

# PALEO DIET AND OPTIMAL HEALTH



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# Who am I?

## Director Cairns Naturopathic Clinic

Health Scientist with a focus on biochemical individuality and functional medicine.

## Our Services

Optimising physical, emotional and spiritual health

Disease Prevention

Disease Management

## Our Practitioners

Kylie Cloney

Health Scientist, Naturopathic Medicine.

Helen Watson Y

Yoga Instructor, Remedial Massage Therapist

Erin Reece

Lomi Lomi Massage Therapist

Susan Breeze

Cranio Sacral Therapist

Werner Rinseler

Registered Psychologist

Jillian Zamora

Henna Tattooist – adorning and honouring the body



**I believe life is precious, often people do not appreciate the physical body until its already in a disease state. The majority of the western world invest more time and money into physical possessions than they do their own body.**

**I believe in establishing Wellness for Life, Because life should be lived!**



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# PALEO DIET AND OPTIMAL HEALTH

LETS THINK ABOUT WHAT WE EAT...

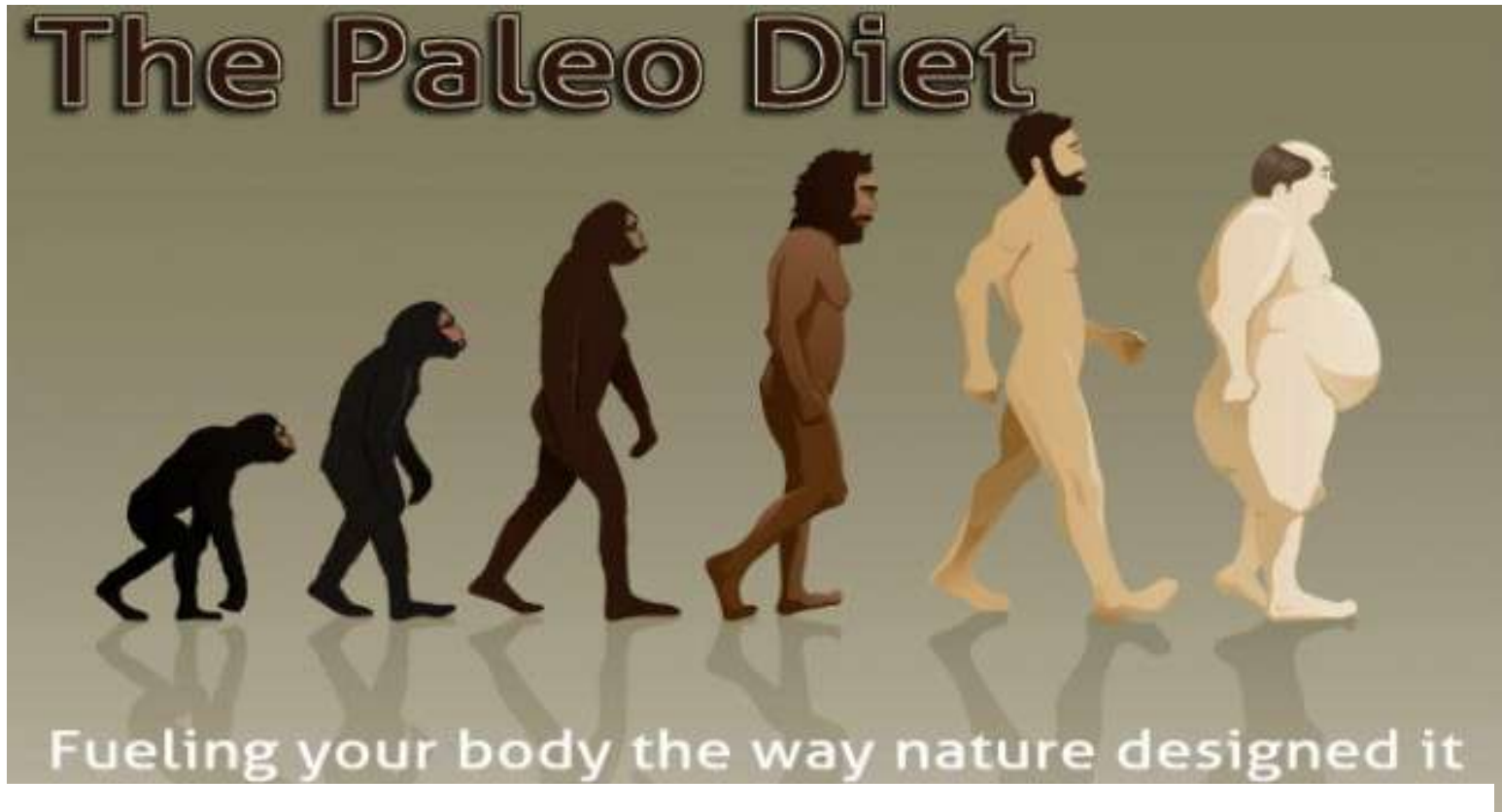
## The Modern Western Diet

- The industrial revolution introduced a new way of life which has rapidly developed in the western world.
- Foods are now available at 24/7. Processing, canning, preserving.
- What effect does this have on the human body?
- Rushing – convenient foods



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How would you eat if you had to hunt or grow your own food?

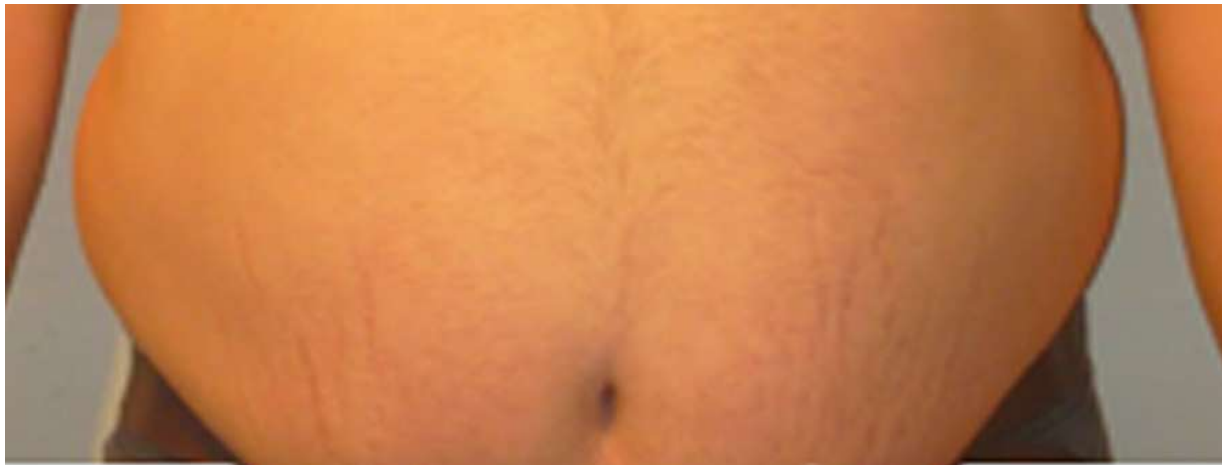


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# Effect of the modern Western Diet

- Poor nutrient content – Macro and Micronutrients
- Increase in obesity
- Increase in Cancer and Cardiovascular disease
- Increase in ASD
- Increase in Infertility
- Increase in Digestive Disease
- Increase in Childhood Food Allergy (gut flora/overexposure to allergen foods)
- Increase in mental health disorders

\*\* Our next Seminar will discuss disease states and management in relation to Paleo diet.



