



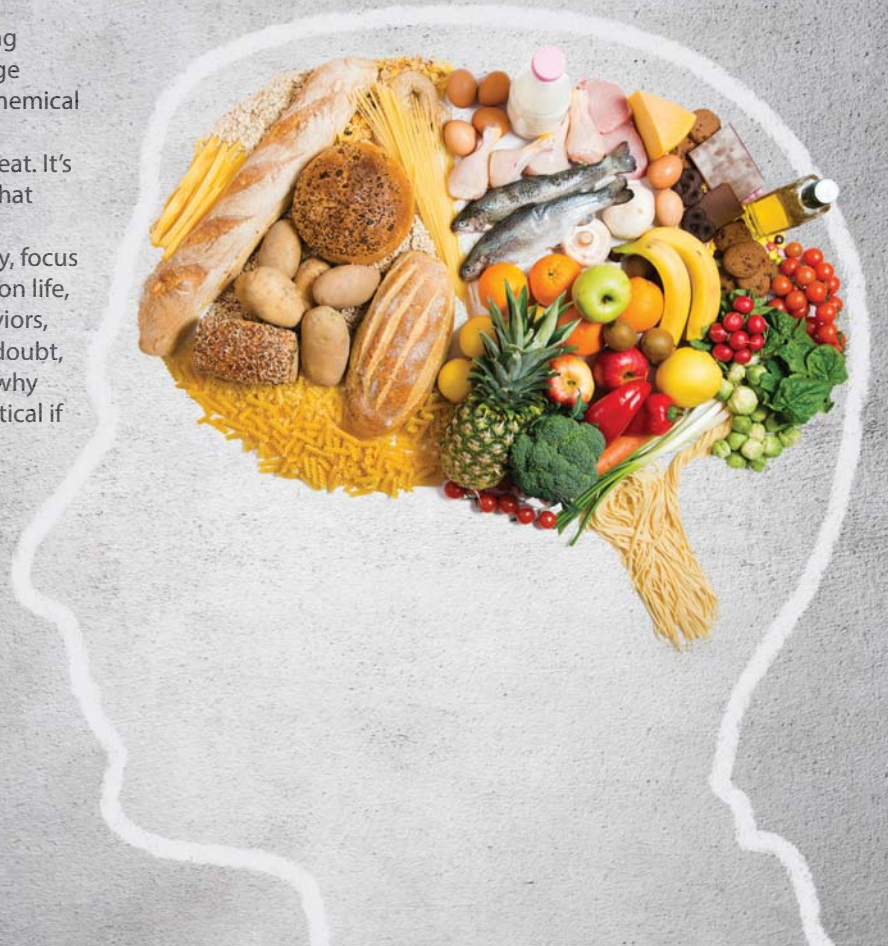
IMPROVING MENTAL WELLNESS THROUGH **OPTIMIZING NUTRITION**

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ARE WE WHAT WE EAT?



The answer to this interesting question is yes, to a very large degree! Every single brain chemical we possess comes directly or indirectly from the food we eat. It's important to keep in mind that optimized brain chemicals determine our mood, energy, focus and concentration, outlook on life, sleep patterns, eating behaviors, and much more. Without a doubt, we are what we eat! That is why eating nutritious foods is critical if mental wellness is our goal.



WHY SHOULD WE CARE ABOUT NUTRITION? WHAT'S THE BIG DEAL?

This is so important that it deserves to be said twice:
ALL brain chemicals are directly or indirectly made from the foods we eat!
What we eat is critically important to our overall wellbeing!



OPTIMIZED NUTRITION = OPTIMIZED MENTAL HEALTH

Seeking Wellness Through Nutrition Makes Sense So, what's the problem?

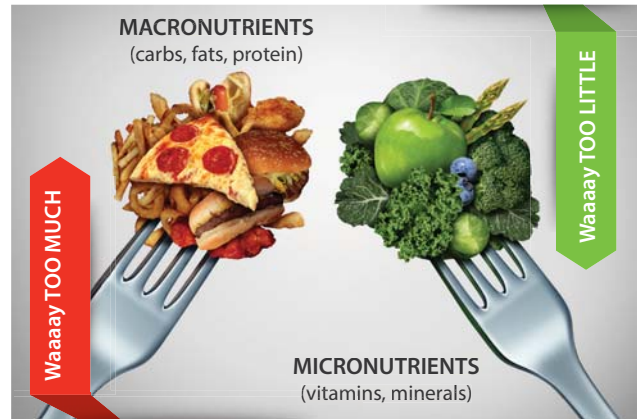


When it comes to nutrition in our modern day world, we have two basic problems:

1. We eat too many carbohydrates, fats, and protein (also known as macronutrients)
2. We don't eat enough foods rich in vitamins and minerals (also known as micronutrients).

