess D in the skin).

Vitamin D:
Alternatives to Supplementation

Diet:

Eat wild caught fish:

The vitamin D content of fish varies between 0 and 400 iu per 3 oz depending on type and source of fish.

Vitamin D:
Alternatives to Supplementation

Diet:

Eat wild caught fish:

Farmed fish may not contain vitamin D depending on what the farmer fed the fish.

Vitamin D:
Alternatives to Supplementation

Diet:

Eat wild caught fish:

Fish get their vitamin D from their food chain which starts with microalgae (which makes its D from sunshine).

Vitamin D:
Alternatives to Supplementation

Diet:

Eat wild caught fish:

For most, trying to get all of your vitamin D from eating fish would be very hard to accomplish without eating fish at every meal.

Vitamin D:
Alternatives to Supplementation

Bottom line:

-**Order blood tests** to definitely know the patient's vitamin D status and increase any combination of D sources until subsequent blood tests reach desired optimal level, then…

Vitamin D:
Alternatives to Supplementation

Monitor the patient's blood levels with a blood test twice per year.

Spring and Fall

Quest: 20-70 ng/ml,

Labcorp: 30-100 ng/ml,

Scientists: 40-60 ng/ml,

Dr. Campise: 80 ng/ml

Vitamin D:
High Risk Patient Profile

Obese Patients

-Adipose tissue traps vitamin D so that it's not available to blood and body tissues.

Vitamin D:
High Risk Patient Profile

<u>Darker skinned Patients</u>

-Melanin can absorb Ultraviolet B (UVB) light so that it is not available to convert cholesterol metabolites into vitamin D as easily.

Vitamin D:
High Risk Patient Profile

Elderly

-Aged skin produces less vitamin D during sun exposure than younger skin

Vitamin D:
High Risk Patient Profile

<u>Avoids sun exposure</u>

-Pale skin

-Vampire look

-Regular sunscreen use

Vitamin D:
Possible Symptoms of Insufficiency

joint pain

muscle pain

muscle twitches (fasciculations)

muscle cramps

bone pain

Vitamin D:
Possible Symptoms of Insufficiency

fatigue

insomnia

jaw clenching or grinding

anxiety

Vitamin D:
Conditions Made Worse by Insufficiency

-Recurring infections of any type (impaired immune function)

-Frequent colds and flus

-High blood pressure (hypertonic smooth muscles of arteriole walls)

Vitamin D:
Conditions Made Worse by Insufficiency

-Too many Braxton-Hicks (“normal” /“practice” non-labor uterine contractions during pregnancy)

-“Premature” contractions of pregnancy

-Pre-eclampsia (high blood pressure during pregnancy)

Vitamin D:
Diseases Caused by Deficiency

-Rickets (weak bones in children)

-Osteomalacia (weak bones in adults)

Vitamin D:
Low D causes:
Strong Evidence; No Consensus

-Autoimmune disease

-Cardiovascular disease

-Cancer

A nice paper by Dr. Hollick, MD, PhD, about this topic:

https://pubmed.ncbi.nlm.nih.gov/28516265/

"True prevention must include assessing and correcting vitamin D status."
-Dr. Campise, D.C.

Vitamin D: Biochemistry

Cholesterol (manufactured by liver)→ travels to skin

7Dehydrocholesterol + sunlight (UVB + infrared)→

Cholecalciferol (vitamin D3) converted by Liver into→

25(OH) vitamin D (inactive form) converted by kidneys into→

1-25 (OH) vitamin D (active form)

Vitamin D: Overdose Risk?

<u>Very low risk</u>

-No published cases of vitamin D toxicity below 200 ng/ml.

-All published cases of vitamin D toxicity resolved without complication after 2-4 months by simply avoiding sources of vitamin D.

Vitamin D: Overdose Risk?

-The worst symptoms of published vitamin D toxicity were muscle and joint pain.

-Often the cause of toxicity is manufacturing errors where the supplement capsule accidentally contained 1 million iu's instead of the labeled amount (usually around 1000 iu).

Vitamin D: Overdose Risk?

-No published cases of vitamin D toxicity ever causing death.

Vitamin D:
Overdose Risk?

-Every year there are verified cases of death from drinking too much water (usually endurance athletes), so in that sense, vitamin D is safer than water!

-So don't let your patients be afraid to take vitamin D when the news reports that too much vitamin D is bad for you. Of course too much of anything can be harmful, but vitamin D is very very safe.

Vitamin D:
Overdose Risk?

-That being said, make sure to order the blood test to verify that the patient is in the optimal range (mostly so that you can prevent them from being deficient).

-By my estimates, millions of deaths each year could be avoided if we brought everyone's D levels up to optimum.

Omega 3

Omega 3: Testing

Blood test:

-The "omega 6 to omega 3" ratio (OmegaCheck TM) test is available from Labcorp and Quest.

-This test measures the percentage of omega 6 fatty acids and the percentage of omega 3 fatty acids in the blood and then divides the two to get a ratio.

Omega 3: Testing

Optimal ratio = less than 4.5:1 (primitive tribes with natural diets are between 3:1 and 1:1).

A ratio of 3:1 means that the blood has three times more omega 6 fatty acid than it does omega 3 fatty acid.

Omega 3: Testing

-A ratio of 1:1 means that there are equal amounts of omega 6 and omega 3 fatty acids in the blood.

-Average American = 15:1

-A ratio of 15:1 means that the blood has 15 times more omega 6 fatty acid than it does omega 3 fatty acid.

Omega 3: Testing

-It takes about 3 months to see a significant change on the blood test.

-If the patient's Omega Check test results are not good, have them increase their intake of omega 3 (and ideally lower their intake of omega 6) and then retest every 3 months until the desired ratio is reached.

Omega 3: Testing

Then test yearly to make sure they stay in the optimal range of less than 4.5:1.

Omega 3:
How to Supplement

Loading Phase:

4,000 - 6,000 mg of "total omega 3" content until the blood test comes into optimal range (3-12 months)

Omega 3:
How to Supplement

Maintenance Phase:

500 - 1500 mg of “total omega 3” daily depending on need.

Omega 3:
How to Supplement

-A 1000 mg capsule of fish oil will generally NOT have 1000 mg of “total omega 3” but more often 300-800 mg. Always study the label, don’t just go off the front of the bottle.

Omega 3:
Alternatives to Fish Oil Supplementation

Loading phase:

Eat fresh wild caught fish and seafood 21 times weekly during the loading phase to bring 6:3 ratio down below 4.5.

Omega 3:
Alternatives to Fish Oil Supplementation

Maintenance phase:

-Eat fresh wild caught fish and seafood 7 times per week for maintenance.

-Farmed fish and seafood may or may not have much omega 3 content. It depends on what the farmers feed the fish.

Omega 3:
Alternatives to Fish Oil Supplementation

-The omega 3 in a fish comes from their natural diet up the food chain starting with algae. If the fish are fed mainly corn, wheat, and/or soy, they won't have much omega 3 in them.