# WARNING

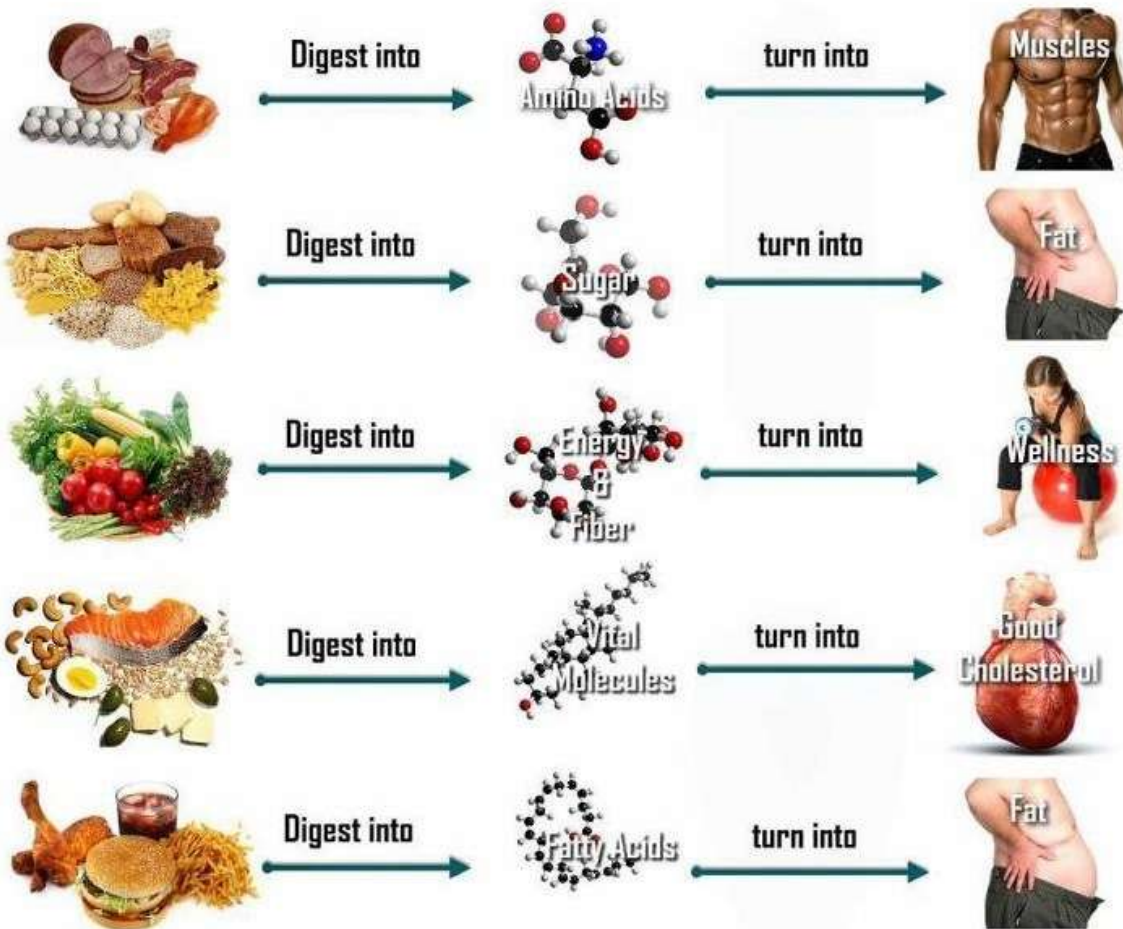
This product can make you obese  
and put you at risk for diabetes,  
cancer, heart failure, hernias,  
incontinence, stroke, gout,  
depression and arthritis



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# HOW FOODS AFFECT OUR BODIES



# USDA Western Food Pyramid



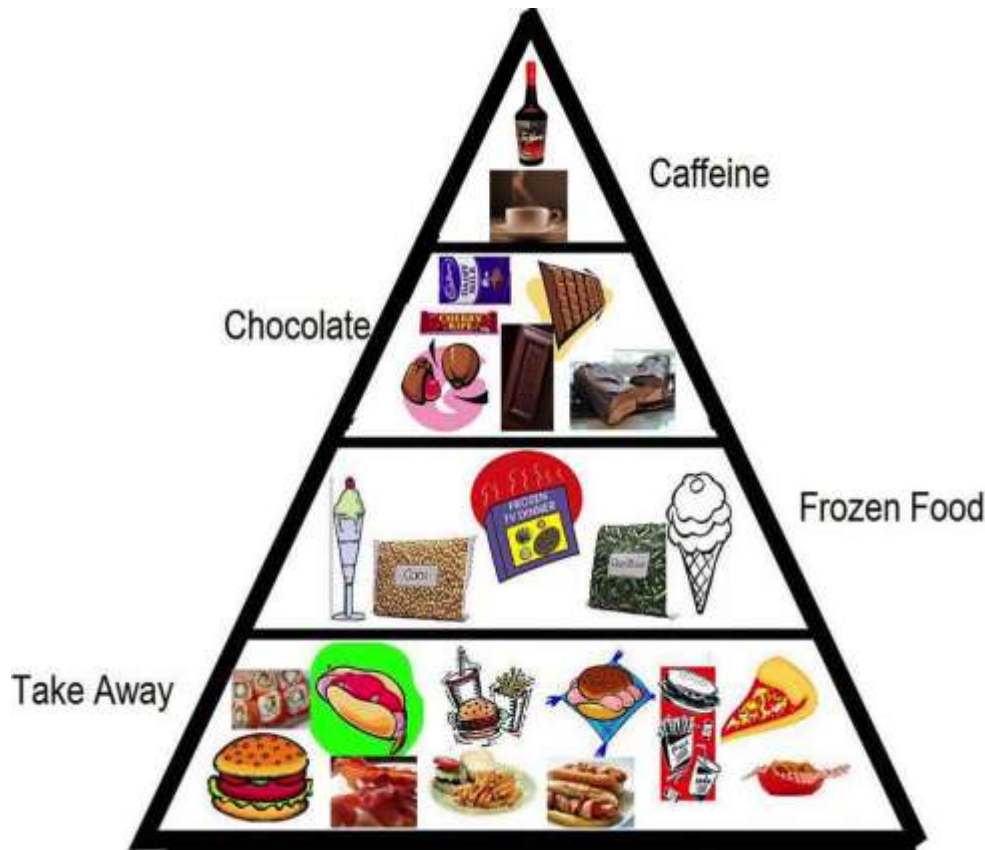
How many westerners actually eat like this though?



