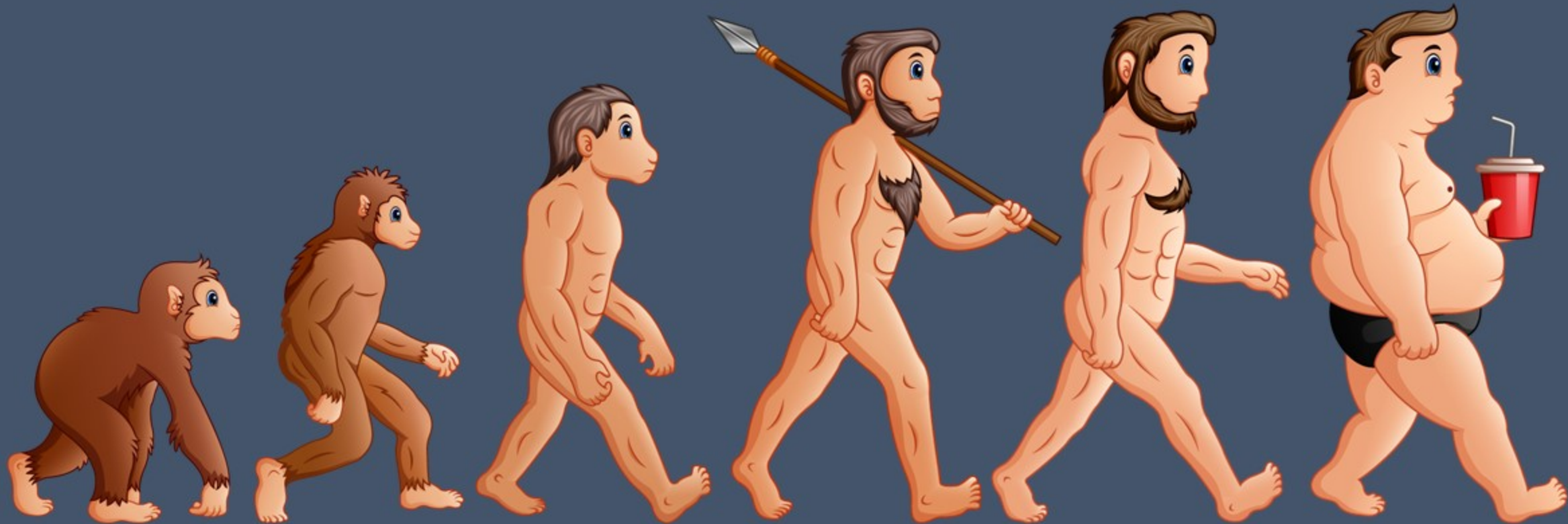


# WHY MOST DIET AND FASTING PROGRAMS FAIL

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# YOU MAY HAVE AN ADDICTION IF...

You know the problem!

You know dieting and fasting is needed!

You know what to do, and may have done it before!

You may have failed over and over again!

You get cravings and can't function!

You had no will power!



# CONTINUED FAILURES WHEN...

You feel AWFUL!

You get headaches, chills, mental fog, disorientation, sweats, anxiety, poor performance, irritability, depression.

Your relationships suffer.

You think your sugar “falls”, and you feel better after eating.

Then it's all OVER!

You feel guilty, ashamed, self-loathing, isolated.

Rarely, we encounter well functioning addicts!

# PERHAPS ... YOU ARE ADDICTED TO FOOD

All foods?

Is it the types of food?

Is it a component of the food?

What substances in food are causing the addiction?

Is it because the food has been converted into a product?

It's not food anymore!

# IMPORTANCE OF ELIMINATING PROCESSED FOOD

- Cause hyperinsulinemia
  - Cause weight gain
- Cause metabolic syndrome
- Cause toxicity and inflammation
  - Cause intestinal dysbiosis
- Cause addiction and behavioral changes



# IMPORTANCE OF LOSING WEIGHT

- To reverse metabolic syndrome
  - To reverse diabetes mellitus
  - To eradicate sleep apnea
- To reduce risk of cardiovascular disease, degenerative joint disease, dementia, and possibly cancers

# “PROCESSED FOOD”

- Not found in nature as such
- Combinations of substances not found in nature, e.g. combination of fat and sugar
- Modified by man and made into a food product, such as flour
  - Chemicals added, e.g. salt, sugar, coloring, sweeteners, caffeine, preservatives, processed oils
    - Fiber removed
  - Highly palatable foods (cereals, breads, chips, cookies)
    - Pre-digested foods



So, do altered and processed foods have different metabolic effects in the body than natural whole foods?

YES!

