

2008

Energetic Insulin Resistance

Energetic Cofactors with Cellular Insulin
Response.

A dietary system for restoring cellular hormone sensitivity.

[Whole Health Research Alliance](#)

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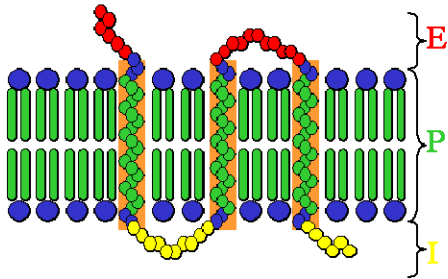
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The Endocrine System

The endocrine system provides hormonal control. A [hormone](#) is a chemical that regulates one or more bodily functions.

Hormones are signal molecules which interact with [cell membrane receptors](#) to transmit chemical information about one or more systemic needs of the organism.



Hormones

[Cellular communication](#) enables the cooperation which enables multi-cellular organisms to exist.

Many cellular communication systems operate at all times to regulate the life processes in multi-cellular organisms, including humans. Defects in cellular communication produce symptoms which reflect one or more regulatory imbalances in the organism.

Hormones are system regulation molecules, carried in the blood which carry chemical control messages that affect multiple or global cellular physiology systems.

Differential Roles

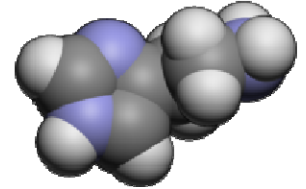
There are two important and often disregarded aspects of hormone regulation:

1. Each hormone plays multiple roles on different cells in the body. Insulin for example plays dual roles:
 - a. Controls cellular glucose uptake;
 - b. Is an anabolic growth hormone.
2. Hormones are systemic controls. Factors which create hormone imbalances create systemic imbalances which often present as seemingly unconnected symptoms or observations. [Histamine](#) for example affects at least three different bodily systems:
 - a. Helps to regulate immune responses;
 - b. Helps to regulate sleep;

- c. Is released from mast cells during orgasm.

The multiple effects of hormones are important for two reasons:

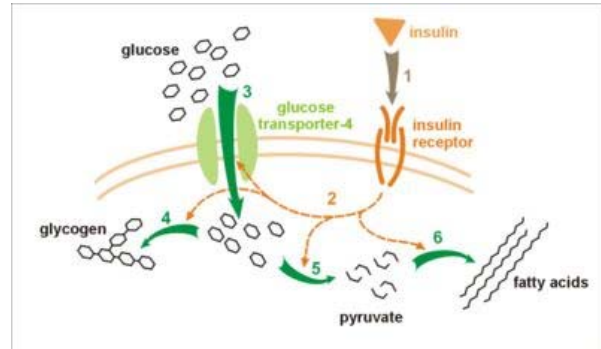
- Hormone dysregulation often causes seemingly unrelated effects by influencing seemingly unrelated bodily functions;
- Hormone over-manipulation often creates significant collateral effects or damage.



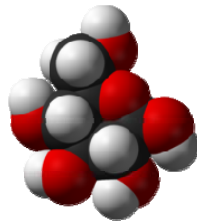
the glucagon response is to provides extra glucose to fuel flight or fight survival responses.

Glucose and Insulin

[Insulin](#) is a hormone which is produced by the pancreas, below, signaling the body's cells to absorb, store or utilize glucose, or sugar.



Sugar, or glucose, is both the a preferred cellular energy food, and a major transport form of cellular fuel throughout the body. It is carried to cells in the blood.



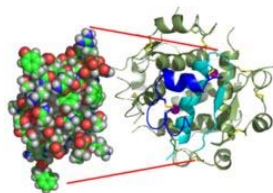
[Blood glucose levels measure](#) the effectiveness of glucose management or fuel processing in the body.

Elevated glucose levels indicate that the body is poorly regulates energy metabolism.

Defect Models

There are two typical defects in glucose regulation which interplay in glucose dysregulation:

- The body's cells have a decreased sensitivity to insulin, typically because the cellular insulin receptor function is impaired due to toxins stuck in the cell membrane;
- [Glucagon](#) Overproduction. Glucagon is produced by the pancreas when the body perceives it requires extra glucose for fuel. This is typically during a stress response which triggers [adrenaline](#) release. The purpose of



Cellular Energy Tutorial

Here are links to resources that provide a basis for the discussion that follows:

- [Cell Membrane Power Video Tutorial](#)
- [Free eBook on Membrane Power](#)
- [Free eBook on Lipophilic Detoxification](#)

Hormonal Dysregulation

Hormonal regulation dysfunction is a typical mid-stage telltale for compromised cell membrane performance.

Hormone receptors are cell membrane structures. When the cell membrane performance declines, hormone sensitivity decreases.

Visit these links for more information regarding hormonal, endocrine disorders, [Thyroid Disease](#), [Endocrine Diseases](#), [Nutritional and Metabolic diseases](#).

The Hyper to Hypo Pattern

Cell membrane performance degeneration causes a hyper to hypo dysfunction pattern of circulating hormone.

Hyper means that there is a long term period of high level of a circulating hormone. This occurs because the source gland overproduces the hormone to compensate for an absence of cellular sensitivity.

Hypo means that there is a semi-permanent period of decreased circulating hormone. This occurs when the source gland burns out and can no longer produce "normal" amounts of the hormone.

In the meantime, there is a tendency to misdiagnose "glandular" diseases. Remember that hormones play multiple roles. Insulin regulates glucose uptake, and is a growth hormone. Overproduction for a life-essential role like glucose regulation, causes pathology development for secondary roles, like growth regulation.