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# REAL Western Food Pyramid



Many Westerners are eating like this...

Note – Alcohol should be included in this pyramid for many Australians

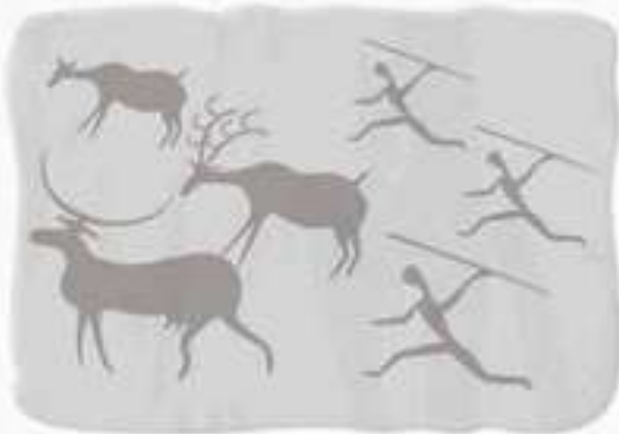


# What is The Paleo Diet?



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The Paleo Diet is an effort to eat like we used to thousands of years ago as cavemen. If a caveman couldn't eat it, neither should you.

Can Eat



And Much More!

(Things we could hunt or find – meats, fish, regional veggies, fruits, leafy greens, nuts, seeds, etc)

Can't Eat



(Things we can't hunt or find – grains, sugar, breads, cereal, pasta, processed foods, etc)



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## EAT:

- ✔ Grass-produced meats
- ✔ Fish/seafood
- ✔ Fresh fruits and veggies
- ✔ Eggs
- ✔ Nuts and seeds
- ✔ Healthful oils (Olive, walnut, flaxseed, macadamia, avocado, coconut)

## DON'T EAT:

- ✘ Cereal grains
- ✘ Legumes (including peanuts)
- ✘ Dairy
- ✘ Refined sugar
- ✘ Potatoes
- ✘ Processed foods
- ✘ Salt
- ✘ Refined vegetable oils (listed in *The Paleo Diet Cookbook* and *The Paleo Diet for Athletes*)



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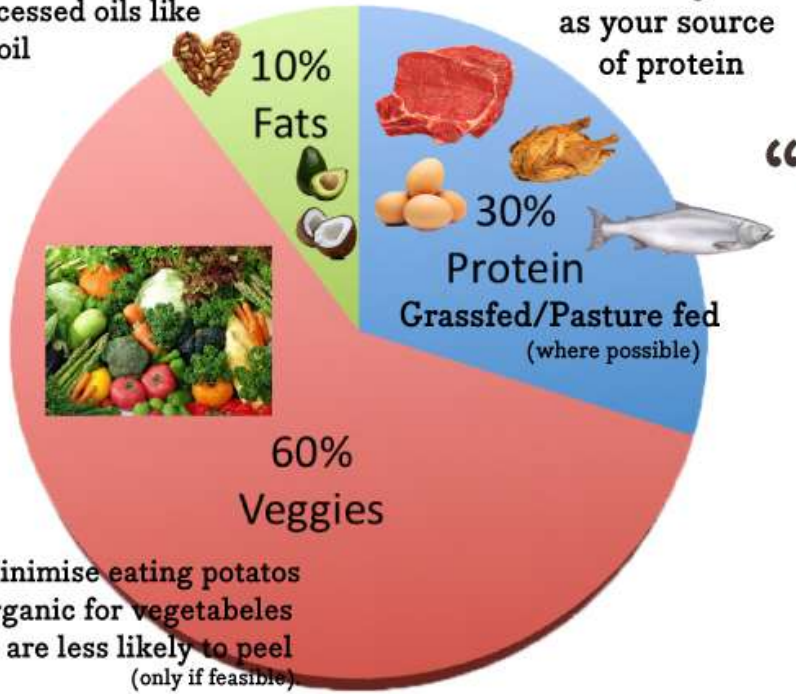
# The Paleo Food Pyramid



# A Paleo Plate

Avoid trans-fat, omega 6 & highly processed oils like vegetable oil

Avoid Legumes as your source of protein



Avoid/minimise eating potatos and select organic for vegetabeles you are less likely to peel (only if feasible)

\*1-2 servings of fruit a day. Fruit should never replace vegetables.



# SUGAR ADDICTION : The Perpetual Cycle

## 1. You Eat Sugar

You Like it, You Crave It  
It has Addictive Properties

## 2 Blood Sugar Levels Spike

Dopamine Is Released In The Brain = Addiction  
Mass Insulin Secreted To Drop Blood Sugar Levels

## 3 Blood Sugar Levels Fall Rapidly

High Insulin Levels Cause Immediate Fat Storage  
Body Craves The Lost Sugar High

## 4. Hunger & Cravings

Low Blood Sugar Levels Cause Increased Appetite And Cravings  
Thus The Cycle is Repeated