This is noted in the image to the right. This modern day nutritional tragedy is resulting in increased problems regarding our mental health. The good news is this is reversible by changing our nutritional habits! Please don't give up hope or feel defeated. Remember, changing eating habits is doable as long as we have the right information and the right tools.

A Modern Day Nutritional Tragedy



OBESITY IT'S AN OUT OF CONTROL EPIDEMIC

We simply can't turn a blind eye to the obesity epidemic. The cost both disease related and financially demands our attention. We applaud your interest in changing your eating habits and taking a stand against obesity!

- More than one-third (34.9% or 78.6 million) of U.S. adults are obese.
- Obesity-related conditions include heart disease, stroke, type 2 diabetes and certain types of cancer, some of the leading causes of preventable death.
- The estimated annual medical cost of obesity in the U.S. was \$147 billion in 2008 U.S. dollars; the medical costs for people who are obese were \$1,429 higher than those of normal weight.

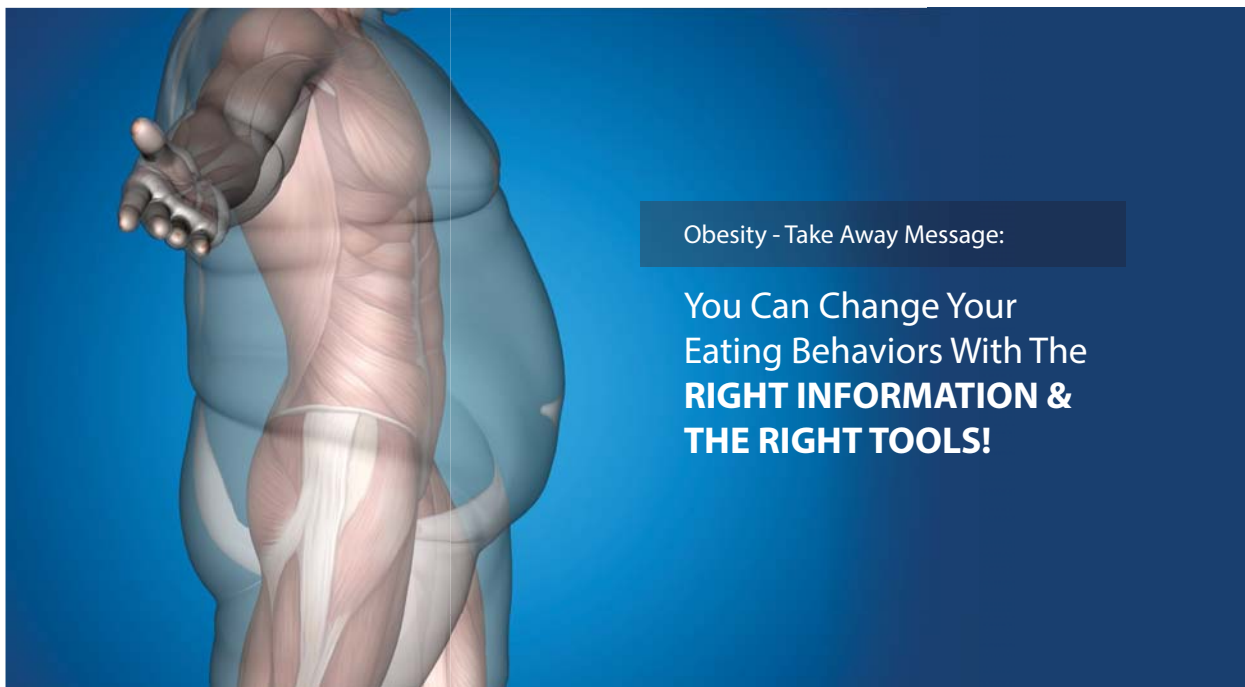
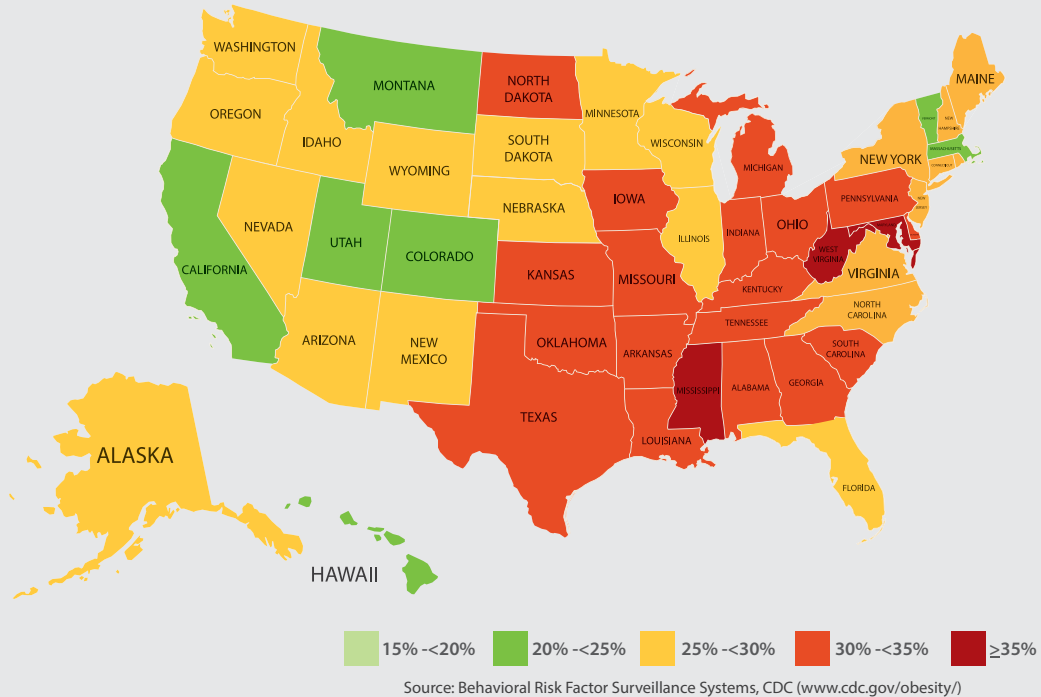
Source: <http://www.cdc.gov/obesity/>