Variable Symptoms

The symptoms of the pattern vary with the hormone. For example, excess insulin damages the vascular [endothelium](#), and contributes to the accumulation of [arterial plaque](#). So, [vascular disease](#) tends to be a symptom of hyper insulin, which is in turn a symptom of cellular [insulin insensitivity](#).

When cells become very unable to respond to insulin, the body loses the ability to control blood sugar, resulting in [Type-2 diabetes](#).

Glandular under production is the inevitable result of burn out. Between these times, there is an ongoing struggle to regulate metabolism. In the meantime wide

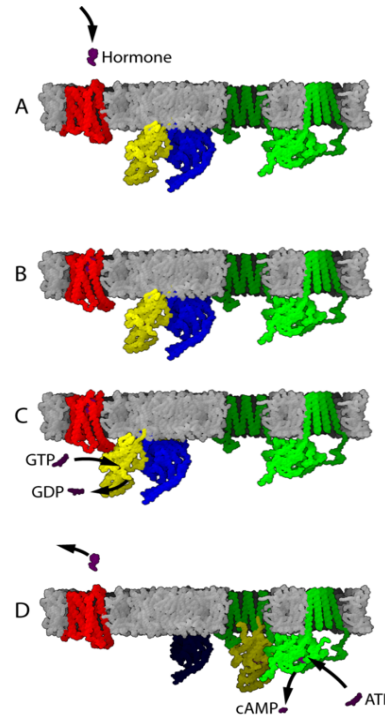


Figure 1 - Hormone Receptor in Cell Membrane

swings in hormone levels produce a systemic instability, and often collateral damage resulting from chronic excess of multiply active hormones.

The period of hormone overproduction creates stress for the organ, which often causes a breakdown.

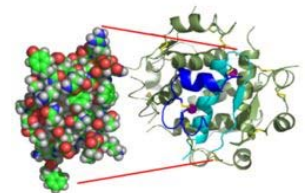
Breakdown may take many forms including burn-

out, resulting in the hypo, or non-production, hormone conditions. Many hormone organ diseases result after long periods of overproduction stress, including tumors, and other organ related diseases.

Symptom Pattern Shift

This model explains the long term observation that Type-2 diabetics often develop into Type-1 when the pancreas burns out from overproduction.

Fortunately, many organs have the ability to recover once the stress condition is relieved. If the stress condition is not relieved, as with most treatment methods, then the organs cannot recover.



The [thyroid hormone](#) goes through a similar process, usually driven by systemic decline in cellular response to thyroid hormones. Hormone imbalances generally indicate a decrease in cellular hormone sensitivity, and

provide an indicator that cell membrane is declining toward illness.

Common Disease Pattern

We suggest that [Graves Disease](#) is a similar disorder. The thyroid overproduces thyroid hormones to compensate for an absence of cellular sensitivity. Other tissues, like those behind the eye, respond to the excess hormones, and produce hormone excess telltales, even though there may be inadequate response to the hormone for the primary role.

Hormone regulation dysfunction affects much of the endocrine system:

- Thyroid relates to fatigue syndromes;
- Insulin relates to glucose management syndromes;
- [Leptin](#) relates to weight management syndromes;
- This is a very long list.

The accompanying pathology becomes bound to the production gland instead of the cellular cause.

Lab Test Results

Hormone testing in individuals with compromised cell membrane performance often shows elevated, or highly variable, circulating hormones.

Lab results which indicate over production are the natural response to the absence of cellular sensitivity. The absence of cellular sensitivity results from the cell membranes inability to sense, or respond to a hormonal signal, which is in turn caused by toxin defects, or pH imbalances, which prevent cell membrane receptors from working properly.

While the under or over production tends to indicate a hormone problem, the blaming and treating source gland is either “shooting the messenger” or “beating a dead horse.”

The source gland is usually a victim instead of a cause. The over then under pattern is more important because it indicates whether the underlying cellular hormone

sensitivity has been going on long enough to exhaust the source gland.

In either case, always consider cellular sensitivity when addressing hormone issues. Over production means the gland is still working; under production means it is exhausted. Either means that the cells don’t respond to the hormone.

It’s always essential to re-establish the cellular sensitivity.

Interpreting Lab Results

Hormone tests, like thyroid, test for a circulating hormone concentration. When the circulating hormone is either high or low, the producing gland is labeled hyper or hypo active, indicating that the source gland is either under or over active.

Lab results, while technically correct are misleading. They shift focus to a gland who is talking to cells who cannot hear, and that cannot respond.

Hormone glands talk louder when cells aren’t listening.

Restoring systemic cellular performance is essential to reestablishing hormone sensitivity.

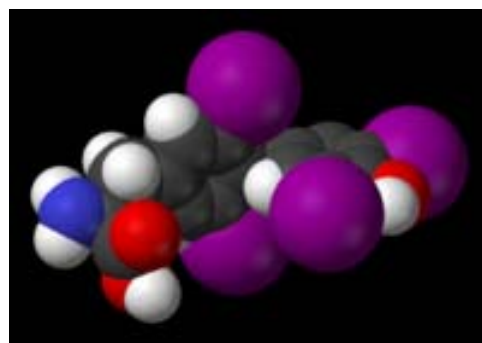


Figure 2 - Thyroid Hormone

In other words, treating glands, by irradiation, or supplementing hormones like insulin, in the absence of repairing the cellular response does

not correct the underlying problem.



Restore the electrochemical integrity of the cell membrane.

The Core Dysfunction

The vast majority of glucose dysregulation conditions result from a ongoing reinforced pattern of toxins in the cell membrane, and compromised pH differential across the cell membrane.