Real food has...

- Less insulin production (hence less obesity + diabetes mellitus)
  - Less addiction
- No unnatural combinations or additives
  - Nutrient dense packaging
    - Early satiety

# HOW CAN YOU GET ADDICTED TO PROCESSED FOODS?

Neurological changes occur in addicted brains. Why would nature want you get HOOKED on processed foods?

- Calorie dense (high in energy)
  - In a time of calorie scarcity ( >20,000 years ago)
- Your genetic material and how it handles nutrition has not changed much in 10,000 years, yet we are surrounded by calorie dense foods

You're a cactus in a rainforest!

# HOW CAN YOU GET ADDICTED TO PROCESSED FOODS?

So, nature has PREWIRED US to seek calorie rich foods for survival IN THAT ERA!

Nowadays:

- Calories are everywhere
  - Food is available at all times, day and night, 24/7
- Food is EVEN MORE calorie dense than it was 20,000 years ago!
  - Sugars vs. beets/cane
- Food is PROCESSED so the calories come without other components we need, e.g. fiber
  - These are NAKED calories today



# EVIDENCE OF ADDICTION OF HIGH CALORIE DENSITY FOODS

## ALTERED NEUROFUNCTIONS

- Sucrose can alter nucleus accumbens dendritic morphology
- Overeating downregulates dopamine, opiate, serotonin and endocannabinoid pathways
  - Reduces cognitive function in pre-frontal cortex
- Increases stress pathway activation + CRF release (HSHF + drug addicts)

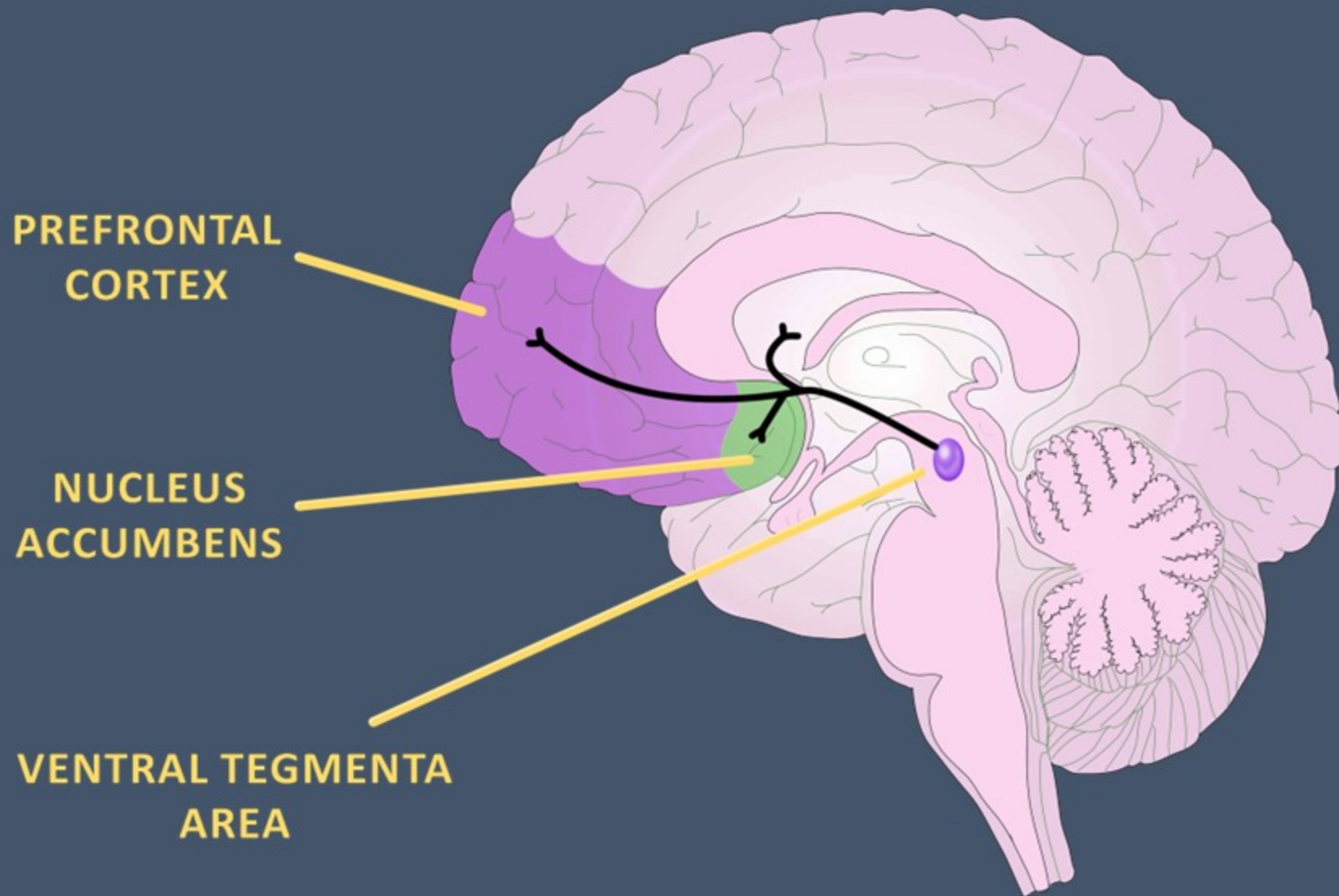
# EVIDENCE OF ADDICTION OF HIGH CALORIE DENSITY FOODS