Obesity: A High Price To Be Paid



Prevalence Of Self-Reported Obesity Among U.S. Adults (2013)

This US map gives us a better idea of states that are truly struggling with the problem of obesity. No matter which state you live in, don't be too distressed. No matter where you live, you can change your nutritional habits.



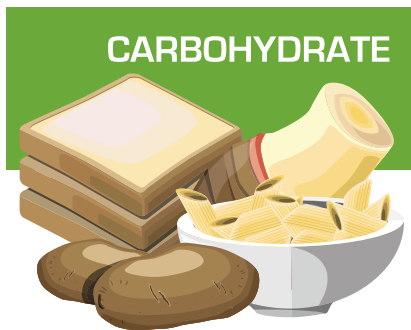
Let's Learn A Little More About Macronutrients

(Carbohydrates, Fats, and Protein)

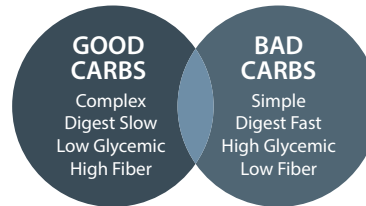
Please discuss each in detail with your healthcare provider



This macronutrient is essential for optimal human life. Keep in mind that BOTH animal and plant-based foods (beans, lentils, nuts, seeds, etc.) are rich in sources of protein. Protein from red meat may be potentially problematic.



Carbohydrates are another macro-nutrient that is required for optimal wellbeing. However, they must be consumed in relatively modest amounts and must be considered "good" carbs – those that don't quickly convert to sugar.



This is another macronutrient that is essential to optimal human life. Fat sources from both animal and plant-based foods are readily available. Don't avoid fats but always eat them in moderation. Good fats are reflected in the picture to the right. Bad fats are basically junk food – highly processed and to be avoided at all costs!