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# PALEO DIET AND SUGAR

## Average consumption of sugar per year, per person

*Data source: Food and Agriculture Organisation of the United Nations*

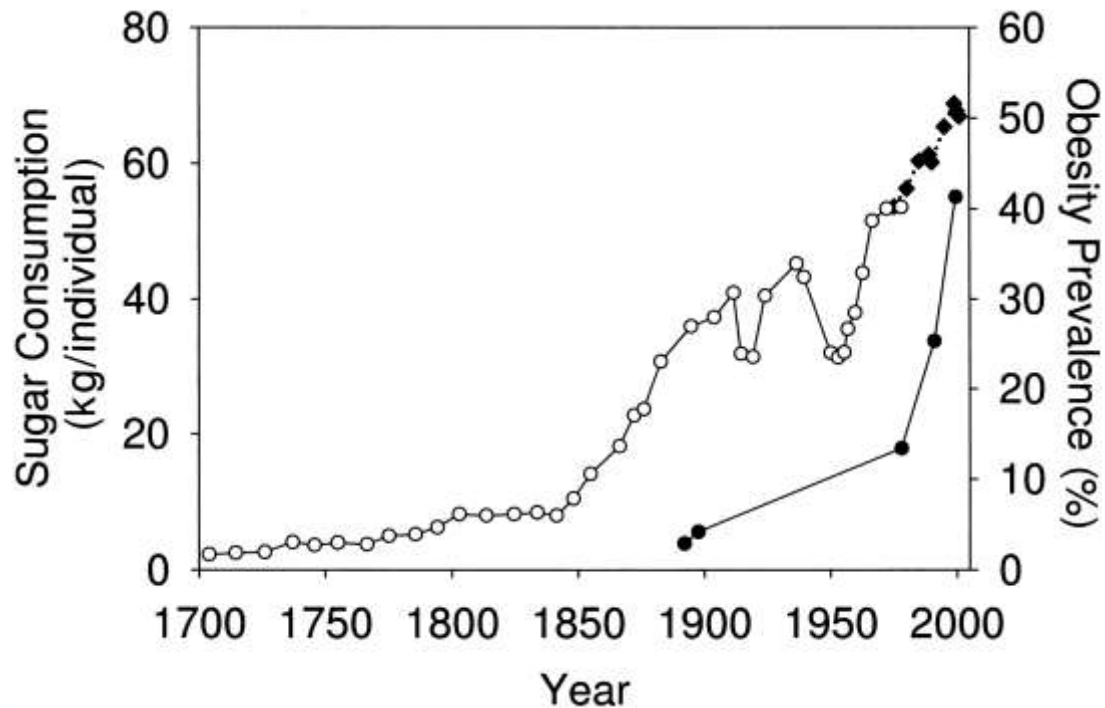


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# PALEO DIET AND SUGAR

American Journal Clinical Nutrition – Statistics National sugar consumption and Obesity scale.



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One large (136g) banana can contain 17g (4.25 teaspoons) of sugar.



One cup of Froot Loops contains 13g (3.25 teaspoons) of sugar.



One 355mL can of Coca-Cola contains 42g (10.5 teaspoons) of sugar.



Two tablespoons of peanut butter contains 2.5g (0.625 teaspoons) of sugar.



Two tablespoons of ketchup contains 8g (two teaspoons) of sugar.



One 355mL glass of orange juice contains 33g (8.25 teaspoons) of sugar.



One cup of grapes contains 15g (3.75 teaspoons) of sugar.



THERE ARE ABOUT **16 PACKS OF SUGAR** IN 1 600ML BOTTLE OF REGULAR SOFT DRINK



**6.75KG WEIGHT GAIN IN ONE YEAR**



It has been estimated that consuming one can of soft drink per day could lead to a 6.75kg weight gain in one year (if these calories are added to a typical US diet and not offset by reduction in other energy sources)

DRINKING A CAN OF SOFT DRINK EACH DAY will significantly increase your risk of

**TOOTH DECAY AND EROSION**



**47% OF CHILDREN**

The 2007 Australian National Children's Nutrition and Physical Activity Survey found that 47% of children (2 to 16 years of age)

**CONSUMED SUGAR-SWEETENED BEVERAGES (INCLUDING ENERGY DRINKS) EVERY DAY**



If you drink 1 x 600ml regular soft drink every day for a year you will drink

**23 KILOS OF SUGAR**



**1.28 BILLION LITRES**

**THE AMOUNT OF CARBONATED/STILL DRINKS BOUGHT IN 2012**

In the 12 months to October 2012, Australians bought 1.28 billion litres of carbonated/still drinks with sugar, with regular cola drinks being the most popular (447 million litres)

**9 PACKS OF SUGAR IN 600ML SPORTS DRINK**



**6 PACKS OF SUGAR IN 250ML ENERGY DRINK**



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Women should limit their sugar intake to less than 6 teaspoons per day.  
Men should limit their daily sugar intake to less than 9 teaspoon.

**BUT**

The average American has more than 22 teaspoons of sugar a day!

The average child consumes 32 teaspoons per day!



[PositiveMed.com](http://PositiveMed.com)



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**80%**

of food items in  
U.S. grocery  
stores are spiked  
with added sugar



**1/3**

of Americans  
will have  
diabetes  
by 2050



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# PALEO DIET AND CARBOHYDRATES

- The Paleo diet is NOT a low carbohydrate high protein diet.
- Adequate carbohydrates are needed to avoid fatigue and weight gain (metabolic damage, catabolism etc)
- All Vegetables, Fruits & Sweet potatoes are sources of carbohydrates.



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## My Paleo Plate: A guide to high nutrient balanced paleo meals

**Fat:** Eat about a thumb size at each meal. 2 – 3 teaspoons of added oil or fat, fruits about 2 – 3 tablespoons, if avocado, 1/4 to 1/2. Make sure you eat low omega 6 fats and foods high in omega 3 (Use this as a guide: Omega 3 and 6 in fish, oils, meats and seafood) If you are lean and need the extra fat – don't be afraid to add more healthy fats to your meals. If you need to lose fat, eat really leaner cuts of meat and add only a small amount if any fat to meals.

**Fruit carbohydrates:** as needed. Fruit contains both glucose and fructose. Fructose is useful for topping up liver glycogen after exercise. Have 1 – 3 serves a day, primarily highly coloured fruit like berries. This is a 1/2 cup serve which has about 10 grams of carbs.  
Total carbs in this meal are approx. 40 grams.

**Organ meats:** For their high nutrient value prior a week – liver, kidneys etc. (not shown)

**Herbs and spices:** Use liberally.

**Make bone broth and drink a small cup most days, or use bouillon cubes like oxtail and lamb necks in slow cooked stews etc. These are rich in collagen and glucosamine, good for joints and gut.**

**This broth was made from beef bones, and has acid of vegetables to make soup.**



**Probiotic foods:** kefir, kimchi, sauerkraut etc. for healthy gut bacteria. The pink is sauerkraut.

**Non starch vegetables:** Fill the rest of your plate, after the protein and starch with vegetables (in this pic there are more than a plateful – this is to illustrate the different groups.)  
Some people may not feel comfortable eating this amount of fibre, or feel better eating well cooked vegetables.  
Others may react to some vegetables if they are high in **histamines** or **ECOMNES**  
At least one cup per meal in addition to starch. Try to get two cups per day from each of the subgroups, green vegetables, and leafy greens.