Omega 3:
Alternatives to Fish Oil Supplementation

-Flax seed oil and chia seed oil, among others, can be converted into omega 3 by the body, but not everyone can efficiently convert these vegetable sources (Inuit people, among others, can’t convert flaxseed oil to omega 3).

Omega 3:
Alternatives to Fish Oil Supplementation

-Algae oil has omega 3 in it, but Dr. Campise has found that it doesn't seem to clinically work at reducing symptoms of inflammation as quickly as fish oil does.

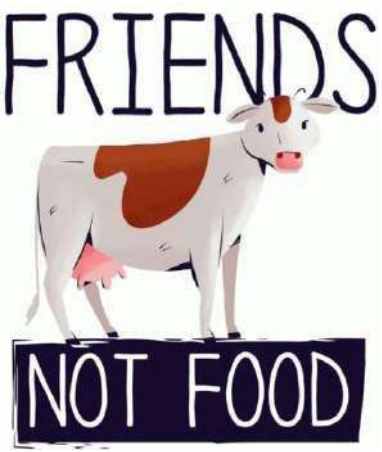
Omega 3:
High Risk Patient Profile

Patients who eat:

<u>Standard American Diet</u>

OR

<u>Vegan diet</u>



Omega 3:
Symptoms to Look For

Patients with any chronic inflammatory symptom, including:

joint pain

muscle pain

tendon pain

ligament pain

nerve pain

Omega 3:
Conditions Caused by Insufficiency

A paper by Horrocks and Yeo in the journal Pharmacological Research
https://pubmed.ncbi.nlm.nih.gov/10479465/

From the abstract: "DHA has a positive effect on diseases such as **hypertension, arthritis, atherosclerosis, depression, adult-onset diabetes mellitus, myocardial infarction, thrombosis, and some cancers**." (DHA is one form of omega 3 fatty acid)

Omega 3:
Conditions Caused by Insufficiency

A paper by Grant and Guest in the journal Advances in Neurobiology
https://pubmed.ncbi.nlm.nih.gov/27651257/

From the abstract: "low omega-3 levels have been associated with CNS-linked disorders such as **poor cognition, depression, anxiety disorders, poor anger control, attention deficit hyperactivity disorder (ADHD) and accelerated neurodegeneration in the elderly**."

Omega 3:
Conditions Caused by Insufficiency

A paper by Chang, et. al. in the journal Neuropsychopharmacology
https://pubmed.ncbi.nlm.nih.gov/28741625/

From the abstract: "In summary, there is evidence that n-3 PUFAs supplementation monotherapy improves clinical symptoms and **cognitive performances in children and adolescents with ADHD**, and that these youth have a deficiency in n-3 PUFAs levels. Our findings provide further support to the rationale for using n-3 PUFAs as a treatment option for ADHD." (n-3 PUFAs = omega 3 oils)

Omega 3:
Conditions Caused by Insufficiency

A paper by Simopolous in the journal Biomed Pharmacotherapy
https://pubmed.ncbi.nlm.nih.gov/12442909/

From the abstract: "Excessive amounts of omega-6 polyunsaturated fatty acids (PUFA) and a very high omega-6/omega-3 ratio, as is found in today's Western diets, promote the pathogenesis of many diseases, including **cardiovascular disease, cancer, and inflammatory and autoimmune diseases**, whereas increased levels of omega-3 PUFA (a low omega-6/omega-3 ratio) exert suppressive effects."

Omega 3:
Conditions Caused by Insufficiency

A paper by DiNicolantonio and O'Keefe in the journal Nutrients
https://pubmed.ncbi.nlm.nih.gov/32759851/

From the abstract: "Evidence indicates that a low intake of marine omega-3s increases the risk for numerous mental health issues, including **Attention Deficit Hyperactivity Disorder (ADHD), autism, bipolar disorder, depression and suicidal ideation**."

Omega 3:
Conditions Caused by Insufficiency

A paper titled: “The potential of omega-3 fatty acids in the **prevention of non-melanoma skin cancer**” by Black and Rhodes in the journal Cancer Detection and Prevention https://pubmed.ncbi.nlm.nih.gov/16872755/

From the abstract: “Supplementary omega-3 FA significantly increases the UVR-mediated erythema threshold in humans. Supplementary omega-3 FA significantly reduces the level of pro-inflammatory and immunosuppressive PGE(2) levels in Ultraviolet B-irradiated human skin.”

Omega 3:
Overdose Risk

-Omega 3 oils are mild natural blood thinners, so they are especially good for anyone with excess clotting issues.

-But for those taking blood thinning medication, you may have to work with the patient's prescribing medical doctor because they may have less of a need for the medication as you load their system with more omega 3.

Omega 3: Overdose Risk

-One sign of blood that is too thin is purple bruises on the skin, especially when the patient can't recall any significant injury at the bruise site.

-Generally, have the patient stop taking Omega 3 supplements several days prior to surgery and prior to giving birth. Restart the omega 3 supplements after any bleeding from the surgery or delivery has subsided.

Omega 3:
Other Dangers

Warning:

-There are little to no standards set by the US Federal Government for fish oil supplements, unlike in the European Union, World Health Organization, and California. But even California and the EU don't require testing for oxidation or for radioactive iodine contamination.

Omega 3:
Other Dangers

-Make sure that the manufacturer you recommend to patients has robust third party testing to ensure their fish oil has low levels of:

Heavy Metals, Oxidation, Dioxin, PCB's, Radioactive iodine

https://www.nordicnaturals.com/images/pdfs/ChartTesting.pdf

Omega 3:
Other Dangers

Oxidation = Rancid

-Oxidation is what creates the extreme “fishy” smell of some fish oils on the market and also what causes people to burp up the oil later in the day or to complain of a “fishy” smell when they sweat.

-All of this is avoided with a high quality manufacturing process that prevents oxidation.

Omega 3:
Other Dangers

-Dr. Campise's favorite high quality brand to recommend to patients is Nordic Naturals. They have a professional label that's only available to health care clinics.

Dr. Campise carries in his office:

Pro-omega 2000 for adults

DHA Junior for children.

Vitamin C

Vitamin C: Testing

-There are no good tests for vitamin C of which I am aware.

-**Plasma and salivary levels** simply reflect recent intake of vitamin C.

-The **Leukocyte test** shows tissue levels of vitamin C reflecting longer term intake. But, the Leukocyte test is mainly used for research and is not readily available to the public.

Vitamin C:
How to Supplement

RDA

-90 mg daily vitamin C for adults

-120 mg for mothers during lactation

-125 mg for smokers

The RDA is essentially the amount to strive for in your daily diet in order to ensure that you don't develop the vitamin C deficiency disease called Scurvy.

Vitamin C:
How to Supplement

There is debate on how much daily vitamin C intake is required to ensure tissue saturation for optimal wellness.