Three dopaminergic pathways are activated in addiction:

- Mesolimbic/mesoaccumbens ( learning and reward)
  - Nigrostriatal (motivation and habit)
- Mesocortical (decision making and execution of function)

These become desensitized by repeated administration of initial reward leading to  
**TOLERANCE.**





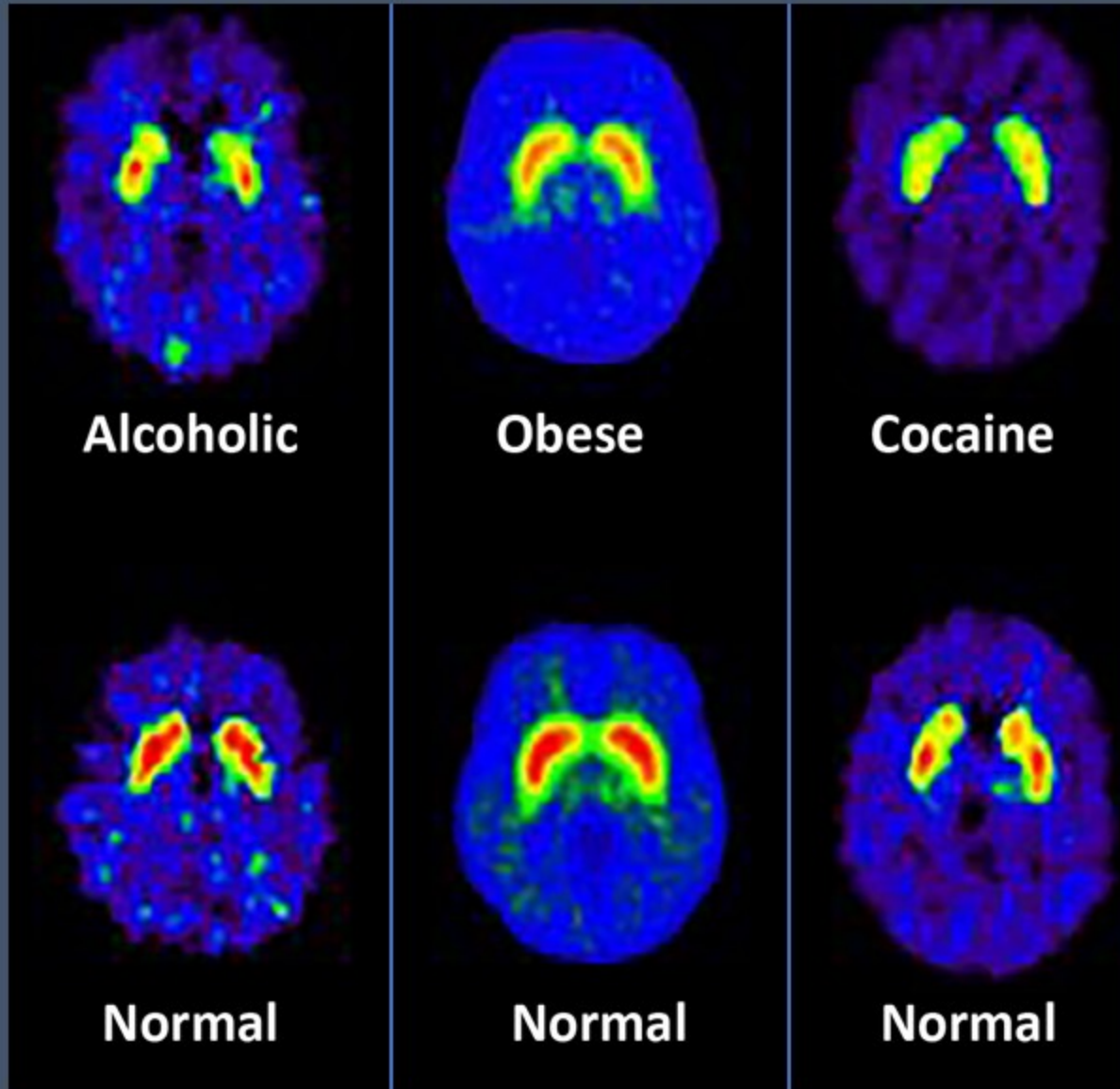


# EVIDENCE OF ADDICTION OF HIGH CALORIE DENSITY FOODS

Dopamine tracer RADOPRIDE used as a PET tracer showed the same pattern in drug addiction as in the addicted obese.