**Protein:** amount needed is approx. roughly 1.5 – 2 grams per kilo ideal body weight per day. For most people following this rule 1 – 2 palm of protein food per meal just happens to work out very closely to this. The amount on this plate is 150 grams cooked salmon. That's about 30 grams of usable protein. (If you want to be more precise – use this as a guideline: Protein amounts in 100g food, meat and dairy fat really unprocessed meats with no sugar)

**Carbohydrate:** for adequate carbohydrate – at least 100 grams per day, this is the amount that most people need for physiological functions. If you are doing high intensity exercise like Cross Fit or Boot camp, you may need more: 150 – 200 grams a day. A bit of starch at each meal and one post workout usually supplies enough. On this plate there is beetroot, sweet potato and banana. About a cup full = 30 grams carbs. For a more accurate guide to carb amounts see the Paleo diet carb list and carb



# Why NO GRAIN?



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# Grains and Gluten....

## Zonulin

Opens up the spaces between the cells of the intestinal lining. That normally occurs, in order for nutrient and other molecules to get in and out of the intestine. However, when leaky gut is present, the spaces between the cells open up too much allowing larger protein molecules to get into the bloodstream where an immunologic reaction can take place. Once that happens, the body is primed to react to those proteins each and every time they appear. It can also cause leakage of intestinal contents, like bacteria into the immune system creating inflammation and overloading the liver's ability to filter out this garbage.

## Triggers that open the Zonulin doorway

Based on Dr. Fasano's research, we know that the two most powerful triggers to open the zonulin door are gluten and gut bacteria in the small intestine. Gliadin causes zonulin levels to increase both in those people who have celiac disease and those who do not. As the zonulin level rises, the seal between the intestinal cells diminishes, opening up spaces between cells that allow all sorts of things to pass right through. This is called "leaky gut". Its as if the security guard that keeps the bad guys out is taking a nap! Sometimes large food molecules will pass through to the immune system. The immune system thinks they are foreign invaders and will mount an immune response leading to food sensitivities. In addition this immune activation leads to more damage to the intestinal cells (called enterocytes) and the gut becomes more inflamed and more permeable or "leaky". As the damage continues, the microvilli that line the intestines and absorb nutrients become damaged, leading to other nutrient deficiencies.

## Top causes of increased zonulin and development of leaky gut

SIBO = small intestinal bacterial overgrowth

- Fungal dysbiosis or Candida overgrowth
- Parasite infections
- Overgrowth of harmful organisms, like bacteria or yeast in the intestine
- Gliadin in the diet (gluten containing foods)

## Gliadin

a protein in wheat, that like gluten, is a trigger for people with celiac disease. However, a study published in the Scandinavian Journal of Gastroenterology in 2006 clearly showed that gliadin can affect zonulin **even in people without the gene for celiac**. The researchers concluded that Based on our results, we concluded that gliadin activates zonulin signaling irrespective of the genetic expression of autoimmunity, leading to increased intestinal permeability to macromolecules. The significance of this is that gluten affects intestinal permeability in all persons to different extents. It also means that 100% of patients with autoimmune disease or leaky gut could potentially benefit from a gluten-free diet.

Gliadin can affect zonulin even in people without the gene for celiac disease..... The significance of this is that gluten affects intestinal permeability in all persons...





# ZONULIN – Gluten and Grains



**Comparison with ancestral diets suggests dense a-cellular carbohydrates promote an inflammatory microbiota, and may be the primary dietary cause of leptin resistance and obesity.**

[Journal of Diabetes Metabolic Syndromes](#) 2012;5:175-89. doi: 10.2147/DMSO.S33473. Epub 2012 Jul 6.

### Abstract

A novel hypothesis of obesity is suggested by consideration of diet-related obese homeostatically guard their elevated weight. In rodent models of high fat diet-induced obesity, leptin resistance is seen initially at vagal afferents, blunting the actions of satiety mediators, the actions of which are in turn blunted by triglyceride-triggered SOCS3 signaling implicated. In humans, dietary fat and fructose co-activate SOCS3 signaling. Crucially however, in humans, fructose more, nutritionally, that neither glycemic index nor energy density homeostasis further, virtually all "ancestral foods" have markedly lower glycemic indices, a property quite independent of glycemic index. Thus the "forgotten organ" of the gastrointestinal microbiota is a prime candidate to be influenced by evolutionarily unprecedented postprandial luminal carbohydrate concentrations. The present hypothesis suggests that in parallel with the bacterial effects of sugars on dental and periodontal health, a-cellular flours, sugars, and processed foods produce an inflammatory microbiota via the upper gastrointestinal tract, with fat able to effect a "double hit" by increasing systemic absorption of lipopolysaccharide. This model is consistent with a broad spectrum of reported dietary phenomena. A diet of grain-free whole foods with carbohydrate from cellular tubers, leaves, and fruits may produce a gastrointestinal microbiota consistent with our evolutionary condition, potentially explaining the exceptional macronutrient-independent metabolic health of non-Westernized populations, and the apparent efficacy of the modern "Paleolithic" diet on satiety and metabolism.

**A-Cellular flours, sugars and processed foods produce inflammatory microbiota via the upper gastrointestinal tract. ...**

**A diet of grain-free whole foods with carbohydrate from cellular tubers, leaves and fruits may produce a gastrointestinal microbiota consistent with our evolutionary condition...Potentially explaining the exceptional macronutrient metabolic health of NON Westernized populations...**



# ZONULIN ASSOCIATED DISEASE

## Major diseases associated to Zonulin (Pre-HP2)

### AUTOIMMUNE DISEASES

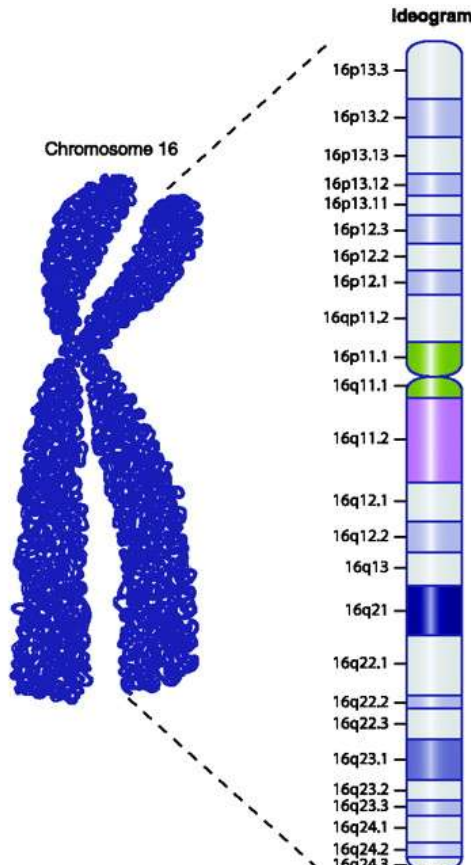
- Ankylosing spondylitis.
- Celiac disease
- Inflammatory bowel disease (Cronh's disease)
- Rheumatoid arthritis
- Systemic lupus erythematosus
- Type 1 diabetes