This amount ranges from 200 mg to 10,000 mg daily.

Vitamin C:
How to Supplement

"Ascorbic Acid (aka ascorbate) is the chemical name for vitamin C."

-Unknown chemist

Vitamin C:
How to Supplement

Vitamin C, being a major antioxidant required by the body, is thought to be needed in **higher amounts** for optimal health **during certain circumstances** such as:

- **high levels of air pollution**
- **intense exercise**
- **respiratory illnesses**
- **diabetes**
- **chemotherapy**

Vitamin C:
How to Supplement

-There are many types of vitamin C supplements on the market. Generally they fall into three categories:

Ascorbic acid

Mineral ascorbates

Whole food concentrates

Vitamin C:
How to Supplement

Ascorbic acid form

Benefits: as any acid can do, ascorbic acid helps absorption of dietary iron, aids the stomach in protein digestion (especially those without adequate production of hydrochloric acid by the stomach lining), helps absorption of all minerals including calcium, magnesium, zinc, etc. Tends to be less expensive.

Vitamin C:
How to Supplement

Ascorbic acid form

Downsides: Patients sensitive to acidic foods such as tomato sauce may not tolerate this form, those with excessive hydrochloric acid production by the stomach lining might have symptom flare-ups such as acid reflux.

Vitamin C:
How to Supplement

Ascorbic acid form

Downsides: It can sometimes irritate those with corn allergies as the majority of vitamin C supplements are sourced from corn which may be a concern if the product was not purified well during manufacturing.

Vitamin C:
How to Supplement

Mineral Ascorbate form

-examples: sodium ascorbate, calcium ascorbate, magnesium ascorbate, etc.

Benefits: Buffered so that not acidic, gentler for those with low tolerance for acidic foods, provides extra minerals for those who may need them.

Vitamin C:
How to Supplement

Mineral Ascorbate form

Downsides: Depending on the mineral, the patient may not need that mineral. For example, those with low blood pressure may get lightheaded after taking magnesium ascorbate (or any magnesium supplement) because magnesium tends to lower blood pressure. And sodium ascorbate might not be a good idea for someone who has high blood pressure.

Vitamin C:
How to Supplement

Mineral Ascorbate form

Downsides:

These are also sourced from corn, which may be a concern if the patient is allergic to corn and the product was not purified well during manufacturing.

Vitamin C:
How to Supplement

Whole Food Concentrates

Benefits:

Usually is not corn sourced. Naturally chelated into a variety of mineral ascorbates by the plants from which it was harvested so much less risk of getting too much of a single mineral.

Vitamin C:
How to Supplement

Whole Food Concentrates

Downsides:

Usually these have very low amounts of vitamin C per tablet or capsule. The patient may have to take 20 or more tablets to get the desired dosage.

Vitamin C:
Alternatives to Supplementation

Vitamin C content per 100 grams:

Raw Bell Pepper.. 150 mg

Cooked Broccoli… 35 mg

Raw spinach…….. 52 mg

Lemon……. 50 mg

Orange……. 50 mg

Vitamin C:
Alternatives to Supplementation

-Many fruits have similar amounts of vitamin C as the chart on the prior slide, but the downside is that most of our patients are already getting too much sugar in their diets, and most fruits contain a fair amount of sugar.

Vitamin C:
Alternatives to Supplementation

-Sour fruits have more vitamin C and less sugar compared to sweet fruits.

Vitamin C:
Alternatives to Supplementation

-Most fruits that are sweet can be eaten if picked before fully ripe, they will be a little sour indicating that they are higher in vitamin C and lower in sugar at that time.

Vitamin C:
High Risk Patient Profile

-City Folk (high pollution exposure)

-Breastfeeding mothers

-Pregnant women

-Athletes

-Smokers

Vitamin C:
High Risk Patient Profile

-Chronic infections

-Poor wound healing of the skin

-Recovering from joint sprain or muscle strain injuries

Vitamin C:
High Risk Patient Profile

-High stress jobs, hobbies, or life situations

-Recovering from surgery, burns, or acute infections.

Vitamin C:
Symptoms to Look For

-Any one of the following on the next slide can be a need for more vitamin C, most vitamin C deficient patients will only exhibit a few or even just one of the following:

Vitamin C:
Symptoms to Look For

-Fatigue

-Bleeding gums when flossing

-Easily bruises, multiple skin bruises with unknown origin

-Classic Scurvy sign: Pinpoint bleeding around hair follicles, and "corkscrew hairs"

Vitamin C:
Symptoms to Look For

Anything related to poor healing of connective tissue:

-Early onset wrinkles

-Chronic skin issues

-Chronic joint pain

-Stretch marks

-Weak nails

Vitamin C:
Conditions Caused by Deficiency

Scurvy

Characterized by:

1) The inability to produce and repair connective tissue leading to **leaky (bleeding) blood vessels** most visible in the gums

Vitamin C:
Conditions Caused by Deficiency

Scurvy

2) The inability to manufacture carnitine for fat burning in the mitochondria leading to **fatigue**

Vitamin C:
Conditions Caused by Deficiency

Scurvy

3) And the inability to reduce copper for the production of norepinephrine, a neurotransmitter involved with the **sympathetic nervous system** and used for **multiple brain functions**.

Vitamin C:
Conditions Caused by Deficiency

Symptoms related to **low** Norepinephrine:

-Anxiety

-Depression

-Headaches

-Sleep problems

-Memory problems

-Low blood pressure

-Low blood sugar

-ADHD

Vitamin C: Dangers

-There is a myth that high dose vitamin C therapy can cause a rebound deficiency in adults after suddenly stopping a high dose intake, and in infants born to women taking high doses of vitamin C during pregnancy.

It is not true.

Vitamin C: Dangers

Rebound deficiency: NEVER HAPPENS

Gerster and Moser published a paper in the journal Nutrition Research that discusses this:

https://www.sciencedirect.com/science/article/abs/pii/S0271531705800958

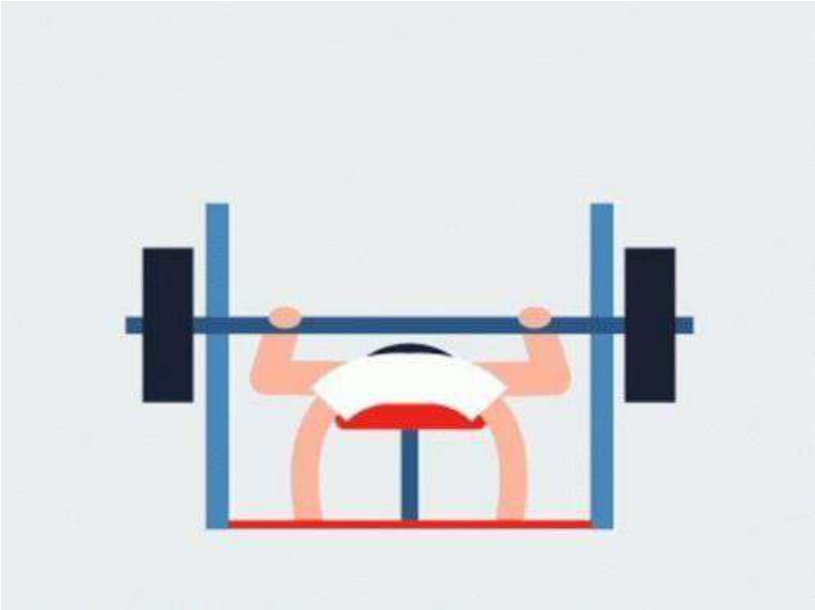
Vitamin C: Dangers

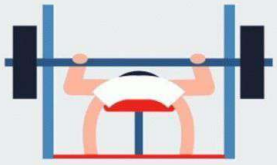
-There are generally no dangers of high dose vitamin C intravenous (IV) therapy.