Prefrontal hypometabolism noted in obese subjects.

MRI imaging using FUNCTIONAL IMAGING showed obese brains very similar to addicted subject brains.



# COGNITIVE IMPAIRMENT

- Cravings compromise thinking
- Deficits in learning and memory occur early
- Decreased attention noted in binge eaters
  - Loss of impulse control



# CUE RESPONSES

Small stimulus causes a SURGE in neurotransmitter release in reward center, and thoughts of food evoke the same response.

Cues release orexin, leptin, and insulin as does advertising of foods, which cause reward sensitivity and cravings in addiction.

# ADDICTION SEVERITY INDEX (ASI)

#1: Processed foods are consumed in larger amounts or over a longer period than was intended.

#2: There is a persistent desire or unsuccessful efforts to cut down or control processed food consumption.

#3: A great deal of time is spent in activities necessary to obtain processed foods, consume processed foods or recover from their effects.

#4: Craving, or a strong desire or urge to consume processed foods.

#5: Recurrent processed food consumption resulting in a failure to fulfill major role obligations at work, school, or home

Ifland, J., Marcus, M. T., & Preuss, H. G. (Eds.). (2020). *Processed food addiction: Foundations, assessment, and recovery* (pp. 122). CRC Press.



# ADDICTION SEVERITY INDEX (ASI)

#6: Continued processed food consumption despite having persistent or recurrent social interpersonal problems caused or exacerbated by the effects of processed foods

#7: Important social, occupational, or recreational activities are given up or reduced because of processed food consumption

#8: Recurrent processed food consumption in situations in which it is physically hazardous

#9: Processed food consumption is continued despite knowledge of having a persistent or recurrent physical or psychological problem that is likely to have been caused or exacerbated by processed foods

Ifland, J., Marcus, M. T., & Preuss, H. G. (Eds.). (2020). *Processed food addiction: Foundations, assessment, and recovery* (pp. 122). CRC Press.



# ADDICTION SEVERITY INDEX (ASI)

**#10:** Tolerance, as defined by either of the following:

- a. A need for markedly increased amount of processed foods to achieve intoxication or desired effect
- b. A markedly diminished effect with continued consumption of the same amount of processed foods

**#11:** Withdrawal, as manifested by either of the following:

- a. The characteristic withdrawal syndrome for processed foods
- b. Processed foods are consumed to relieve or avoid withdrawal symptoms

Ifland, J., Marcus, M. T., & Preuss, H. G. (Eds.). (2020). *Processed food addiction: Foundations, assessment, and recovery* (pp. 122). CRC Press.

# ADDICTION SEVERITY INDEX (ASI)

The DSM specifies the thresholds of use disorders, with **two to three** symptoms for **mild**, **four to five** symptoms for **moderate**, and **six or more** for **severe**.

(American Psychiatric Association, 2013).