### CANCERS

- Brain cancers (gliomas)
- Breast cancer
- Lung adenocarcinoma
- Ovarian cancer
- Pancreatic cancer

### DISEASES OF THE NERVOUS SYSTEM

- Chronic inflammatory demyelinating polyneuropathy (CIDP)
- Multiple sclerosis (Autoimmune disease?)
- Schizophrenia (Autoimmune disease?)



## Major diseases associated to Chromosome 16

### AUTOIMMUNE DISEASES

- Adult polycystic kidney disease
- Inflammatory bowel diseases (NOD2 locus)
- Systemic lupus erythematosus
- Type 1 diabetes
- Rheumatoid arthritis

### CANCERS

- Acute nonlymphocytic leukemia
- Breast cancer
- Fanconi's anemia
- Lymphoma, diffuse large B-cell
- Myeloid leukemia, acute
- Prostate cancers

### DISEASES OF THE NERVOUS SYSTEM

- Batten's disease (juvenile onset neurodegenerative disorder)
- Lou Gehrig's disease
- Leukodystrophy
- Multiple sclerosis
- Autism



# RICE - Why not Paleo.

## Phytin / Phytate

This stuff binds itself to minerals and keep them from being absorbed and get at the minerals fairly well, but they eventually get removed. Removing the bran removes the phytate. That's why white rice is basically phytate-free.

**Trypsin inhibitor found in rice – means we can't effectively digest the protein we eat with it.**

As Mark Sisson puts it, "Phytate is a natural mineral chelator. It binds to minerals and keeps them from being absorbed – (poor mineral balance)."

**Phytate in hull of brown rice binds to minerals and keeps them from being absorbed – (poor mineral balance)**

## Trypsin Inhibitor

Trypsin is an enzyme produced in the pancreas, and its job is to cleave protein peptide chains into amino acids for easy absorption in the digestive process. If trypsin is blocked – say, by the trypsin inhibitor found in rice – we can't effectively digest the protein we eat with it.

But again, trypsin inhibitor is "located primarily in the outer embryo of the rice seed, with a bit in the bran, and none in the polished, milled seed. Bran-free white rice has no trypsin inhibitor. Steaming rice bran deactivates it, too."

## Haemagglutinin-lectin

Haemagglutinin-lectin is a lectin that binds to certain carbohydrates and nutrients. But it's located in rice bran only, and once it's cooked, it's neutralized.

## Oryzacystatin

Like trypsin, cysteine proteases are enzymes that degrade proteins. They're involved in apoptosis (necessary programmed cell death) to certain immune responses. Unlike trypsin, however, oryzacystatin doesn't get milled away or neutralized through cooking. "Oryzacystatin remains 100% active after at least 30 minutes of boiling."

**Cysteine proteases .... Responsible for host of biological processes... including immune responses.....inhibitors in rice mess with these processes... unable to be milled away or neutralised in cooking.**

## Allergens

Wheat-sensitive allergic reactions in particular.

**Cooked white rice..doesn't contain anti-nutrients... Brown rice is worse for you...**

Autoimmune disorders seem more susceptible to rice allergy, too (big surprise there), and eczema, gastrointestinal distress, or asthma. If you're sensitive to food in general and grains in particular, it's not cause an immediate reaction, there remains the question of latent, hidden damage.

If you stick with white rice (which doesn't contain the phytate and trypsin inhibitor content of the less-milled brown rice) and you cook it properly (which neutralizes the haemagglutinin-lectin), you don't have much to worry about from an anti-nutrient perspective. Yes, that's right: Brown rice is worse for you than white rice.

But just because white rice won't destroy you doesn't mean that it's some kind of super-food. "White, milled, polished rice is basically pure starch... It is essentially a blank slate, nothing all that bad about it, but nothing all that great, either." Rice can be tasty, but it's really nothing more than empty, starchy calories.

**White, Milled polished rice is basically pure starch... it is essentially a blank slate, nothing all that bad about it but nothing all that great either... nothing more than empty calories...**



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# What about RICE? Its gluten free...

- May provide starch for dysbiosis – bad gut bacteria.
- Much of the nutritional value of rice depends on whether the hull of the rice has been removed (white rice) or left on (brown rice).
- The hull does contain all the nutrients in the rice but also contains phytates and other anti-nutrients.
- White rice is essentially nothing but carbohydrate - glucose with neither nutrients nor toxins.
- Rice – May create a nutrient deficiency in your diet by displacing too many nutrient-dense foods – filling you up with empty calories.



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# Why not just eat Gluten Free Products?

- Gluten free products are often overly processed and nutrient deficient. Check the Labels: hollow carbohydrates often full of sugar.
- Don't encourage you to change eating habits
- Keep for occasional use only

# What about Fat/Cholesterol?



The traditional diets of Pacific islanders free of heart disease, for example, vary widely in their proportions of fat and carbohydrate, but as can be seen in Figure 1, they are all rich in saturated fat and low in PUFA when compared to the standard American diet.

Each of these traditional diets is based primarily on starches, fruits, coconut and fish, so the PUFA comes mostly from fish rather than from vegetable oils.