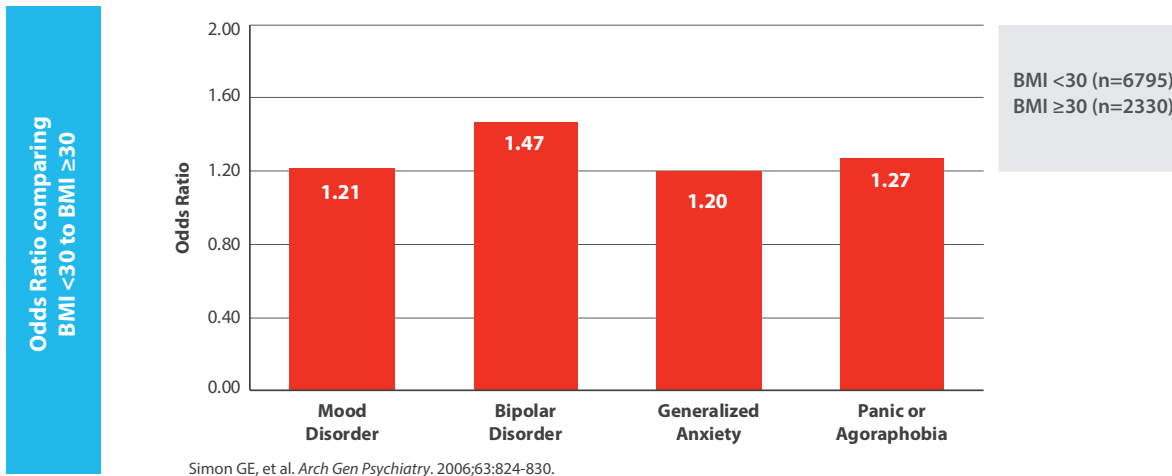


Why Is Excess Body Weight A Problem When Optimum Mental Health Is Our Goal?



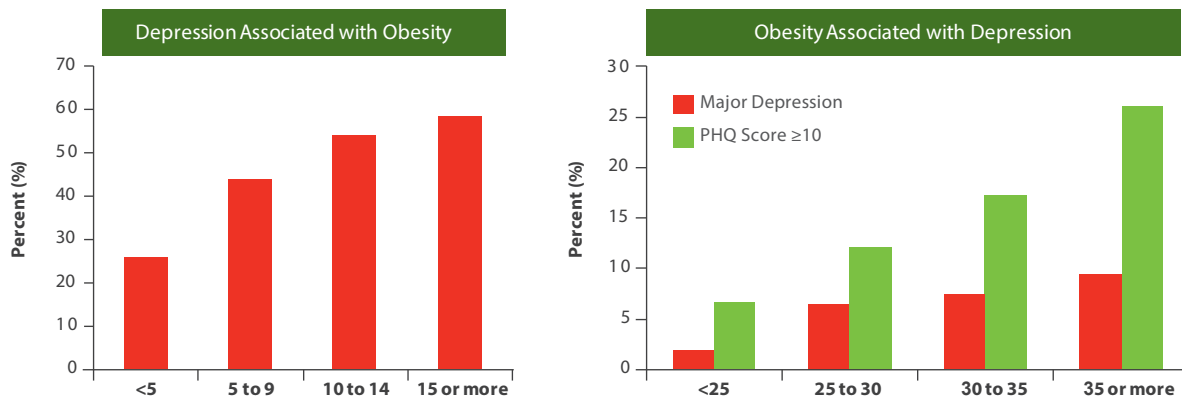
As you look at the next four illustrations, the scientific information is clear. Please notice the takeaways below each of these four illustrations

1. Having a Higher BMI = Higher Risk of Having a Psychiatric Illness



The higher our Body Mass Index (BMI), the higher the risk of mental health problems.