# THE YALE FOOD ADDICTION SCALE

IN THE PAST 12 MONTHS:		Never	Once a month	2-4 times a month	2-3 times a week	4 or more times or daily
1.	I find that when I start eating certain foods, I end up eating much more than planned	0	1	2	3	4
2.	I find myself continuing to consume certain foods even though I am no longer hungry	0	1	2	3	4
3.	I eat to the point where I feel physically ill	0	1	2	3	4
4.	Not eating certain types of food or cutting down on certain types of food is something I worry about	0	1	2	3	4
5.	I spend a lot of time feeling sluggish or fatigued from overeating	0	1	2	3	4
6.	I find myself constantly eating certain foods throughout the day	0	1	2	3	4
7.	I find that when certain foods are not available, I will go out of my way to obtain them. For example, I will drive to the store to purchase certain foods even though I have other options available to me at home.	0	1	2	3	4
8.	There have been times when I consumed certain foods so often or in such large quantities that I started to eat food instead of working, spending time with my family or friends, or engaging in other important activities or recreational activities I enjoy.	0	1	2	3	4
9.	There have been times when I consumed certain foods so often or in such large quantities that I spent time dealing with negative feelings from overeating instead of working, spending time with my family or friends, or engaging in other important activities or recreational activities I enjoy.	0	1	2	3	4
10.	There have been times when I avoided professional or social situations where certain foods were available, because I was afraid I would overeat.	0	1	2	3	4
11.	There have been times when I avoided professional or social situations because I was not able to consume certain foods there.	0	1	2	3	4
12.	I have had withdrawal symptoms such as agitation, anxiety, or other physical symptoms when I cut down or stopped eating certain foods. (Please do NOT include withdrawal symptoms caused by cutting down on caffeinated beverages such as soda pop, coffee, tea, energy drinks, etc.)	0	1	2	3	4
13.	I have consumed certain foods to prevent feelings of anxiety, agitation, or other physical symptoms that were developing. (Please do NOT include consumption of caffeinated beverages such as soda pop, coffee, tea, energy drinks, etc.)	0	1	2	3	4
14.	I have found that I have elevated desire for or urges to consume certain foods when I cut down or stop eating them.	0	1	2	3	4
15.	My behavior with respect to food and eating causes significant distress.	0	1	2	3	4
16.	I experience significant problems in my ability to function effectively (daily routine, job/school, social activities, family activities, health difficulties) because of food and eating.	0	1	2	3	4



# THE YALE FOOD ADDICTION SCALE

IN THE PAST 12 MONTHS:		Never	Once a month	2-4 times a month	2-3 times a week	4 or more times or daily
1.	I find that when I start eating certain foods, I end up eating much more than planned	0	1	2	3	4
2.	I find myself continuing to consume certain foods even though I am no longer hungry	0	1	2	3	4
3.	I eat to the point where I feel physically ill	0	1	2	3	4
4.	Not eating certain types of food or cutting down on certain types of food is something I worry about	0	1	2	3	4
5.	I spend a lot of time feeling sluggish or fatigued from overeating	0	1	2	3	4
6.	I find myself constantly eating certain foods throughout the day	0	1	2	3	4
7.	I find that when certain foods are not available, I will go out of my way to obtain them. For example, I will drive to the store to purchase certain foods even though I have other options available to me at home.	0	1	2	3	4
8.	There have been times when I consumed certain foods so often or in such large quantities that I started to eat food instead of working, spending time with my family or friends, or engaging in other important activities or recreational activities I enjoy.	0	1	2	3	4
9.	There have been times when I consumed certain foods so often or in such large quantities that I spent time dealing with negative feelings from overeating instead of working, spending time with my family or friends, or engaging in other important activities or recreational activities I enjoy.	0	1	2	3	4
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16.	I experience significant problems in my ability to function effectively (daily routine, job/school, social activities, family activities, health difficulties) because of food and eating.	0	1	2	3	4

# THE YALE FOOD ADDICTION SCALE CONT.

IN THE PAST 12 MONTHS:		NO	YES			
17.	My food consumption has caused significant psychological problems such as depression, anxiety, self-loathing, or guilt.	0	1			
18.	My food consumption has caused significant physical problems or made a physical problem worse.	0	1			
19.	I kept consuming the same types of food or the same amount of food even though I was having emotional and/or physical problems.	0	1			
20.	Over time, I have found that I need to eat more and more to get the feeling I want, such as reduced negative emotions or increased pleasure.	0	1			
21.	I have found that eating the same amount of food does not reduce my negative emotions or increase pleasurable feelings the way it used to.	0	1			
22.	I want to cut down or stop eating certain kinds of food.	0	1			
23.	I have tried to cut down or stop eating certain kinds of food.	0	1			
24.	I have been successful at cutting down or not eating these kinds of food	0	1			
25.	How many times in the past year did you try to cut down or stop eating certain foods altogether?	1 or fewer times	2 times	3 times	4 times	5 or more times

# ADDICTION TO PROCESSED FOOD

## Behavioral syndromes

- Poor impulse control
  - Blaming
  - Shame
  - Denial
- Emotional avoidance
  - Relapse
  - Cravings



# ADDICTION TO PROCESSED FOOD

## Muted taste

- Vegetables taste bitter to individual

## Comorbidities

- Financial problems
- Relationship problems
  - Social problems
- Employment problems
  - Physical illness
  - Mental illness

# WHAT FOODS ARE ADDICTIVE?

## Foods high in SUGAR, SALT, and FATS

- In unnatural combinations with additives included
  - Sugar affects dopamine levels
- Western diet is HIGH SUGAR, HIGH FAT (HSHF)