The cell membrane is an electric structure. Insulin receptors are electric devices. The electrical integrity of the cell membrane is critical because it supports extremely powerful electromagnetic fields in the range of 20 Million volts/meter.

A single molecule of a Lipid toxin, like mercury, are physically large enough to create electrical weakness in the membrane. Electrical leakage causes disruption of electrical functions in the region surrounding the toxins.

[Click here for a video discussion of DDT/Agent Orange, unnatural and difficult to detoxify lipid toxins.](#)

Glucose uptake and Cell Power

Glucose uptake is heavily dependent on electrical strength. When membrane voltage is compromised by either acidosis or because of electrical short in the cell membrane, glucose uptake and glucose regulation decrease.

In other words, glucose regulation is highly sensitive to lipid bound toxins.

[Here is a presentation for a protocol to clear DDT and Agent Orange lipid toxins.](#)

Fungus and heavy metals are by no means the only toxins which interfere with glucose regulation. Diabetes is a well known long term effect of Agent Orange exposure.

This process prevents the cells from absorbing glucose from the blood. This condition is called insulin resistance. Academics may debate whether the absence of glucose uptake starts with insulin insensitivity or a defective glucose uptake.

Either way or both, the operative intervention boils down to the same answer.

This often easier said than done because of the ongoing spectrum of factors that contribute to electro-cellular dysfunction.

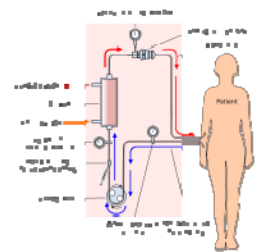
Anti-Education

The mechanical factors are secondary to the primary intellectual ones. The biggest single contributor to glucose dysregulation is anti-education.

Anti-education is the widespread deployment of misinformation regarding the topic of glucose regulation.

Many factors contribute to the cause of anti-education, but here is the short list:

- Diabetes is a huge revenue component of the health care industry. [This revenue biases information distribution to favor consumption of existing highly profitable goods and services](#) and away from distribution of curative or causal information.
- Diabetic management guarantees lifetime of revenue. Diabetics progress from insulin dependence, to neuropathy, to amputation, to dialysis, and so on until death, producing awesome revenue for the diabetes industry.
- Diabetes is driven by the industrial food supply, heavily biased toward convenience and cost at the expense of nutrition.
- Most of the disease propagation is rooted misleading and misinterpreted research publications promoted by vested interests unmotivated due to preservation of revenue.



These economic factors reflect huge economic disincentive to focus on core cause by either the health care or food industries.

If you are going to try to do something to repair your glucose metabolism the biggest challenge is intellectual.

In other words, stop reading if you think information distributed by either the health care industry or the food industry is accurate or is intended to serve your health.

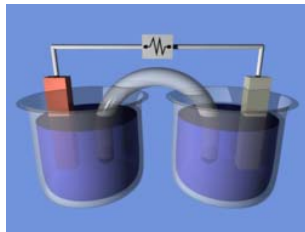
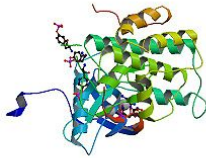
Your ability to succeed is proportional to your ability to tolerate the material that follows, which strongly contradicts dogma from the food and sickness care industries.



The Physical Challenge

[Diabetes mellitus](#) is driven by ongoing deficiency in cellular glucose uptake. Glucose uptake insufficiency is caused by two electro-cellular cofactors:

- The [cell membrane](#) is electrically weak and cannot hold enough electrical energy drive [insulin receptor](#), and [glucose uptake](#) functions to enable cellular machinery to work, typically because of pollution in the fats that make up the cell membrane;
- The water compartments inside and outside the cell cannot maintain the [membrane potential](#), pH differential ([battery](#)), to hold the voltage required to drive cellular glucose metabolism.



Both of these factors work together.

Unfortunately, there isn't an easy quick fix. The cellular dysfunctions have a noxious and self-reinforcing matrix of cofactors.

Environmental and consumptive cofactors

Weak cell membranes result from:

- Membrane toxin pollution
 - Yeast and fungal toxins
 - Heavy metals
 - Organic solvents.
- Diets devoid of fat soluble nutrients
 - Processing removes [fat soluble vitamins](#) and nutrients.
 - Imbalanced consumption of unsaturated fats particularly omega-3 essential fatty acids.
- Radical over consumption of rancid lipids
 - Frying and processing exposes heated oil to oxygen;

Version 3

- Which combines with the oils at the fragile hydrogen double bonds;
- Making the oil sticky sludge;
- Which gravitates to any sick cell in the body becoming preferential building material to sick cells ([Revisi Patents](#)).
- Elevated consumption of lipid solvents:
 - Vegetable oils replaced animal fats in the majority of diets – lard a former mainstay for food preparation was universally replaced by vegetable oils;
 - [Vegetable oils](#) are extracted from plants using [hexane](#),
 - Hexane is a solvent, which dissolves fats by weakening molecular lipid bonds.
- Increased [detergent](#) consumption:
 - Widespread adoption of [dishwashing](#) technology led to the adoption of powerful detergents capable of dissolving grease for clean dishes;
 - There isn't any real difference in dissolving grease on dishes and dissolving the [fats that make up cellular structures](#) when you eat detergent residues.
- Absence of consumption of high [cholesterol](#) foods, including butter and eggs which contain butyrate and [lipid substrates](#) for electrically coherent cell membranes.



The convergence of these factors ongoing rapidly escalating spectrum of lipid-regulation conditions and diseases that relate to compromised performance in cellular lipid structures.