2. Deleterious Bidirectional Relationships Between Obesity and Depression

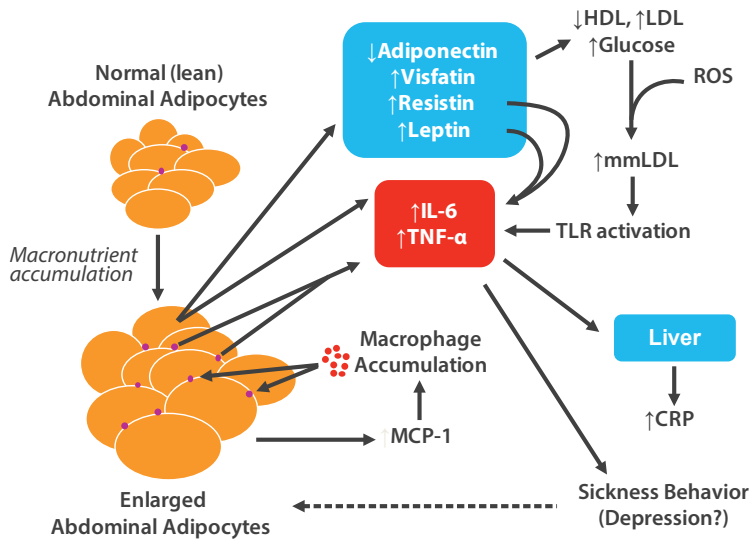


In a sample of 4,641 female health plan enrollees aged 40 to 65, depression was associated with obesity and obesity was associated with depression.¹ Prevalence of moderate or severe depression increased from 6.5% among those with BMI <25 to 25.9% among those with BMI >35. Prevalence of obesity increased from 25.4% among those with no depressive symptoms to 57.8% among those with moderate to severe depression. These cross-sectional data have been confirmed in longitudinal studies in women showing that depression at baseline independently predicts weight gain over time (OR 1.38, 95% CI 1.24-1.53) and that obesity predicted increased risk of depression on follow up (OR 1.11, 95% CI 1.03-1.18).²

BMI = body mass index; PHQ = Patient Health Questionnaire.
¹Simon GE, et al. *Gen Hosp Psychiatry*. 2008;30(1):32-39; ²Pan A, et al. *Int J Obes*. 2012;36(4):595-602.

Depression causes Obesity and Obesity causes Depression!

3. Adiposity, Inflammation, and Depression



- High caloric intake in the diet leads to increased accumulations of lipids in adipocytes.
- Increased lipid content results in an increased release of MCP-1 (CCL2), a chemoattractant that increases the infiltration of macrophages into adipose tissue.
- Both adipocytes and macrophages release inflammatory mediators, such as IL-6 and TNF- α , into the peripheral circulation.

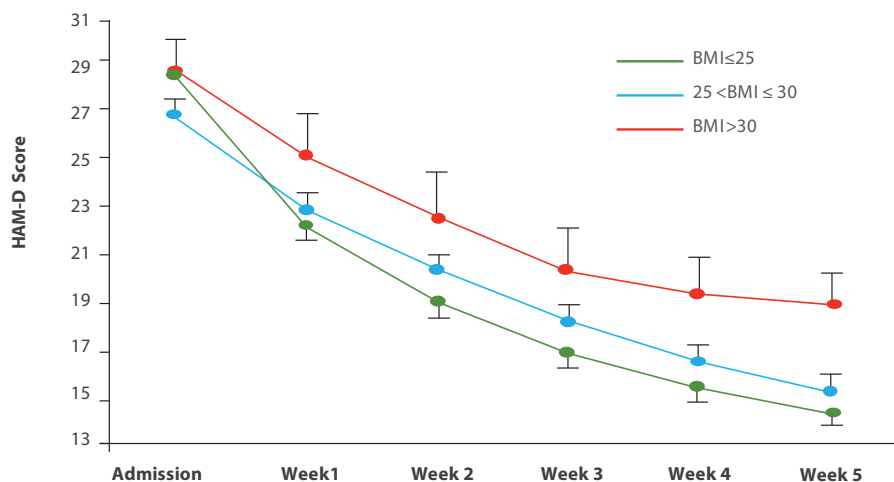
HDL= high-density lipoprotein; LDL= low-density lipoprotein; ROS= reactive oxygen species; mmLDL= minimally-modified low-density lipoproteins; TLR= toll-like receptor; MCP-1= monocyte chemoattractant protein 1.

Shelton RC, Miller AH. *Prog Neurobiol.* 2010;91(4):275-299.

To top it off, being overweight often makes antidepressants work less well.