-High dose oral doses can cause excess intestinal gas and loose bowels that resolves upon lowering or stopping the vitamin C dosage.

-In a tiny fraction of the population, with certain rare genetic defects, excess vitamin C can cause kidney stones and other issues relevant to their genetic disease…

Protein





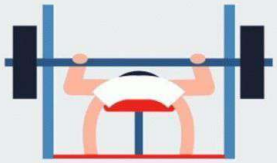
Protein: Testing

Blood Tests

Total Protein..... 6.0-8.5 g/dL

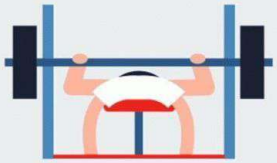
Albumin.....3.8-4.8 g/dL

Total Globulin.....1.5-4.5 g/dL



Protein: Testing

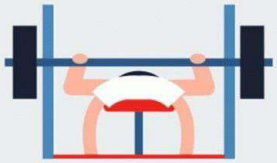
-Patients can still have mild signs of low protein even if these blood markers are in normal range.



Protein: Testing

-Remember, normal ranges are averages, they don't take each unique patient situation into account.

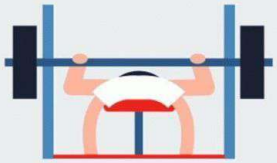
-For this reason, patient history and signs and symptoms are very useful for assessing protein status, especially when combined with a "low normal" blood result.



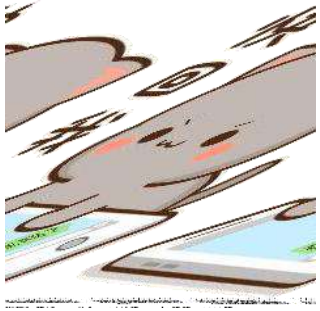
Protein:
How to Supplement

-Have the patient download a meal tracking app on their smartphone or computer. These are free.

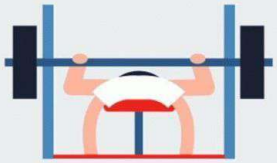
-After a week of meal tracking, the app will report the patient's average daily protein (as well as fats and carbs if needed).



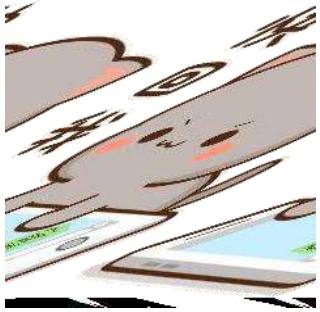
Protein:
How to Supplement



-If labs are low, or if there are any symptoms or signs of low protein, increase protein intake by 25-50% each week until the labs normalize, or symptoms and signs go away.



Protein:
How to Supplement



<u>Increase protein by 25-100% during the following</u>:

-Increased exercise

-Surgery

-Illness

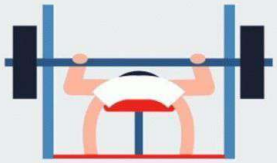
-Infection

-Increased stress

-Pregnancy

-Lactation

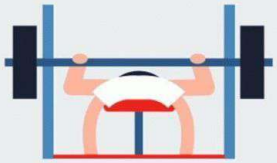
-Postpartum



Protein:
How to Supplement

Protein powder is bulky and so swallowing 20+ protein capsules or tablets daily is not a practical option for most patients, but…

Protein “shakes” can be a practical way to supplement with protein.



Protein:
How to Supplement

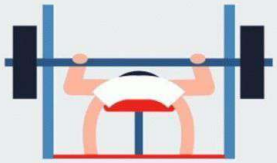
Let's look at 4 sources of protein shakes:

1) Dairy (usually whey concentrates)

2) Collagen

3) Egg

4) Plant based

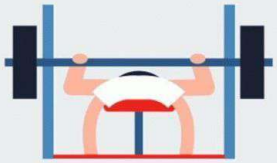


Protein:
How to Supplement

Dairy based protein powders

Benefits:

1) Very well balanced in the proportion of different types of amino acids.

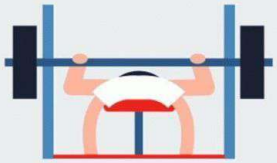


Protein:
How to Supplement

Dairy based protein powders

Benefits:

2) May contain immune stimulating proteins, and growth stimulating proteins (cow milk stimulates small baby cows to fight infections and to grow into large adult cows).

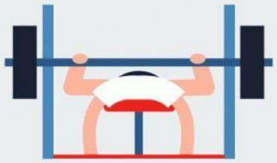


Protein:
How to Supplement

Dairy based protein powders

Benefits:

3) For a human recovering from illness or injury, these immune and growth stimulating proteins can be powerful healing agents.

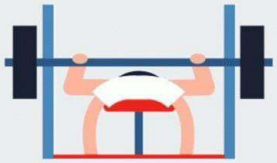


Protein:
How to Supplement

Dairy based protein powders

<u>Downsides</u>

1) For those with allergies and autoimmune conditions, dairy can overstimulate an already overactive immune system, causing flare-ups. The most common sign of this is increased mucus production.

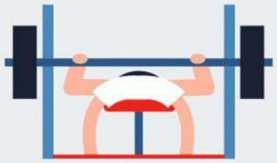


Protein:
How to Supplement

Dairy based protein powders

<u>Downsides</u>

2) Those with lung issues like asthma, or chronic sinus issues, generally do worse with increased production of mucus in the lungs and sinuses.

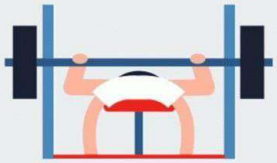


Protein:
How to Supplement

Dairy based protein powders

<u>Downsides</u>

3) Even powders claiming pure whey protein isolate are usually not 100% pure whey.