# WHAT FOODS ARE ADDICTIVE?

## CHOCOLATE and CAFFEINE

- Methylxanthines
- Biogenic amines
- Cannabinoids-like fatty acids



# WHAT FOODS ARE ADDICTIVE?

## DAIRY and CHEESE

- Ice cream, sour cream, cream, cottage cheese, yogurt, butter
  - Contain morphine like CASOMORPHINE

## WHEAT GLUTEN

- Have gluteomorphine
- Wheat, rye, kamut, spelt, barley, corn, bean flour, lentil flour

# WHAT FOODS ARE ADDICTIVE?

## SWEETENERS

- Mannitol, sorbital, sucrose, lactose, fructose, stevia, Splenda saccharine
- All increase dopamine level, causing ADDICTION responses

## ALL SNACK FOODS

- All snack foods have combinations of aforementioned chemicals

# WHAT FOODS ARE ADDICTIVE?

## PARTICLE SIZE: VERY IMPORTANT

Powdering of food is very deleterious because of insulin response, inflammation, weight gain and nutrient poor food due to extraction of all fiber and nutrition.

This includes artisanal breads, whole wheat grains, and natural cheeses.



# WHAT FOODS ARE ADDICTIVE?

## DISTILLATION

High fructose corn syrup (HFCS), syrups, alcohol

## CRYSTALIZATION

Sugars

## HEATING TO HIGH TEMPERATURES

Frying in vegetable oils and processed fats cause endocannabinoid and opioid receptor stimulation and decreases memory in rats.

# INTERCHANGEABILITY OF DRUGS AND FOOD

Tobacco → Food

Cocaine → Alcohol

# POLYADDICTIONS

Tough to treat!

- Sugar
- Fat (vegetable seed oils)
  - Dairy
  - Gluten
- Caffeine



# POLYADDICTIONS

- Soft drinks: Caffeine + sugar
- Doughnuts: Flour, gluten, sugar, HFCS, salt, fat, and chocolate
  - French fries: Fat, salt
  - Milkshake: Fat, sugar
  - Snacks: Fat, sugar
- Sweets: Sugar, cocoa butter, chocolate, milk, soy lecithin, palm oil, hydrogenated and partially hydrogenated fats, salt

# WARNING!

57% of energy intake in the US population is from ultra-processed foods!

# ABSTINANT FOOD PLANS

## Completely remove:

- Sugars and sweeteners
  - Flours of ANY kind
  - Caffeine
- Processed fats, fried food, cheeses
- Starches, e.g. sweet potatoes, squash, brans, brown rice, quinoa, buckwheat
  - Puffed grains, all cereals



# ABSTINANT FOOD PLANS

AVOID!

NUTS and SEEDS: Especially if allergic

SOY: Typically GMO and processed, exception of tempeh

POTATOES: In all forms, e.g. French fries, chips, baked, mashed

# DESIRED FOOD PLANS: FRUITS

- Apricot
- Pear
- Apples
- Peaches
- Oranges
- Grapefruit

- Tangerines
- Blueberries
- Raspberries

Note: No melons (including cantaloupe), kiwi, bananas, and grapes (typically given as “healthy” fruit plate)

# DESIRED FOOD PLANS: COLD PRESSED OILS

- Olive
- Avocado
- Flaxseed
- Coconut
- Sesame

AVOID vegetable and seed oils such as grapeseed, sunflower, canola, safflower, cottonseed, corn, soy oils



# DESIRED FOOD PLANS: VEGETABLES

- Asparagus
  - Onions
  - Broccoli
- Brussel sprouts
- Cauliflower
- Cabbage
- Carrots
- Celery
- Beets
- Lettuce
- Spinach
- Pepper
- Eggplant
- Tomato
- Cucumber
- Zucchini

# PALEOLITHIC DIET

- Eliminates most addictive foods
  - Found in studies to be better than diabetic diet!
- Better than Mediterranean diet because GRAINS and DAIRY are eliminated
- CRAVINGS are eliminated quicker and then there are less relapses because you get rid of addictive foods

# IMPLEMENTATION AND FAILURES

AVOID CUES! Reduce availability activities:

- While shopping
- In the home and pantry
- In breakrooms
- On the ride home
- Certain people/food pushers

Face your delusions



# IMPLEMENTATION AND FAILURES

Eat outside your normal structure

Find a support person/group

Expect failure and lapses, avoid self loathing

- Common adverse effects of breaking addiction: headache, fatigue, drowsiness, dysphoric mood, depression, irritability, poor concentration, flu-like symptoms