4. BMI Impacts Antidepressant Response

- Response to antidepressant treatment according to weight status
- Mean HAM-D rating scores and SEMs for 5 weeks after hospitalization



Kloiber S, et al. *Biol Psychiatry.* 2007;62(4):321-326.

This link between BMI and antidepressant response is perhaps because of inflammation caused by obesity that adversely affects the brain.

Saundra Jain, MA, PsyD, LPC & Rakesh Jain, MD, MPH



WHY MICRONUTRIENTS (VITAMINS & MINERALS) ARE SO IMPORTANT?

Micronutrients are so powerful they even affect a developing fetus.

Every single brain and body function requires a vitamin.

Micronutrients control our levels of inflammation, energy expenditure, and thinking capacity.



People who eat more micronutrients have lower mental health problems.

Micronutrients support brain health.

The vitamin B family has many members and they are deeply involved with many brain functions.



Place a check mark after the entry that best describes your normal eating habits			
	0	0.5	1
Green Leafy Vegetables ^a	≤2 servings/wk	> 2 to <6/wk	≥6 servings/wk
Other Vegetables ^b	<5 serving/wk	5 - <7 wk	≥1 serving/day
Berries ^c	<1 serving/wk	1 /wk	≥2 servings/wk
Nuts	<1serving/mo	1/mo - <5/wk	≥5 servings/wk
Olive Oil	Not primary oil		Primary oil used
Butter, Margarine	>2 T/d	1-2 /d	<1 T/d
Cheese	+7 servings/wk	1-6 /wk	< 1 serving/wk
Whole Grains	<1 serving/d	1-2 /d	≥3 servings/d
Fish (not fried) ^d	Rarely	1-3 /mo	≥1 meals/wk
Beans ^e	<1 meal/wk	1-3 /wk	>3 meals/wk
Poultry (not fried) ^f	<1 meal/wk	1 /wk	≥2 meals/wk
Red Meat and products ^g	+7 meals/wk	4-6 /wk	< 4 meals/wk
Fast Fried Foods ^h	+4 times/wk	1-3 /wk	<1 time/wk
Pastries & Sweets ⁱ	+7 servings/wk	5 -6 /wk	<5 servings/wk
Wine	>1 glass/mo or never	1/mo – 6/wk	1 glass/d
	(A) check marks x 0 =	(B) check marks x 0.5 =	(C) check marks x 1 =
	(A) <u>0</u> + (B) <u> </u> + (C) <u> </u> = <u> </u>		

^a kale, collards, greens; spinach; lettuce/tossed salad; ^b green/red peppers, squash, cooked carrots, raw carrots, broccoli, celery, potatoes, peas or lima beans, potatoes, tomatoes, tomato sauce, string beans, beets, corn, zucchini, summer squash, eggplant, coleslaw, potato salad; ^c strawberries; ^d tuna sandwich, fresh fish as main dish; not fried fish cakes, sticks, or sandwiches; ^e beans, lentils, soybeans; ^f chicken or turkey sandwich, chicken or turkey as main dish and never eat fried at home or away from home; ^g cheeseburger, hamburger, beef tacos/burritos, hot dogs/sausages, roast beef or ham sandwich, salami, bologna, or other deli meat sandwich, beef (steak, roast) or lamb as main dish, pork or ham as main dish, meatballs or meatloaf; ^h How often do you eat fried food away from home (like French fries, chicken nuggets)?; ⁱ biscuit/roll, pop tarts, cake, snack cakes, Twinkies, Danish, sweet rolls, pastry, donuts, cookies, brownies, pie, candy bars, other candy, ice cream, pudding, milkshakes, frappes.

T: Tablespoon; d: Day; wk: Week; mo: Month.

01

LOWEST TERTILE
Score 2.5 to 6.5

02

MIDDLE TERTILE
Score 7.0 to 8.0

03

HIGHEST TERTILE
Score 8.5 to 12.5

MIND diet and Alzheimer's Disease Risk

What Your Scores Mean:

Lowest Tertile = 1.0

Middle Tertile = 0.75

Highest Tertile = 0.47

Are you interested in eating to promote a healthy mind and body? Of course you are. Well, let's see what your MIND diet score really means.

The MIND diet is an excellent choice for those of us wanting to achieve peak wellness. Just to show you the power of this diet, we want to share some interesting findings related to the MIND diet and Alzheimer's Disease (AD). Certainly not a fun topic but the data will show you the power of eating well.