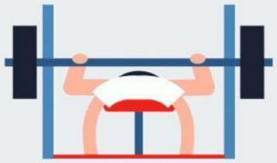


Protein:
How to Supplement

Dairy based protein powders

<u>Downsides</u>

4) Labeling laws allow products to be within 10% of the label's stated claim, so that "100% pure whey isolate" can be up to 10% non-whey stuff, such as lactose, cow antibodies, etc.

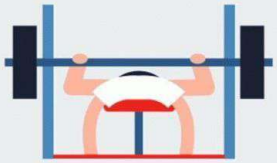


Protein:
How to Supplement

Dairy based protein powders

<u>Downsides</u>

5) Even if the whey is 99% pure, that 1% of immune stimulating components can make a big impact, which for some, will cause: **allergy, asthma, sinus, or even autoimmune flare-ups**.



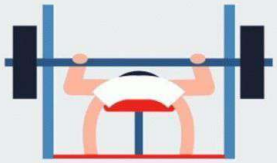
Protein:
How to Supplement

Collagen based protein powders

<u>Benefits:</u>

1) Very concentrated protein.

2)Good for skin, hair, nail, ligament, cartilage, tendon, and bone health.

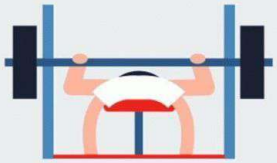


Protein:
How to Supplement

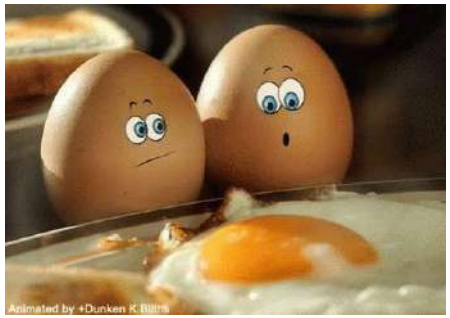
Collagen based protein powders

<u>Downsides:</u>

1) Little to no tryptophan, an essential amino acid.



Protein:
How to Supplement

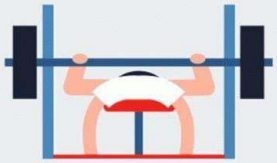


Egg based protein powders

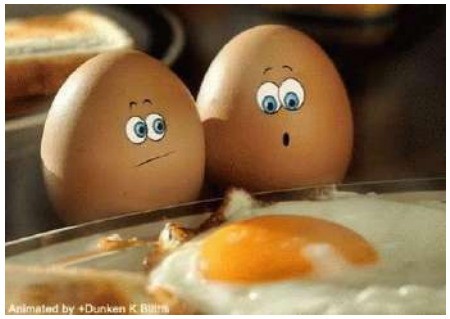
<u>Benefits:</u>

1)Amino acid profile is the closest of all protein sources to human protein needs.

2) Dense protein concentration.



Protein:
How to Supplement

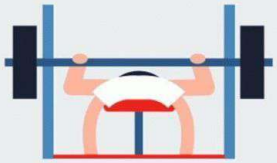


Egg based protein powders

<u>Downsides:</u>

1)Some patients have known allergic reactions to eggs, some find out only after using egg based protein powder.

2)Egg is the second most common food allergen in children behind dairy.



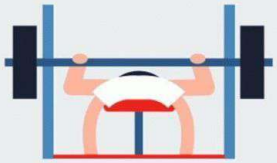
Protein:
How to Supplement

Plant based protein powders

<u>Benefits:</u>

1) Suitable for vegan patients

2) Higher in fiber than other sources



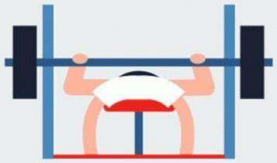
Protein:
How to Supplement

Plant based protein powders

<u>Downsides:</u>

1)Usually does not include all 9 essential amino acids unless from mixed sources.

2)Soy contains estrogenizing compounds that can be bad for men's health and for estrogen dominant women.

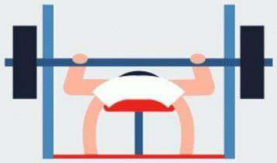


Protein:
How to Supplement

Plant based protein powders

<u>Downsides:</u>

3) Can be harder to mix due to fiber content

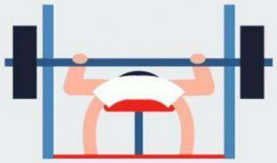


Protein:
Alternatives to Supplementation

Land animals and milks, seafood, eggs:

-All very dense good sources of protein.

-Not good for those allergic to them.

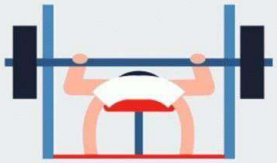


Protein:
Alternatives to Supplementation

<u>Fake meats</u>:

-Soy based - estrogenizing, bad for men and estrogen dominant women

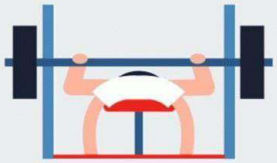
-Gluten based - many patients are allergic and don't know it, eating that much gluten can cause a sensitivity in those who previously weren't



Protein:
Alternatives to Supplementation

Beans and Rice: “Complete Protein” confusion:

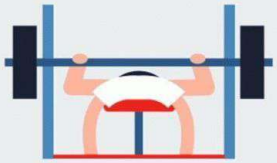
“Complete Protein” means the meal has all 9 essential amino acids in a good ratio. It says nothing about density or amount of total protein. “Beans and rice” is **NOT** a dense source of protein compared to animal sources or concentrated plant protein powders.



Protein:
High Risk Patient Profile

Elderly

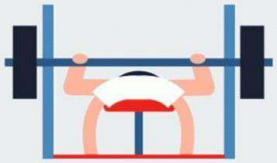
The ability to digest and absorb protein reduces with age, increasing minimum daily intake requirements.



Protein:
High Risk Patient Profile

Athletes

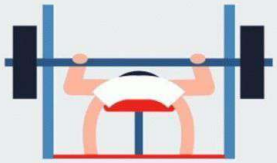
With increased activity comes increased tissue damage which requires more protein to keep up with the increased rate of tissue repair.



Protein:
High Risk Patient Profile

Vegans

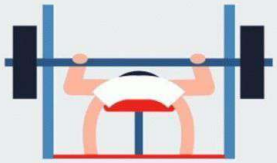
A vegan patient with no symptoms might be getting adequate protein intake. A vegan patient with symptoms of any kind is almost certainly deficient in protein. Vegan protein powder supplementation often substantially reduces symptoms of any kind in vegans.



Protein:
High Risk Patient Profile

Pregnancy/Lactation

Growing a baby and producing milk for a baby requires much higher intake of protein than when not doing so.



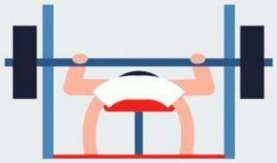
Protein:
High Risk Patient Profile

<u>High Stress</u>

-Mental and emotional stress creates an increased demand for protein.

-Adrenaline is made from the amino acid L-tyrosine.