# FASTING FOR ADDICTION

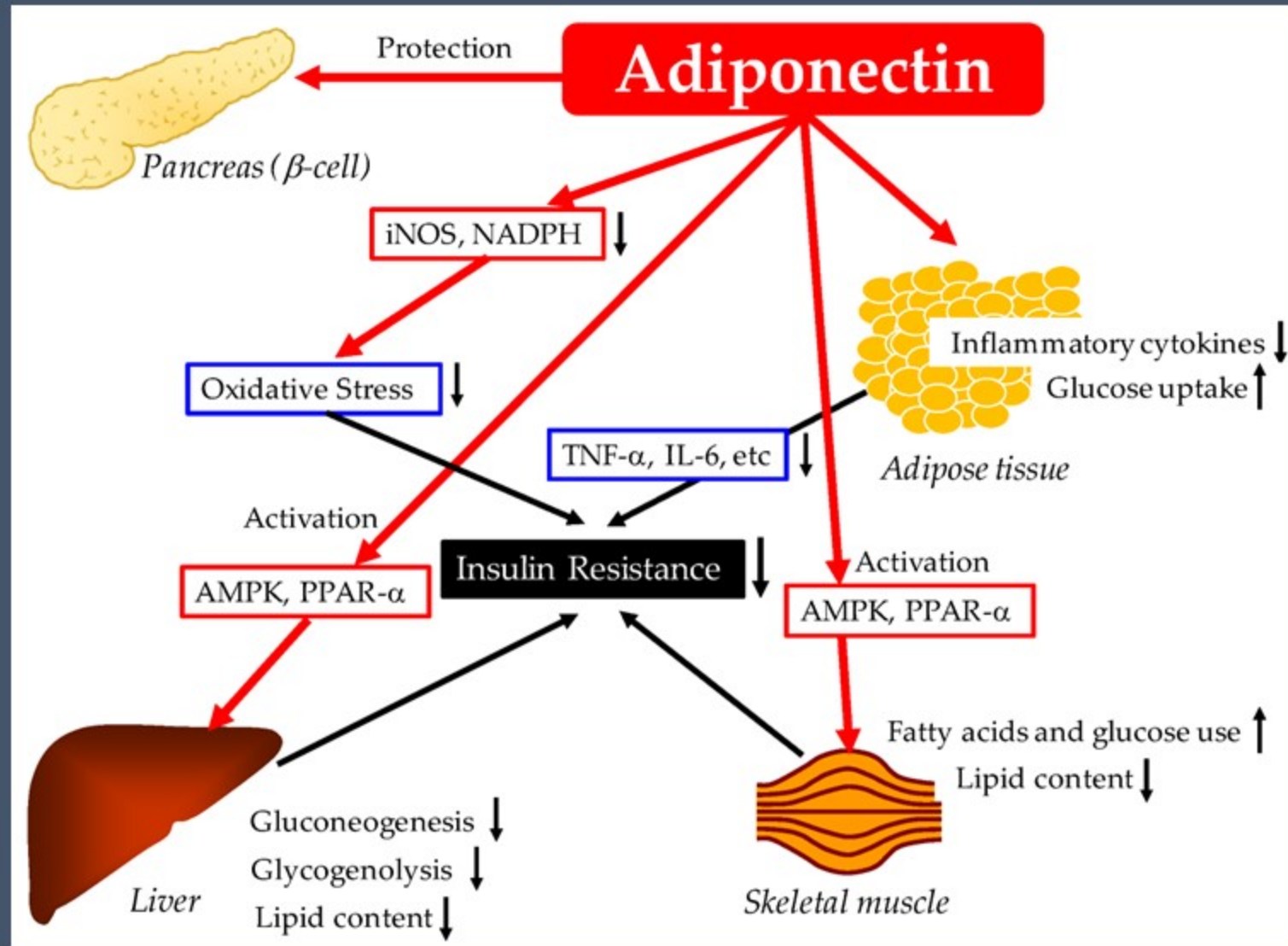
- Breaks the dopamine cycle
- Eliminates addictive foods from the diet
  - Breaks cravings of processed foods
- Deconstructs previous maladaptive neuropathways
  - Restores neurochemical homeostasis
    - Restores leptin levels
    - Increases adiponectin
- Rewires neural pathways e.g. prefrontal lobe rehabilitation
  - Increases brain derived neurotropic factor
  - Induces ketogenesis and metabolic flexibility
    - Improves intestinal dysbiosis
      - Improves “leaky gut”