Common Sense of Natural Senses

Fatty foods taste good because they are biologically beneficial.

Taste and scent are highly refined senses that enable our bodies to identify substances which are beneficial to our biology.

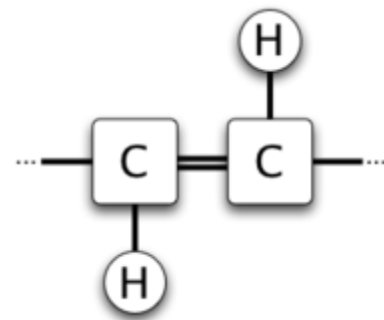
Somewhere along the money trail we adopted the notion that the marketing materials touting the glory of industrial foods deserved more credibility than our own senses of [taste](#) and [smell](#).

If you're brainwashed enough to believe that some science paper funded by an industrial food or drug concern by some alleged scientist is more reliable than your own senses, then you probably ought to look elsewhere for answers to your health problems.

Lipid Consumption and Disease

Lipid disease incidences tracks, with about a 12 year time lag, the widespread adoption of the food and health industry dogma on lipid chemistry.

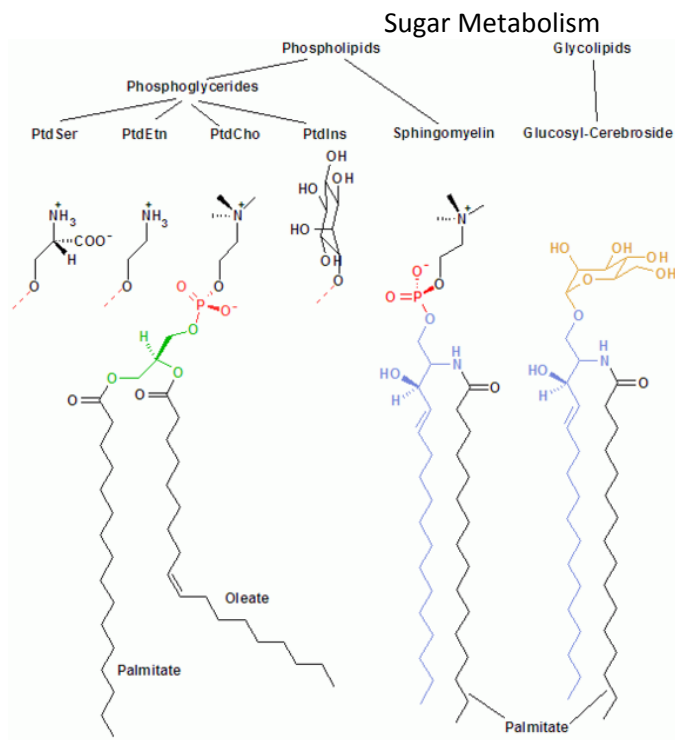
Industrialized lipids have virtually replaced natural lipids in western diets, with heavy consumption of [trans-fats](#), and [rancid](#) forms.



More curiously, the incidence curves on diabetes and heart disease mirror the abandonment of saturated fats plus about 12 years.

The punch-line is misinformation. We're not saying that you should live on bacon. You've been misled regarding the nature and role of lipids in cell physiology. Fats are the skeletons of cells.

Lipids are essential. The working essential structures of cells are made of fat. Prolonged deficiency of good



Dogmatic Diversion

This information on dietary fat consumption strongly contrasts both medical and food industry dogma.

This dogma is aggressively supported by individuals, who nearly always sick themselves with vascular disease and insulin resistance.

Think simple. If cholesterol causes heart disease, then a country which has eliminated cholesterol should not experience heart disease.

The opposite is true in the US. The incidence of heart disease, diabetes, and many other conditions increased dramatically over the past 30 years – mirroring the adoption of foods touted to curb the heart disease risk, and corresponding decline in dietary cholesterol consumption.

Lipid Replacement Detoxification

When our society abandoned mainstay dietary lipids, butter, lard, and eggs, an important detoxification pathway was abandoned.

Lipid turnover is a process of replacement of fats enables the body to dump toxins which cannot detoxify by normal [glutathione](#) or other natural [chelation](#) pathways.



quality dietary fat, not just [EFA's](#), increases susceptibility to diabetes, cancer, and heart disease.

The healthy composition of fats and the absence of gunk that mucks up the fat structures are the simple keys to restoring the natural cellular regulatory processes which are strong cofactors in all hormone regulatory systems including glucose control.

The dietary principles touted as science, adopted as dogma, and eventually forced on a trusting public as the absence of dietary choice; underlie the ongoing tendency for development of insulin related conditions.

A more neutral view

If you have glucose regulation challenges, a diet high in fat is beneficial because it replaces carbohydrate calories with fat, with low-glycemic index foods which do not compound the glucose regulation issues.



Diabetes Cofactor Summary

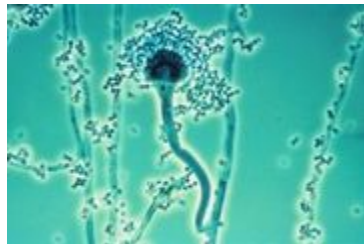
There are several major cofactors which contribute to the tendency for sustained loss of control of glucose control.

Defects in the cell membrane structures are driven by:

- Prevalence of high carbohydrate diets;
- Prevalence of poisoned fat diets;
- Prevalence of fungal-parasitic overgrowth feeding cells a continuous supply of dielectric toxins and heavy metals;
- Deficiency of quality dietary lipids.

Onset Cofactors

Pathogenic organisms typically account for the ongoing nature of glucose dysregulation conditions.