Study Findings (please see the chart to the left):

Compared to people who ate the least nutritious food (MIND score 2.5 to 6.5), people who ate moderately nutritious food (MIND score 7 to 8) their risk of developing Alzheimer's Disease was decreased by 25%.

Are you ready for even better news? People who ate truly nutritious food (MIND score 8.5 and higher) their risk of developing Alzheimer's Disease was decreased by a whopping 53%!

We are what we eat and eating well is truly in our best interest.

In Your Pursuit of Achieving Optimum Wellness, the MIND Diet is a Great Choice as it Promotes a Healthy Mind-Body Connection.

(Please see the image below to better understand the different elements of the mind diet)



Adapted from Morris MC, Tangney CC, Wang Y, Sacks FM, Barnes LL, Bennett DA, Aggarwal NT, MIND diet slows cognitive decline with aging, *Alzheimer's & Dementia: The Journal of the Alzheimer's Association*, 2015. doi:10.1016/j.jalz.2015.04.011

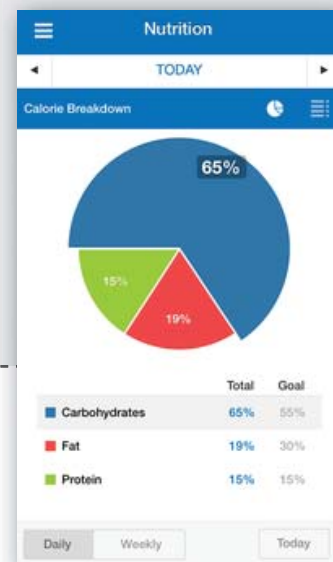
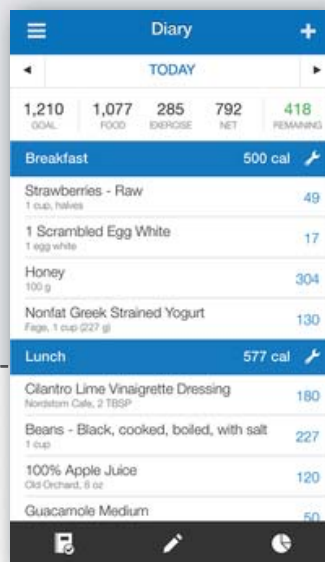
Important Tools To Help In Your Quest For Nutritional Wellness

We highly recommend using this free app on your smartphone! It's an excellent app that documents your nutritional intake – both macro and micronutrients. This is an outstanding app and we hope you'll consider using it on a DAILY basis. If you prefer to use your computer rather than a smartphone, you can go to www.MyFitnessPal.com and sign up. It's available on both iPhones and Android based smartphones.

My Fitness Pal is so incredibly helpful in tracking your nutrition (and exercise), that we highly recommend you take full advantage of it. The fact that it's free is a huge bonus! It helps change behavior and keeps us motivated to continue making healthy lifestyle changes.



Scan QR to visit
www.MyFitnessPal.com



“ It seems that the simple act of writing down what you eat encourages people to consume fewer calories. ”

Dr. Jack Hollis

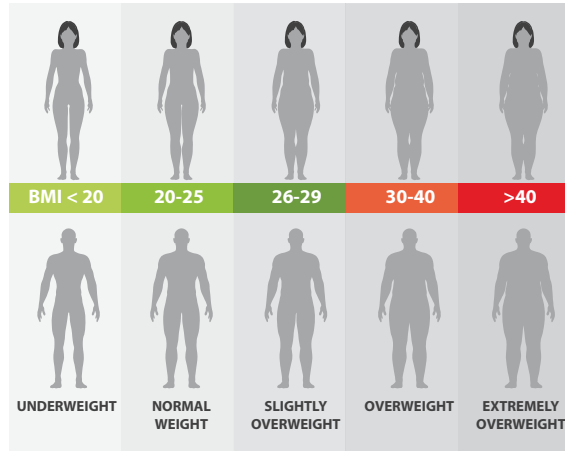
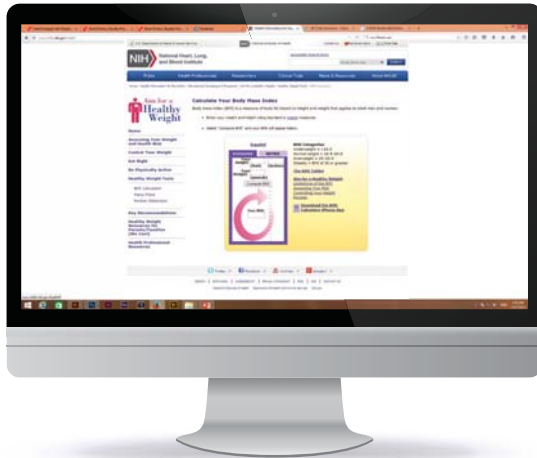
Kaiser Permanente's Center for Health Research