	TOKELAU	PUKAPUKA	KITAVA	USA
Protein	12	12	10	15
Carbohydrate	34	50	69	50
Total Fat	54	38	21	33
Saturated	49	30	17	11
Monounsaturated	3	6	2	12
Polyunsaturated	2	2	2	7

FIGURE 1. Macronutrient Intakes in the Traditional Diets of Three Pacific Island Populations Free of Heart Disease and in the Standard American Diet as a Percentage of Total Calories.<sup>1, 2, 3</sup>



# Why no Legumes?



- Alfalfa
- Baby Lima Bean
- Black Turtle Bean
- Broad Bean
- Chili Bean
- Dwarf Beans
- English Bean
- Field Pea
- Frijole Negro
- Green and Yellow Peas
- Lespedeza
- Madagascar Bean
- Molasses Face Bean
- Mungo Bean
- Peanuts
- Red Bean
- Red Kidney Bean
- Scarlet Runner Bean
- Southern Peas
- Wax Bean
- White Pea Bean
- Asparagus Bean
- Black Bean
- Boston Bean
- Cannellini Bean
- Coco Bean
- Egyptian Bean
- Fava Bean
- French Green Beans
- Great Northern Bean
- Kidney Beans
- Licorice
- Mexican Black Bean
- Mung Bean
- Navy Bean
- Peruvian Bean
- Red Clover
- Rice Bean
- Small Red Bean
- Sugar Snap Peas
- White Clover
- Asparagus Pea
- Black-eyed Peas
- Boston Navy Bean
- Chickpeas
- Cranberry Bean
- Egyptian White Broad Bean
- Fava Coceira
- Frijol Bola Roja
- Green Beans
- Lentils
- Lima Bean
- Mexican Red Bean
- Mung Pea
- Pea Bean
- Pinto Bean
- Red Eye Bean
- Runner Bean
- Snow Peas
- Soybean
- White Kidney Bean





# Almonds have a neutral effect on serum lipid profiles: a meta-analysis of randomized trials

[J Am Diet Assoc.](#) 2009 May;109(5):865-73. doi: 10.1016/j.jada.2009.02.014.

[Phung OJ](#)<sup>1</sup>, [Makanji SS](#), [White CM](#), [Coleman CI](#).

<sup>1</sup>University of Connecticut, Hartford Hospital Evidence-Based Practice Centre, Hartford, CT 06102-5037, USA.

## Abstract

The aim was to evaluate the influence of almonds on lipid parameters

Almond consumption may be associated with improvements in serum lipid profiles. The aim was to evaluate the influence of almonds on lipid parameters to help define the role of almonds as a lipid modulator. MEDLINE, EMBASE, Cochrane CENTRAL, and the Natural Medicines Comprehensive Database were searched through July 2008, with no language restrictions, for randomized controlled trials of almonds in which at least one of the following endpoints: total, low-density lipoprotein (LDL) cholesterol, triglycerides, or the LDL:HDL ratio. A manual search of references from published articles was also conducted to identify additional relevant trials. Five randomized, controlled trials (totalling 142 participants) met all inclusion criteria. Open meta-analysis, almond consumption ranging from 25 to 168 g/day significantly lowered total cholesterol [weighted mean difference -6.95 mg/dL (95% confidence interval [CI] -13.12 to -0.772) (-0.18 mmol/L [95% CI -0.34 to -0.02) and LDL cholesterol [weighted mean difference -5.79 mg/dL (95% CI -11.2 to -0.3) (-0.15 mmol/L [95% CI -0.34 to 0.04) but had no significant effect on HDL cholesterol, triglycerides, or LDL:HDL ratio in any analysis ( $I^2=0\%$  for all). Review of funnel plots and the Egger's weighted likelihood of publication bias in all analyses ( $P>0.25$  for all). Almond consumption did not significantly affect LDL or HDL cholesterol, triglycerides, or the LDL:HDL ratio. These findings do not support the ingestion of almonds solely for their lipid modifying effects. Both the lipid modulating effects and the safety/tolerability of almonds should be further investigated through the conduction of larger randomized, double-blinded trials of longer duration. Such studies might focus specifically on whether the efficacy of almonds as a lipid modulator varies

Five randomized, controlled trials (totalling 142 participants) met all inclusion criteria

Almond consumption may decrease total cholesterol and does not significantly affect LDL or HDL cholesterol, triglycerides, or the LDL:HDL ratio.



# Paleolithic diets as a model for prevention and treatment of Western disease.

[Lindeberg S.](#)

[Am J Hum Biol.](#) 2012 Mar-Apr;24(2):110-5. doi: 10.1002/ajhb.22218. Epub 2012 Jan 19.

Department of Primary Health Care Research, Lund University, Sweden. [staffan.lindeberg@med.lu.se](mailto:staffan.lindeberg@med.lu.se)

## Abstract

### OBJECTIVES:

To explore the possibility that a paleolithic diet could prevent or reduce the risk of degenerative Western disease.

### METHODS:

Literature review of African Paleolithic foods in relation to recent evidence of healthy nutrition.

### RESULTS AND DISCUSSION:

Available evidence lends weak support in favour and little against the notion that lean meat, fish, vegetables, tubers, and fruit can be effective in the prevention and treatment of common Western diseases. There are no obvious risks with avoiding dairy products, margarine, oils, refined sugar, and cereal grains, which provide 70% or more of the dietary intake in northern European populations. If stroke, coronary heart disease, type 2 diabetes, and cancer are preventable by dietary changes, an ancestral-like diet may provide an appropriate template.

There are no obvious risks with avoiding dairy products, margarine, oils, refined sugar, and cereal grains, which provide 70% or more of the dietary intake in northern European populations



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## WHY BEANS ARE BAD

PHYTIC ACID

LECTINS

CANAVANINE

HIGH IN COPPER

LOW NUTRIENT DENSITY

THEY MAKE YOU GASSY



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# Why no Dairy?

- Mucous forming
- Lactose intolerance/Mal-digestion
- Pasteurization
- Links to increase in breast and prostate cancer
- Dairy - High allergen proteins - inflammation, autoimmune stimulation
- Getting regular exercise, especially weight-bearing and muscle strengthening exercise.
- Getting adequate vitamin D, whether through diet, exposure to sunshine, or supplements.
- Consuming enough calcium to reduce the amount the body has to borrow from bone.
- Acid/Alkaline base – regulated via kidney function is vital for maintaining healthy calcium levels – Kidneys excrete more calcium in an acidic body.
- Consuming adequate vitamin K, found in green, leafy vegetables.
- Not getting too much preformed vitamin A.



# Whole milk intake is associated with prostate cancer-specific mortality among U.S. male physicians.

[J Nutr.](#) 2013 Feb;143(2):189-96. doi: 10.3945/jn.112.168484. Epub 2012 Dec 19.

[Song Y<sup>1</sup>](#), [Chavarro JE](#), [Cao Y](#), [Qiu W](#), [Mucci L](#), [Sesso HD](#), [Stampfer MJ](#), [Giovannucci E](#), [Pollak M](#), [Liu S](#), [Ma J](#).