-Stressed patients tend to eat more refined sugars and carbs, reducing protein intake.



Protein:
High Risk Patient Profile

Patients with:

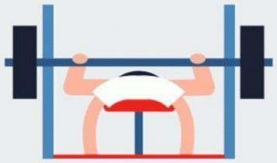
-Anorexia, Bulimia

-Celiac disease

-Inflammatory bowel disease

-Liver disease

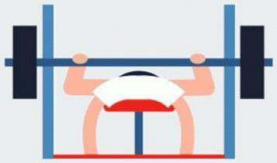
-Kidney disease



Protein:
Symptoms of Low Protein

Swollen tongue

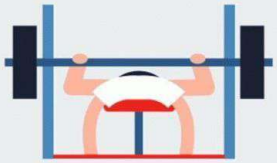
Low protein causes swelling of tissues due to lower than optimal albumin levels. Swelling shows up in the tongue first and can easily be seen by the doctor. Increase protein intake until tongue ridges improve or go away.



Protein:
Symptoms of Low Protein

Swollen tongue

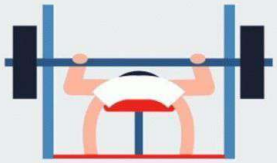
-Make sure the patient's tongue is relaxed when observing. When the tongue swells, it pushes into the gaps between the teeth causing a ridged effect similar to the ridges seen on swollen ankles after removing their socks.



Protein:
Symptoms of Low Protein

Swollen ankles

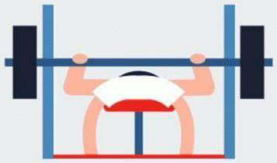
-There are many causes of swollen ankles, but protein is a common one in some high risk patients (elderly, pregnant).



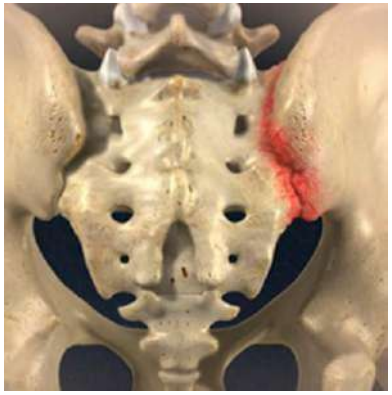
Protein:
Symptoms of Low Protein

Anxiety/Depression/Brain fog/Poor memory

-There are many causes of anxiety, depression, brain fog, and poor memory, but protein deficiency is a common one in high risk patients (vegan, pregnant/nursing, elderly, stressed). Most neurotransmitters (NT) are made by the brain out of dietary proteins. Protein low = NT's low.



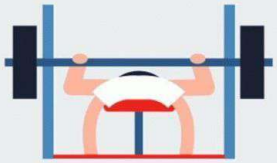
Protein:
Symptoms of Low Protein



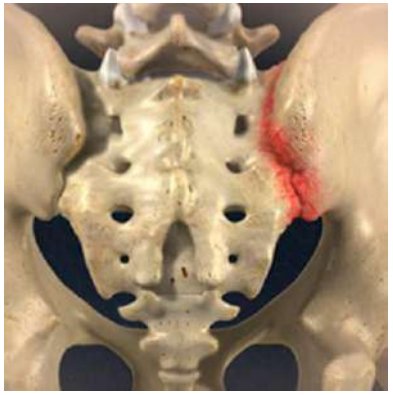
Ligament Laxity

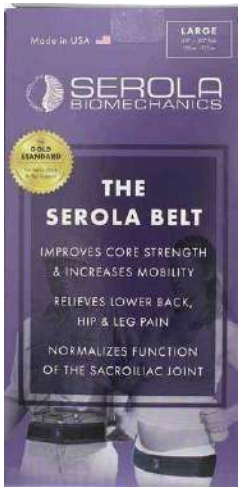
-There are several causes of weak ligaments but low protein can be a major causative factor.

-Weak ligaments due to low protein will cause chronic subluxations and joint pain.



Protein:
Symptoms of Low Protein

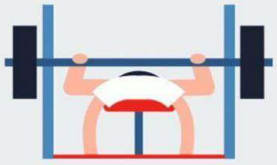




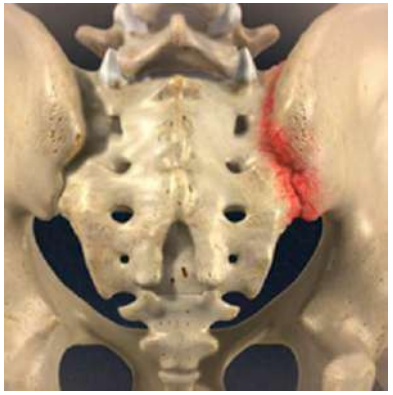
Ligament Laxity

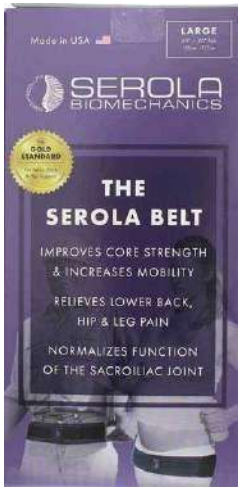
-Bilateral EX ilium listings are common in the protein insufficient, especially pregnant, lactating, vegan, and stressed patients.

-An SI support belt will often immediately relieve back, pelvis, or leg pain in these patients.



Protein:
Symptoms of Low Protein

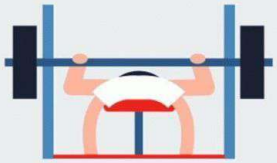




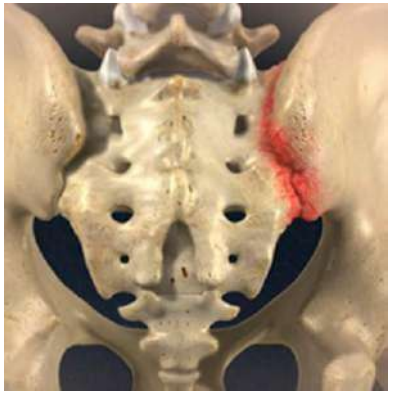
Ligament Laxity

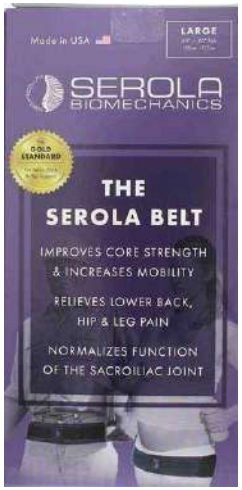
-“Osseous” joint cavitations are contraindicated in ligament lax patients, as they tend to have adverse reactions.

-Use activator, drop table, and “gentle” techniques.