Pathogens, typically fungal and yeast forms, exploit an initial dysregulation to gain foothold.

These pathogens maintain their existence using a variety of mechanisms, including both toxin creation and stress creation, to create ongoing tendency for elevated glucose, or food.

While pathogens are critical factor in glucose regulation disorders, they are usually not the initial front-end cause.

Fungi are both symbiotic and opportunistic. When a pathological weakness occurs, overgrowth results in dual toxin and stress lock cycles, where toxins and stress mechanism exploit [dual aspects of glucose regulation](#).

Membrane toxins, adrenal stress, and immunological inhibition driven by free enzyme deficiency caused by pancreatic overload prevent the body from restoring symbiotic fungal balance.

Both effects help to increase glucose-food availability to [anaerobic pathogens](#) which thrive in a glucose rich, or fermenting environment.

influencing both the body's ability which prevent the organism from returning to

They do not however account for the onset, which is typically attributable to a series of cofactors which set setup a locked pattern of damaged cells, and fungal overgrowth continuous fresh toxins which keep cells damaged and suppress glucose regulation.

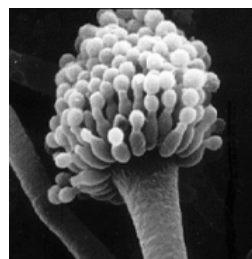
Fungal Cofactor

[Fungi are pervasive organisms](#). They are a symbiotic to normal human physiology. In other words fungus in moderation is a good thing. They help the body cleanse itself, and digest damaged or injured tissue.

In excess they are pathogenic, or disease causing.

They are particularly significant with glucose regulation disorders because they produce toxins, or [mycotoxins](#), which interfere with cellular metabolism.

The major fungal toxins are lipid soluble.



There is significant, but widely ignored, research that shows fungus manufactures heavy metals, including mercury, and probably lead

cadmium and arsenic.

Most research data presumes that heavy metal toxicity which always accompanies fungal overgrowth is exogenous, or from exterior sources.

These authors assert that fungus is a source of heavy metal toxicity. The source hypothesis explains both:

- Inseparable correlation between fungal overgrowth and heavy metal toxicity;
- The absence of the ability to use Chelation, or any other method to create a durable reduction

in heavy metal toxic load while fungal overgrowth is present.

Scientific Support

Here are links to some amazing experiments showing how plain old baker's yeast engages in nuclear manipulation.



- The yeast culture lifecycle show reproducible shifts in the rate of radioactive decay of uranium and thorium;
- The yeast culture creates anomalous metals including lead from other materials;
- The yeast and fungi cultures produce aluminum as a final reaction ([Alzheimer's disease anybody?](#))

If you'd like a simpler verification of the atomic shifts that occur in microbes just read the nutrition panel on [nutritional yeast label](#). Take a look at the concentrations of nutritional metals. The table below is extracted from a standard analysis of nutritional yeast flakes, with a sample of 16 grams.

Metal	Amount
Magnesium	20.8 mg
Zinc	3.2 mg
Selenium	22.4 mcg
Copper	.128 mg
Manganese	.094 mg
Molybdenum	6.4 mcg

Where do all those metals come from?

Yeast is made when you mix simple sugar $C_{12}H_{22}O_{11}$ with H_2O and a yeast culture and trace elements.

In other words there is pretty solid data, if you're willing to dig for it that supports the notion that fungus and yeast overgrowths have the metabolic capability to create metal toxins.

As a matter of fact, here is a list of well documented and reproduced metabolic transformations which have been known since the 1800's. Most of these are regular metabolic processes in your own cells.

$Na_{23} + H_1 \rightarrow Mg_{24}$	$Na_{23} + O_{16} \rightarrow K_{39}$	$Na_{23} - O_{16} \rightarrow Li_7$
$Na_{23} \rightarrow Li_7 + O_{16}$	$K_{39} + H_1 \rightarrow Ca_{40}$	$Mg_{24} + Li_7 \rightarrow P_{31}$
$Mg_{24} + O_{16} \rightarrow Ca_{40}$	$F_{19} + O_{16} \rightarrow Cl_{35}$	$C_{12} + Li_7 \rightarrow F_{19}$
$Cl_{35} \rightarrow C_{12} + Na_{23}$	$Fe_{56} - H_1 \rightarrow Mn_{55}$	$2 O_{16} - H_1 \rightarrow P_{31}$
$O_{16} + O_{16} \rightarrow S_{32}$	$2 N_{14} \rightarrow C_{12} + O_{16}$	$N_{14} + Mg_{12} \rightarrow K_{19}$
$Si_{28} + C_{12} \rightarrow Ca_{40}$	$Si_{28} + C_{12} \rightarrow Ca_{40}$	$P_{31} + H_1 \leftrightarrow S_{32}$

We defer a lengthy discussion on the politics of science to assert the simple notion that fungus and yeast are active and ongoing sources of heavy metal toxins.

[Video Presentation Here.](#)

Here's the bottom line:

Normal glucose regulation is impossible with fungal overgrowth.

Note that this is a balance equation, not a declaration of war. The focus is not on extermination.

Symbiotic means that the yeast/fungal organisms share our body space in their primitive beneficial forms instead of a pathogenic form.

In the planetary spirit, the pathogenic forms are important also. When we die, they decompose our bodies back to dust. When we make ourselves sick enough they get confused about the biological cleanup role they are supposed to perform.

Getting them to back off is the key. The protocols discussed later in this document provide a gentle process to inhibit the advanced pathogenic forms, toward a natural balance. The protocol shifts the

balance to favors the beneficial, primitive, symbiotic forms.