# FASTING FOR ADDICTION

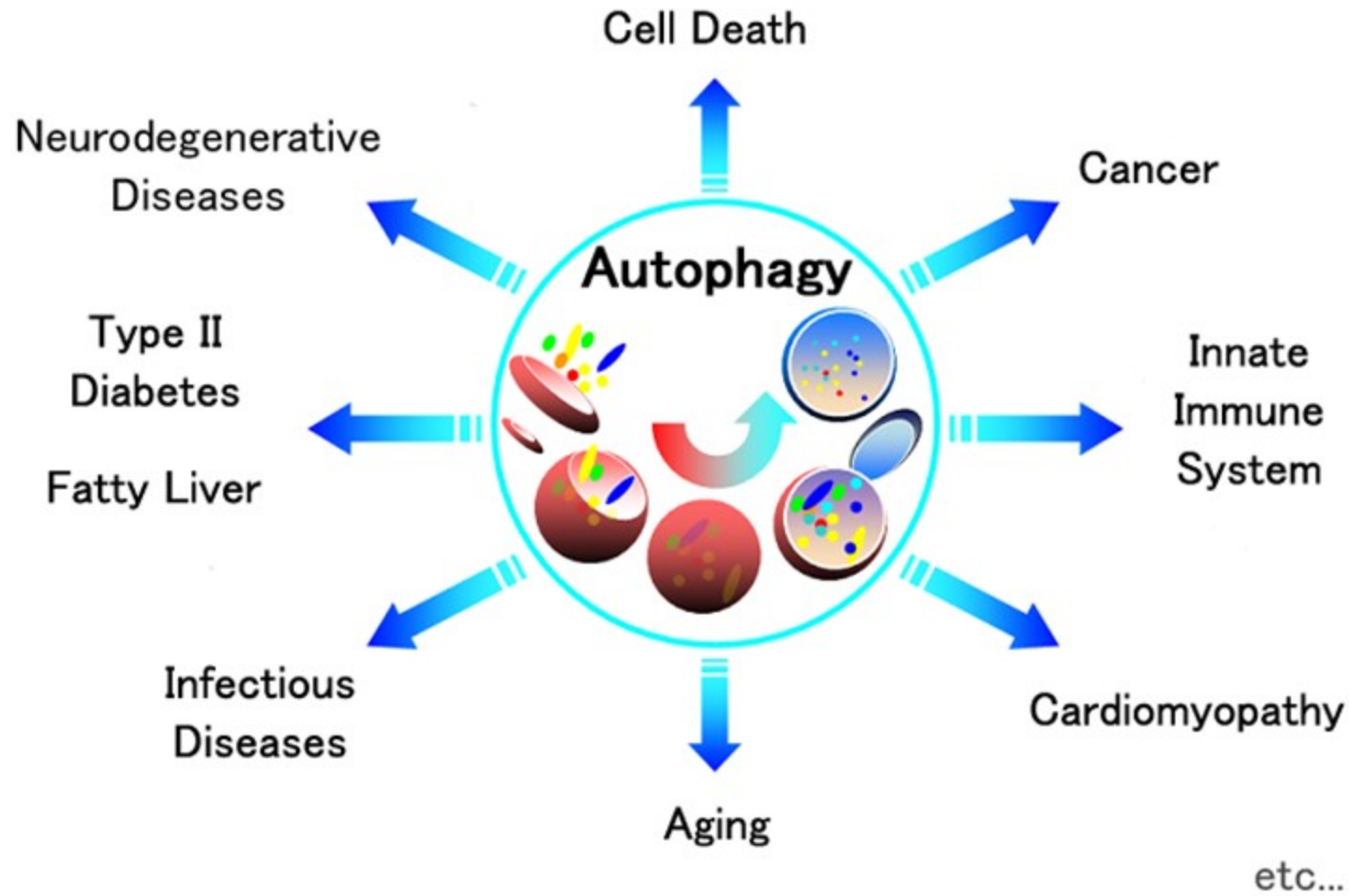
- Induces autophagy and mitophagy
  - Induces weight loss
  - Positive self esteem
- Improves mood disorders and depression
  - Lessens pain
  - Improves sleep
  - Eliminates fatty liver
  - Eliminates sleep apnea
- Improves insulin sensitivity (reverses diabetes)
  - Eliminates toxins
- Promotes metabolic flexibility

SEE MY "FASTING FOR SURVIVAL" LECTURE ON YOUTUBE





Yanai H, Yoshida H. Beneficial Effects of Adiponectin on Glucose and Lipid Metabolism and Atherosclerotic Progression: Mechanisms and Perspectives. *International Journal of Molecular Sciences*. 2019; 20(5):1190. <https://doi.org/10.3390/ijms20051190>



Source: Japanese National Institute of Infectious Diseases <http://www.tanpaku.org/autophagy/index.html> (11/20/21)

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Dr. Jamnadas and Galen Foundation Lectures on YouTube