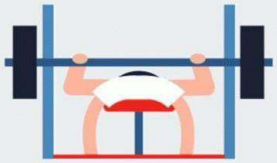
Protein:
Symptoms of Low Protein





Ligament Laxity

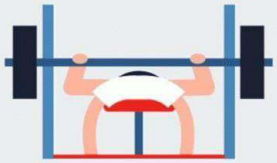
-Soft support braces and tapes are usually indicated along with increased protein intake.



Protein:
Symptoms of Low Protein

Thin Hair. Hair falling out

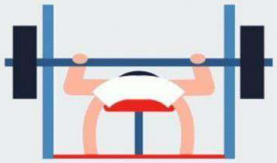
-There are many causes of thinning hair, but low protein is a major cause in high risk patients (elderly, vegan, athletes, stressed).



Protein:
Symptoms of Low Protein

Anemia, bruising, slow healing

-There are many causes of anemia, bruising, and slow healing, but low protein is a major cause in high risk patients (elderly, vegan, athletes, stress, lactating).



Protein:
Conditions Caused by deficiency

Kwashiorkor

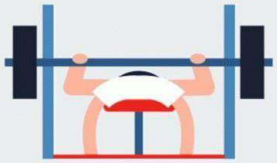
-Edema in all extremities especially the legs

-fatty liver disease

-hair, skin, and nails thin, depigmented, brittle

-bone fractures

-muscle loss



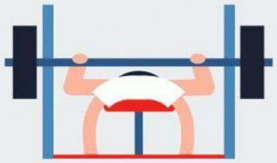
Protein:
Conditions Caused by deficiency

Kwashiorkor

-Stunted childhood growth

-Weak immune system, frequent and/or severe infections

-Fatigue



Protein:
Overdose Risk?

Kidney disease

Patients with severe kidney disease may be aggravated by a high protein diet.

Iodine

Iodine: Testing

-Simple Urine and Blood tests: Reflective of recent intake, not of total body sufficiency.

-Skin test: (Paint red iodine on skin and wait to see how long it takes to absorb fully). Not an accurate test.

Iodine: Testing

-24 hour urine iodine loading and excretion test: Gold standard for total body sufficiency.

-Many labs don't perform this test.

-More difficult for patient than the other tests.

Iodine: Testing

The US Government Recommended Daily Value for iodine intake is 150 mcg for humans older than 4 years (and slightly more, at 220 mcg, for pregnant women).

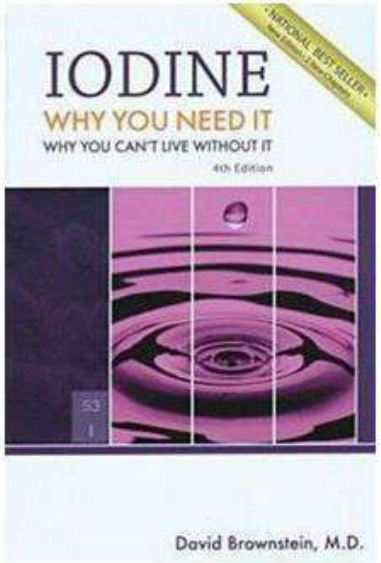
The traditional Japanese diet contains ***100 times*** more iodine than this.

Iodine: Testing

Iodine is the most common deficiency worldwide, leading to miscarriage, birth defects, impaired childhood growth, and to physical and mental disabilities.

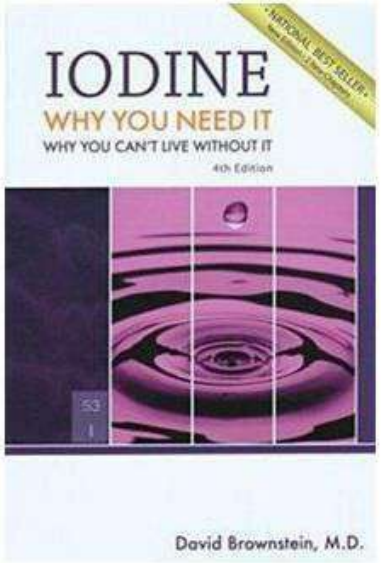
30% of world population is thought to be at risk.

Iodine:
Dr. David Brownstein, MD



Read Dr. David Brownstein's book for more in-depth understanding of why modern humans need so much more iodine intake than the mainstream consensus.

Iodine:
Dr. David Brownstein, MD



He also introduces the term “iodophobia” to refer to clinicians who think that higher iodine intake is bad for humans.

Of course the opposite is true. But there are reasons to be careful recommending it.

We’ll cover this in the upcoming slides.

Iodine:
How to Supplement

Dr. Campise's protocol based on his experience and his study of Dr. David Brownstein's work. →

Biotics Liquid Iodine Forte (or similar):

(Food grade clear potassium iodide: 150 mcg per drop.)

1) Start with 10 drops daily for 7 days.

2) Double to 20 drops daily during second week.

3) Double to 40 drops daily during the third week.

Iodine:
How to Supplement

Dr. Campise's protocol based on his experience and his study of Dr. David Brownstein's work. →

Iodizyme HP (or similar). High potency tablets 12 mg iodine per tablet.

4) Take 1 tablet daily during fourth week.

5) Take 2 tablets daily during fifth week.

6) Take 4 tablets daily during sixth week.

Iodine:
How to Supplement

Additional instructions for patient:

Do ***NOT*** take iodine if previously diagnosed with autoimmune thyroid disease such as **Graves or Hoshimoto's** until in remission as proven by normal TGA and TPO blood tests. It could make these conditions flare up!

Iodine:
How to Supplement

Additional instructions for patient:

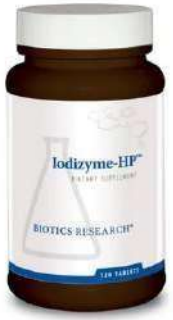
Some patients could have a subclinical undiagnosed case of autoimmune thyroid and could react poorly to iodine by having a thyroid storm.

Iodine:
How to Supplement

Additional instructions for patient:

Thyroid storm symptoms: Sudden onset (within 30 minutes of iodine intake) of any of the following: rapid heart beat, palpitations, anxiety, sweating, nervous energy, insomnia, lightheaded, high blood pressure, hot flashes.

Iodine:
How to Supplement

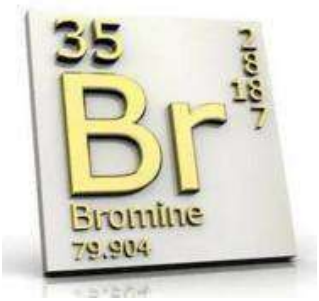


Additional instructions for patient:

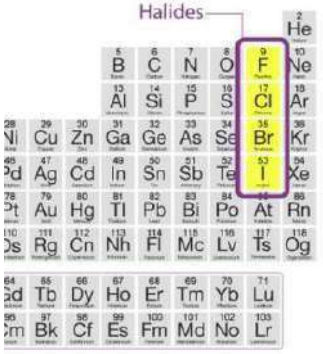
Educate the patient about the very small chance of these symptoms and tell them to immediately stop the supplement and let you know.