It's important to recognize that overgrowth is a critical part of the glucose regulation problem matrix. There are at least ten thousand species of yeast, molds and fungus that our bodies may host. Many of these are purely pathogenic while others are essential to life.

Restoring glucose balance solidly requires interrupting the flow of toxic substances produced by these critters.

Earlier we proposed that onset of typical diabetes is not typically driven by fungus. Overgrowth does not occur when the immune system is fully operational and capable of maintaining symbiotic balance, or when the food supply isn't overloaded with sugars.

On the other hand, once a food-hold enables overgrowth, the situation changes dramatically, and the balance is semi-permanently forfeit.

The toxins suppress immunity, overload natural detoxification systems, and lock the system into a state of permanent dysregulation.

[Click here for a video presentation of disease lock systems.](#)

Once you reach a state of chronic glucose dysregulation, detoxification without extermination leaves the ongoing source of the problem intact.

Breaking this lock requires three simultaneous things:

- Fungal suppression;
- Cell membrane cleanup;
- An insulin holiday.

Most dietary diabetic control program are incomplete because they fail to recognize and handle the interlinked nature of fungus, sugar, and the critical cell membrane integrity.

As a result, diabetes returns after awhile usually because the fungi return, and re-pollute the cell membranes after the protocol ends.

Fungus Food and Glucose Regulation

Both the role and prevalence of fungal involvement in glucose regulation disorders is underestimated. Fungi manipulate with glucose regulation because it is part of their feeding mechanism:

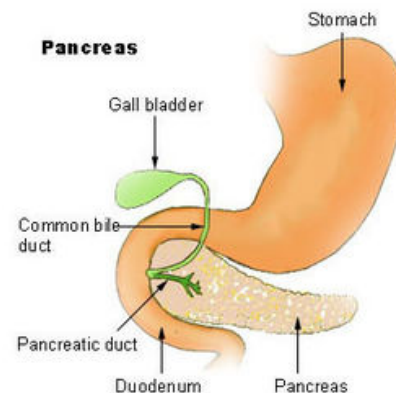
- Create systemic stress which triggers adrenaline release which triggers glucagon, which triggers the liver to raise glucose levels to cope with stress. This explains why diabetics often have extremely elevated morning glucose levels, in spite of no food overnight;
- Create cell membrane toxins, particularly heavy metals, which decrease the cell's cellular insulin sensitivity, which increases the average amount of glucose available in blood;
- It's all about food, and devices which increase the food available to feed the fungus;

The Pancreas

The [pancreas](#) produces insulin and protein [digestive enzymes](#).

Pancreatic insulin overproduction taxes the pancreas, and decreases the amount of digestive enzymes available for both digestion and immunological support.

Digestive enzymes are immunological cofactors. Free enzymes circulate in the bloodstream and help digest systemic pathogens, particularly [levorotary proteins](#) which encapsulate anaerobic organisms, including yeast and cancer.



Sugar Metabolism

Version 3

In simple terms, pancreatic overload from excess insulin production prevents the pancreas from helping to fight the fungus throughout the body.

Long term over-production of insulin decreases enzyme availability which is needed to overcome fungal and yeast forms.



Diabetic Cofactor Matrix

We've spent quite a bit of effort laying out the environment and dietary cofactors which accompany glucose regulation challenges.

These cofactors combined suggest both cause and hence cure for insulin resistance diabetes.

Here is the short list:

- High levels of poor quality dietary fats, combined with *low levels of high quality* dietary fat create a huge challenge for the body creating functional cell membranes;
- High carbohydrate diets create an ongoing food supply for yeast and fungus. In turn, the yeast and fungus produce a unending supply of lipid toxins which continuously pollute cell membranes.

The whole topic of diabetes doesn't seem so complicated anymore.

Here is a link to the definitive reference on diabetes care, [American Diabetes Association standard of care guide](#).

The alert reader will observe several curious omissions:

- No consideration of the cell membrane, or suggestion that lipid-toxins contribute to insulin resistance;
- Absolutely no discussion of the relationship of fungus, which is always present and easily observable with every diabetic;
- Absolutely no discussion correlating heavy metal toxicity to diabetes;
- An absence of meaningful information regarding the possible causes of diabetes.



More curious is the universal consistency in heavy metal test results which always accompany fungus conditions.

Let's put this into perspective:

1. Diabetics always have fungus;
2. Individuals with fungus always test positive for heavy metals;
3. Chelation and techniques which reduce heavy metals provide short term results, but rarely resolve diabetes.

The missing correlation is that both yeast/fungus generate heavy metals which in turn contribute to the diabetes by mucking up the cell membranes.

When cell membrane power is low, the glucose uptake process does not work.

A durable program requires fixing all parts of the problem.

Plan Basics

We've explained the problem, so let's design a program.

The basic program has only three parts:

- [Suppress fungus](#);
- [Detoxify cellular fat](#);
- [Take an Insulin Holiday](#).

These are simple principles.

The many people have overcome diabetes naturally have employed methods which achieve these goals by a variety of means.

Tom Smith, at <http://healingmatters.com> has helped hundreds of individuals overcome diabetes. His book, *Insulin our Silent Killer*, provides excellent dietary guidance.

Fungus Suppression

Fungus suppression is the first huge challenge.

Fungus and yeast are severely underestimated. They are resilient, and possess dozens if not hundreds of self-preservation attributes.

We've spent quite a bit of time talking about toxin creation, but fungi and yeast also generate hormone analogs to influence both behavioral and drive stress responses which elevate glucose levels.

Attempts to shift diet are hindered because the fungi fight back using hormone signals that drive both discomfort and cravings.