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## Abstract

Previous studies have associated higher dairy intake with reduced prostate cancer (PCa) incidence, but little data are available concerning milk types and the relation between milk intake and risk of fatal PCa. We investigated the association between intake of dairy products and the incidence and survival of PCa during a 28-y follow-up.

The intake of total dairy products was associated with increased PCa incidence....

We conducted a cohort study in the Physicians' Health Study (n = 21,660) and a survival analysis among the incident PCa cases (n = 2806). Information on dairy product consumption was collected at baseline. PCa cases and deaths (n = 305) were confirmed during follow-up. The intake of total dairy products was associated with risk of PCa (HR = 1.12 (95% CI: 0.93, 1.35); >2.5 servings/d vs. ≤0.5 servings/d).

Whole milk intake remained associated with risk of progression to fatal disease after diagnosis...

Skim/low-fat milk intake was positively associated with risk of low-grade, early stage, and screen-detected cancers, whereas whole milk intake was associated only with fatal PCa [HR = 1.49 (95% CI: 0.97, 2.28); ≥237 mL/d (1 serving/d) vs. rarely consumed]. In the survival analysis, whole milk intake remained associated with risk of progression to fatal disease after diagnosis [HR = 2.17 (95% CI: 1.34, 3.51)]. In this prospective cohort, higher intake of skim/low-fat milk was associated with a greater risk of nonaggressive PCa. Most importantly, only whole milk was consistently associated with higher incidence of fatal PCa in the entire cohort and higher PCa-specific mortality among cases. These findings add further evidence to suggest the potential role of dairy products in the development and prognosis of PCa.



# All about calcium.....

Green vegetables, sesame seeds, and even oranges contain lots of usable calcium, without problems associated with dairy. Keep in mind that [you retain the calcium better and just do not need as much when you don't consume a diet heavy in animal products and sodium, sugar, and caffeine.](#)

Many green vegetables have calcium-absorption rates of over 50 percent, compared with about 32 percent for milk. [Additionally since animal protein induces calcium excretion in the urine, the calcium retention from vegetables is higher.](#) All green vegetables are high in calcium.

Weaver, C.M., and K.L. Plawecki. 1994. Dietary calcium: adequacy of a vegetarian diet. *Am. J. Nutr.* 59 (supp.): 1238-41S.

The American "chicken and pasta" diet style is significantly low in calcium, so adding dairy as a calcium source to this mineral-poor diet makes superficial sense it is certainly better than no calcium in the diet. However, much more than just calcium is missing. The only reason cow's milk is considered such an important source of calcium, is that the American diet is centred on animal foods, refined grains, and sugar, all of which are devoid of calcium. Any healthy diet containing a reasonable amount of unrefined plant foods will have sufficient calcium without milk. Fruits and vegetables strengthen bones. [Researchers have found that those who eat the most fruits and vegetables have denser bones. These researchers concluded that not only are fruits and vegetables rich in potassium, magnesium, calcium, and other nutrients essential for bone health, but, because they are alkaline, not acid-producing, they don't induce urinary calcium loss.](#) Green vegetables in particular have a powerful effect on reducing hip fractures, for they are rich not only in calcium but in other nutrients, such as vitamin K, which is crucial for bone health.

Tucker, K.L., M. T. Hannan, H. Chen, et al. 1999. Potassium, magnesium, and fruit and vegetable intakes are associated with greater mineral density in elderly men and women. *Am. J. Clin. Nutr.* 69 (4): 727-36; News, S. A., S.P. Robins, M.K. Campbell, et al. 2000. Dietary influences on bone mass and bone metabolism: further evidence of a positive link between fruit and vegetable consumption and bone health? *Am. J. Clin. Nutr.* 71 (1): 142-51.



# Bio-available Calcium Absorption

Food <sup>1</sup>	Serving size	Calcium <sup>2</sup> content	Fractional <sup>3</sup> absorption
	g	mg	%
Milk	240	300	32.1
Almonds, dry roasted	28	80	21.2
Beans, pinto	86	44.7	17.0
Beans, red	172	40.5	17.0
Beans, white	110	113	17.0
Broccoli	71	35	52.6
Brussel sprouts	78	19	63.8
Cabbage, Chinese	85	79	53.8
Cabbage, green	75	25	64.9
Cauliflower	62	17	68.6
Citrus punch with CCM	240	300	50.0
Fruit punch with CCM	240	300	52.0
Kale	65	47	58.8
Kohlrabi	82	20	67.0
Mustard greens	72	64	57.8
Radish	50	14	74.4
Rutabaga	85	36	61.4
Sesame seeds, no hulls	28	37	20.8
Soy milk	120	5	31.0

Milk 32.1%

Chinese Cabbage  
53.8%

Cauliflower 68.6%

Sesame Seeds 20.8%



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# Quick question: Why are we so obsessed with the idea of getting calcium from milk?



1 cup milk =  
276 mg calcium  
(28% DI)



100 g sesame seeds =  
989 mg  
(99% DI)



100 g chia seeds =  
635 mg  
(64% DI)



100 g winged beans =  
442 mg (44% DI)



1 cup almonds =  
367 mg  
(37% DI)



100 g fried tofu =  
372 mg  
(37% DI)



100 g turnip greens =  
190 mg  
(19% DI)



1 cup bok choy =  
158 mg  
(16% DI)



5 dried figs =  
135 mg  
(14% DI)



1 herring fillet =  
106 mg  
(11% DI)



1 tbsp ground savory =  
88 mg  
(9% DI)



1 cup broccoli =  
74mg  
(7% DI)



1 cup orange juice =  
72 mg (7% DI)

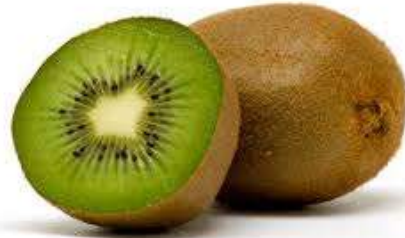


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# A GOOD PALEO DAY....



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# A BAD PALEO DAY...



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# FANATISISM AND EXTREMES

- Use The Paleo diet as a **guideline** for your food choices.
- 80/20 rule
- Better to eat some of the low allergen grains and pseudo-grains occasionally than binge or yoyo your diet.
- Tell people about all the **good things** you **can eat** and don't focus on what you cant have. Tell them how amazing you feel.



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# PRESENTATION 2

- Paleo for Sport and Fitness – case examples
- Paleo for specific disease states
- Understanding individual biochemistry
- Paleo for Children/Pregnancy/Growth and development
- Paleo for weight loss
- Eating out and on the run with Paleo



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