Iodine:
How to Supplement

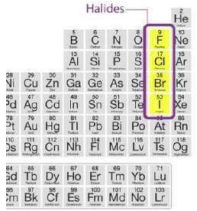
If a patient has thyroid storm symptoms after taking iodine, or if you might suspect undiagnosed autoimmune thyroid issues, send them to get a thyroid panel including TGA and TPO antibody tests.



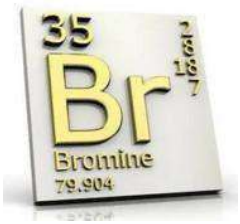
Iodine:
How to Supplement



If the patient's TPO and TGA are normal, then they likely did not have a thyroid storm. Instead, they may be having a bromide detox. The toxic halide salt, bromide, is thought to accumulate in iodine insufficient patients. Taking iodine can sometimes trigger a bromide detox.

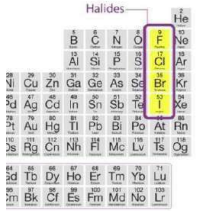


Iodine: How to Supplement

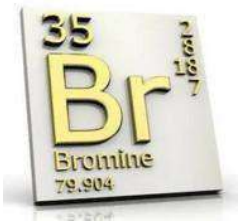


Bromide Detox protocol:

If you suspect a bromide detox, stop the iodine temporarily. Load the patient up with vitamin C and unrefined sea salt to their tolerance for several weeks to slowly reduce bromide levels. Then restart the iodine.



Iodine:
How to Supplement

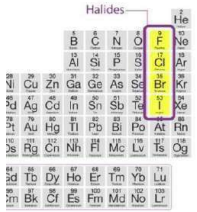


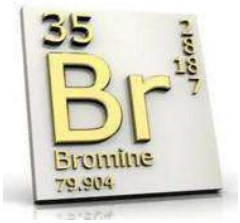
Bromide Detox protocol:

Take:

3,000 to 6,000 mg of vitamin C daily with food.

¼ to 1 teaspoon of unrefined salt per day.





Iodine: How to Supplement

Bromide toxicity:

Bromide toxicity from the consumption of Dead Sea Salt:

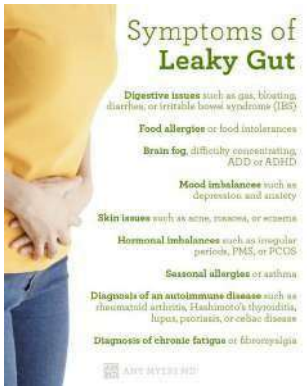
https://www.amjmed.com/article/S0002-9343(09)00954-1/fulltext

The toxic chemistry of methylbromide:

https://journals.sagepub.com/doi/10.1177/0960327113493299

Iodine: How to Supplement

Image from AmyMyersMD.com:



Dr. Campise's Autoimmune Thyroid protocol:

1) Stop all dairy, all grains, and all added sugars.

2) Treat the patient's leaky gut.

3) Improve patient's stress management skills.

From womhoo.com
→

Iodine:
How to Supplement

Dr. Campise's Autoimmune Thyroid protocol:

4)Take topical progesterone as a temporary mild immune suppressant (ok for men too).

5) If ***hyper***thyroid: also take OTC Lithium.

6) Optimize vitamin D and omega 3 levels.

Iodine:
How to Supplement

Dr. Campise's Progesterone protocol:

For men: take 5 drops daily, increase by 1 drop every 3 days until reaches maximal autoimmune thyroid (AIT) symptom relief.

Iodine:
How to Supplement

Dr. Campise's Progesterone protocol:

For women: to avoid estrogen detox symptoms, start with 1 drop daily, increase by one drop every 3 days if no worsening estrogen symptoms until she reaches maximal AIT symptom relief. If estrogen detox symptoms, stop. Restart next wk.

Iodine:
How to Supplement

Dr. Campise's Progesterone protocol:

Progesterone can make some people sleepy, so generally patients should apply it at night before bed. Men can take it because it has no sexualizing activity. This is why placentas produce progesterone instead of estrogen/testosterone.

Iodine:
Alternatives to Supplementation

Eat seafood at every meal:

Seaweed

Fish

Shellfish

Iodine:
High Risk Patient Profile

Vegans

Inland or high altitude dwelling

Average American

Iodine:
Symptoms of Insufficiency

1) Keloids/excessive scar tissue

2) Fibroids

3) Polyps

4) Tough/Thick skin

5) Skin tags

Iodine:
Symptoms of Insufficiency

6) Any low thyroid symptom: fatigue, weight gain, cold hands or feet, joint pain, muscle pain, dry skin, thin brittle hair and nails, heavy or irregular menstruation, infertility, slow heart rate, depression, constipation, poor memory, hoarse voice, low body temperature, anemia, tingling in hands, low libido, puffy face, high cholesterol.

Iodine:
Symptoms of Insufficiency

7) Thick mucus in sinuses, throat, lungs, vagina, or colon.

Mucinase is an enzyme that requires iodine in order to function properly. Mucinase thins mucus. Low iodine intake can lead to a lack of mucinase activity and thus thick mucus.

Iodine:
Symptoms of Insufficiency

7) Thick mucus can cause or aggravate:

-Sinus infections, sinus allergies, sinus headaches

-Asthma, lung allergies, lung infections, respiratory viral infections

-Vaginal or colon inflammation, dysbiosis

Iodine:
Symptoms of Insufficiency

Case Report at Dr. Campise's clinic:

-Chronic asthma for three years with thick mucus in throat requiring daily allergy medication and weekly use of steroid inhaler in 35 yo male.

-4 weeks of iodine protocol and grain/dairy free diet: all symptoms gone and no more meds use.

Iodine:
Diseases Caused by Deficiency

Hypothyroid

Goiter

Infertility

Birth Defects

Hashimoto's/Graves (according to Dr. Brownstein)

Iodine: Overdose

80% of excess iodine intake is eliminated by the kidneys in 24 hours.

Iodine is very safe for those without an autoimmune thyroid disease.

Iodine: Allergy

There is no such thing as an allergy to iodine. By definition, allergies are overreactions to foreign proteins.

Iodine is not a protein.

Iodine:
Allergy

Radioactive “Iodine” Dye, or Iodine Containing Contrast Dye:

Anyone who has an allergic reaction to these dyes is having an allergy to the protein that makes up the dye, not the iodine itself.

Iodine: Allergy

Patients who claim they have an iodine allergy are actually allergic to either medical contrast dyes that happen to contain iodine, or to shellfish chitin (contained in the shell), and not iodine.

I have never found a patient who can't tolerate pure iodine supplements due to an "allergy."

Back To Chiropractic CE Seminars

Nutrition: The Big Five ~ 4 Hours

– Presented by John B. Campise, D.C.–

john@drjohnusa.com 559-285-4121 (Cell)

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