The following discussion explains why targeting these organisms with toxins doesn't work either.

Antibiotics are Bad

Traditional approaches to infection rely on antibiotics. Antibiotics are produced by fungi.

Most antibiotics help fungus thrive. The alert reader will probably recognize why antibiotics are usually ineffective with diabetic infections. (The toxins are

made by fungi, which are resistant to the toxins they make.)

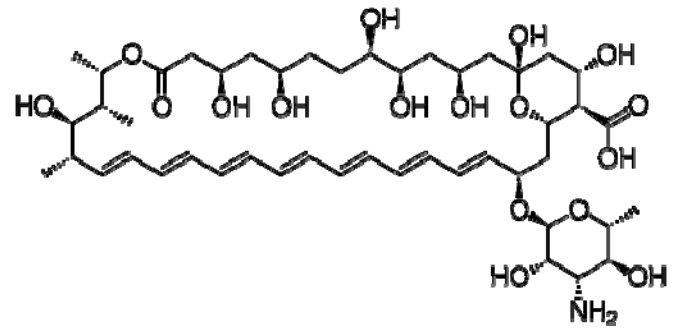
While it is possible for diabetics to have bacterial overgrowth, the prevalent issue in diabetes is fungal and yeast forms. Antibiotics are made by fungus to suppress competitive bacteria.

Antibiotic over-use enables fungus overgrowth by suppressing the natural bacterial competitors to fungus.

Most diabetics have so much resident fungus that it literally controls their physiology and even psychology.

Anti-Fungal toxins are worse

Traditional [anti-fungal drugs](#), are lipid toxins. Both [fungi](#) and humans are [eukaryotes](#). Thus fungal and human [cells](#) are similar at the molecular level. This means it is more difficult to find a target for an antifungal drug to attack that does not also exist in the infected organism.



[Polyene Antimycotics](#), picture above, bind to sterol, in the cell membrane of the fungi (and to a lesser extent in a human).

This is exactly the wrong thing to do to a diabetic's cells – the cell membranes are clogged with toxins, so more toxins make a bad problem worse. Anti-fungal drugs damage what is already damaged.

Anti-fungal drugs work by damaging the lipid structures in the cell membrane.

There has to be better answer, *and there is*.

Parasitic Vulnerability

Reproduction versus repair is an essential difference between parasitic cell forms and advanced forms.

Durability versus proliferation, nature's model goes something like this:

- Yeasts, fungi and viruses have a tiny nucleus with genetics are heavily biased to rapid reproduction, at the expense of durability, because it's easier to reproduce than to repair.
- Higher order animals cells are genetically biased to durability because it's easier to repair than to reproduce.

In other words, the cells in advanced organisms are more able to repair themselves while parasitic forms are not.

This creates a differential vulnerability to oxidative stress between lower and higher life forms.

Differential Oxidative Stress

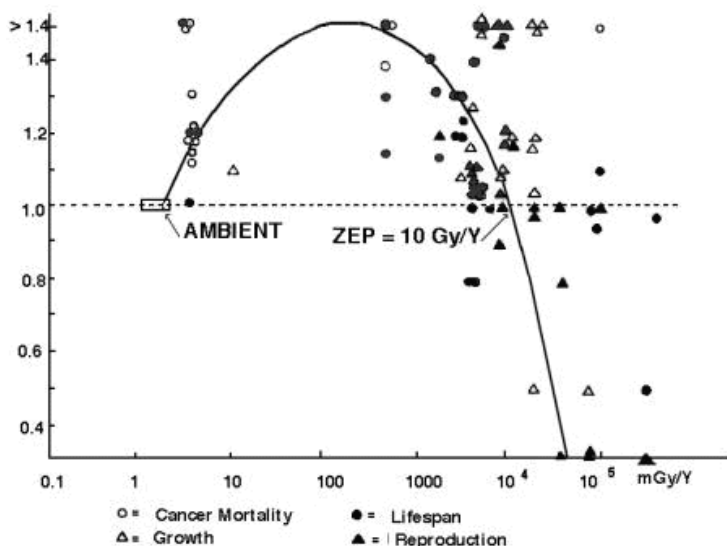
Very low levels of radiation suppress fungus.

In simple cases sunlight, and in more advanced cases low-level of radiation from rocks each are anti-fungal.

Sunlight is free. If you can afford about an hour a day in direct sun exposure, then plain old sunshine will help your fungus challenge.

If you are one of the millions whose lifestyle doesn't permit an hour of direct sun exposure at noon, then consider the rocks.

The curve extracted from a book by TD Luckey, shows



very positive correlation health related markers,

including reduced cancer increased lifespan, and enhanced reproduction.

This research shows that low levels of radioactivity can selectively disrupt the life cycle of pathogenic organisms, yeast, molds and fungus.

There is no comparable set of results which show harm from low dose irradiation (Luckey, 1990; 1993). The results displayed in figure 1 provide background for this critical review of recent literature on cancer mortality in humans exposed to whole body irradiation.

Exposure to low level radiation has long term protective effects. [This study shows that low level exposed animals survived longer than control animals even though they were blasted with normally lethal radiation later in the experiment.](#)

This data suggests, low level radiation exposure activates cellular and genetic repair mechanisms and provides durable protection for radiation exposure later in life.

[Low dose radiation levels exerts antimicrobial effects and appears to suppress all pathogenic forms in necrotic tissue with gas gangrene.](#) Radiation does not require functional circulation so it can reach areas with compromised circulation. It appears to suppress a wide range of pathogenic organisms.

A 5000 year old answer

Native American cultures have recognized the benefits of certain stones catalyzing healing.