Saundra Jain, MA, PsyD, LPC & Rakesh Jain, MD, MPH

Learn how to calculate your Body Mass Index (BMI)

Practical Tip:
BMI Calculator

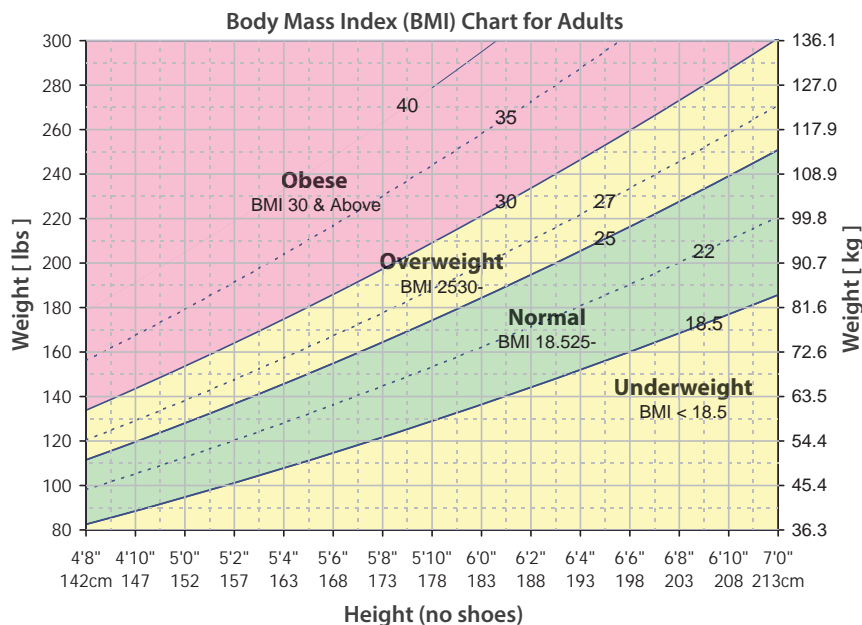
It is very important to learn how to calculate your BMI (body mass index) and to document it on a regular basis. BMI is a very good way to see if you're in the healthy or unhealthy range for body weight and to see how it changes as you make healthy lifestyle choices. Please visit the website noted in the image below, or scan the QR code in order to easily calculate your BMI.



Scan QR to get
Online BMI Calculator: NIH Web Site Calculator
www.nhlbi.nih.gov/guidelines/obesity/BMI/bmicalc.html



Also you can use several of
BMI Calculator Apps
using your smartphone



Once you calculate your BMI, please look at the chart to the left to better understand what your BMI can tell you about your current health status.

Remember, It's All About Documenting Your Progress!

Documenting and keeping records seems to make a difference when it comes to changing behaviors. We encourage you to use the simple chart below to document your BMI and your weight on a monthly basis. This practice allows you to track your progress and be aware of areas needing attention.

Journaling Your BMI and Your Body Weight		
Document your BMI and your WEIGHT at least monthly		
MONTH	BMI	BODY WEIGHT
January		
February		
March		
April		
May		
June		
July		
August		
September		
October		
November		
December		



MY ACTION PLAN

Please discuss action plan with your healthcare provider



1. Assessment of my current nutritional practices:

2. I plan to incorporate mindful eating into my nutritional plan by doing the following:

3. Roadblocks to eating well:

4. What are my emotional triggers that encourage me to make poor food choices:

5. My plan to develop quality nutritional habits:



“ Be careful what you feed your body and consider what you feed your senses.
Both provide you sustenance that makes you who you are. ”
Simon Boylan