Radiation Hormesis is an inexpensive and safe technique of fungus and yeast suppression in diabetics.

[Click here for a research summary on Radiation Hormesis compiled by Jay Gutierrez.](#)

The model is a simple sleeping pad placed under the sheet. The pad, made of low level radioactive material delivers a small dose of radiation during sleep.

The half life of the radioactive material is 120,000 years.



Sugar Metabolism

The long term use of this technology enables ongoing interference with the fungal/yeast life cycle, and support interfering with a wide range of pathogens.

There appear to be only positive long term effects.

In spite of an army of armchair critics, there is no data supporting any negative effects of low level radiation.

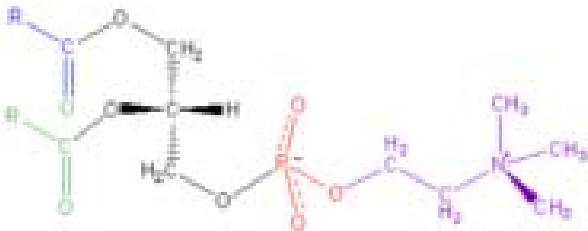
All of the data for low level radiation exposure shows decreases in disease incidence, increased fertility, and increased life expectancy.

[These references indicate successful clinical trials using low dose radiation to cure cancer in the US in the early 1970's.](#)

Detoxify Cellular Fats

Fats make up critical structures of the cell including the cell membrane and mitochondria which conduct the main business of the cell.

When these structures are polluted, cellular performance deteriorates.



Certain foods provide useful fats which help with lipid detoxification, particularly butter, coconut oil and eggs. Butter contains butyrate, a molecule which helps cells to break down long chain fatty acids.



Eggs contain lecithin, which provides an ideally balanced fat source of sterols and UFA's. Coconut oil contains medium chain triglycerides which are ideal for energy production.

Version 3



Clean dietary fats, which include cholesterol, are keys to detoxification.

Fad low-fat diets inhibit lipid detoxification.

Low fat diets defer liver from bile release. Deferred bile release contributes to toxin accumulation.

Fat consumption causes the liver to release bile. Bile contains fat soluble toxins collected by the liver. Fatty food consumption creates a bile release that enables the body to release noxious garbage incorporated into the bile.

If the liver never dumps bile then the toxins accumulate in the liver.



There are several techniques for improving bile flow:

- Beet tops contain enzymes which trigger release of bile;
- Eat fiber with fatty meals;
- Use phosphoric acid compounds to neutralize bile so it exits the body.

Replace Glucogenic Foods

Fatty foods also provide a food source that do not tax glucose regulation.

[Robert Atkins made big headlines](#) when he rejected the food pyramid which declared refined carbohydrates were the preferred human food.

Low carbohydrate foods are clearly superior for individuals with glucose regulation issues because they implicitly replace carbohydrates with fat and protein.

We discuss the appropriate eating program below. The Atkins program is good, but the Detoxx diet is better.

Consumption of 4:1 lipids is important also. The cell membranes are made of a balance of 4.25 units of omega 6 fatty acids to 1 unit of omega 3 fatty acids.

Common name	Lipid name	Chemical name
Linoleic acid	18:2 (n-6)	9,12-octadecadienoic acid
Gamma-linolenic acid	18:3 (n-6)	6,9,12-octadecatrienoic acid
Eicosadienoic acid	20:2 (n-6)	11,14-eicosadienoic acid
Dihomo-gamma-linolenic acid	20:3 (n-6)	8,11,14-eicosatrienoic acid
Arachidonic acid	20:4 (n-6)	5,8,11,14-eicosatetraenoic acid
Docosadienoic acid	22:2 (n-6)	13,16-docosadienoic acid
Adrenic acid	22:4 (n-6)	7,10,13,16-docosatetraenoic acid
Docosapentaenoic acid	22:5 (n-6)	4,7,10,13,16-docosapentaenoic acid
Calendic acid	18:3 (n-6)	8E,10E,12Z-octadecatrienoic acid

Consumption of fatty acids outside this ratio challenges the body, typically with excess omega 3 acids.



Insulin Holiday

Here is a [link to an excellent book for an insulin](#) holiday.

Reducing insulin is critical to restoring glucose balance.

Perhaps the most important message is that fungus produces hormone analogs.

These chemical messengers often interfere, and create cravings which can be very hard to resist.

Common name	Lipid name	Chemical name
	16:3 (n-3)	<i>all-cis</i> 7,10,13-hexadecatrienoic acid
Alpha-linolenic acid (ALA)	18:3 (n-3)	<i>all-cis</i> -9,12,15-octadecatrienoic acid
Stearidonic acid	18:4 (n-3)	<i>all-cis</i> -6,9,12,15,-octadecatetraenoic acid
Eicosatetraenoic acid	20:4 (n-3)	<i>all-cis</i> -8,11,14,17-eicosatetraenoic acid
Eicosapentaenoic acid (EPA)	20:5 (n-3)	<i>all-cis</i> -5,8,11,14,17-eicosapentaenoic acid
Docosapentaenoic acid (DPA, Clupanodonic acid)	22:5 (n-3)	<i>all-cis</i> -7,10,13,16,19-docosapentaenoic
Docosahexaenoic acid (DHA)	22:6 (n-3)	<i>all-cis</i> -4,7,10,13,16,19-docosahexaenoic acid
	24:5 (n-3)	<i>all-cis</i> -4,7,10,13,16,19-docosahexaenoic acid
Nisinic acid	24:6 (n-3)	<i>all-cis</i> -6,9,12,15,18,21-tetracosenoic acid

