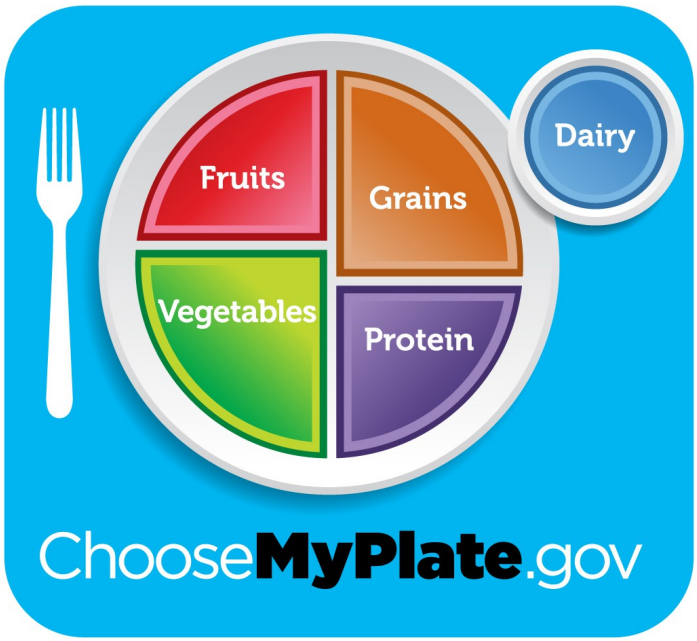
Which Plate Would You Want to Eat From?

1) USDA recommended nutritional intake



2. "SuperFood" Plate

PART ONE: How to Eat and How Much is "Healthy"

- Portions or "The Hand Rule" and Ideal Percentages of Intake.

Portion control begins with an understanding of what a portion really is. General consensus is the following for the "BIG THREE" or "MACRO" nutrients...

A: Protein - Should account for approx 15% of your dietary calories. A serving of protein is the equivalent of a CLOSED FIST. For highly active individuals or those looking to gain muscle mass (i.e. strength athletes), it can be increased to A FIST AND A HALF to TWO FISTS.

TAKE IN: Lean protein such as skinless chicken, fish (occasionally due to mercury), turkey, pork and beef. THIS DOES NOT MEAN LUNCH MEAT or PROCESSED MEAT such as sausage. However, there are exceptions to every rule. If you are eating well sourced meat such as organic, grass-fed, or grass-fed organic (ideal) then you can eat the fat of the animal and the skin on the chicken. Fish should NOT BE FARM RAISED; they should all be wild caught. If you want to know the exact reason why, do some Googling and you'll be appalled how these fish eat, processed, and cosmetically altered for market. If you really want to take a deep dive as to why we are suggesting what we are, further Googling into big farm practices for chicken, beef, and pork is highly eye opening.

B: Carbohydrates - Should account for approx 20% of your dietary calories. A serving is the equivalent of a CUPPED HAND. Carbohydrates have been demonized recently for their high consumption in Western (American) diets. These sources are traditionally refined grains and simple sugars which are high in calories, send blood sugar on a roller-coaster ride (diabetes anyone?), and cause a host of issues with the lining of your intestine. So what are good options for anyone's diet? Here you go...

TAKE IN: Starchy tubers (yes sweet potatoes and white potatoes are in), gluten-free grains such as quinoa, black and red rice, wild rice (actually a grass), buckwheat, and "sprouted" grain cereal/breads. Fruit is actually a safer choice but the sugar in fruit if consumed in excess can cause increased body-fat storage. You may choose one piece of hand fruit (apple, pear, etc) or the equivalent of a cup of berries which are satiating and low glycemic.

AVOID: Dried fruit, refined flour (white bread, pasteries, cakes, etc), high sugar ANYTHING, and the like.

C: Fats – Should account for approx 65% of your dietary calories. Wait? WHAAT? FAT is the HIGHEST PERCENTAGE? FAT makes you FAT...right? Not necessarily, context truly matters for fat consumption. A serving is a "thumb" sized portion which is either a liquid form or solid form such as tree nuts (almonds, walnuts, etc). The majority of your sources should be from MONOUNSATURATED sources such as olive oil or HEALTHY SATURATED FATS such as coconut oil. Animal derived fats also have a place in the diet as long as the source is "grass fed" and, ideally, "organic". The WHY is simple, better/unique vitamin content and LESS saturated fat ounce for ounce. Emphasizing fat consumption helps shuttle vitamins and minerals from vegetables to be used by the body and not simply oxidized or "broken down" without absorption. Furthermore, there is less free radical damage from the body using fat metabolism than carbs. Another great reason that fat is emphasized is that fat is satiating (filling) and does not adversely affect blood sugar levels. Finally, for clarification, eating "fat" does not mean fish and chips or pounding down a jar of peanut butter. Vary

your fat sources and adhere to a one or two thumb serving per meal.

D: Veggies! - This is a special category because, yes, they are carbohydrate dense (in some instances) but you really cannot get fat while eating a diet high in plant matter in the form of low glycemic and green leafy vegetables. Water content is high, fiber is typically high, and calories are typically low; all promote a sense of fullness. This should be about half a plate of food. Avoid things such as sweet peas and corn. They do have a place in the diet, but they are more of a "starchy carb".

E: Easy Summary for Nutrients – Get percentage of calories as 15% protein, 20% from carbohydrates, and 65% from fat. Add more carbohydrate and protein given body mass, profession, and/or fitness goals. Do not shy away from healthy fats! Lastly, try to have THREE LARGE MEALS A DAY rather than grazing. If you are hungry, try to drink 8 oz of water, wait 10 minutes and then re-assess your hunger. If it doesn't go away, eat some more healthy fat. If it does, it was probably a hydration issue more than true hunger. **Final note...the Superfood Plate has different percentages but if you look at the "vegetable" percentage and simply add that to a "carbohydrate" and "protein" macro profile, the results are fairly close to the guidelines that we sugest.**

BONUS TIPS

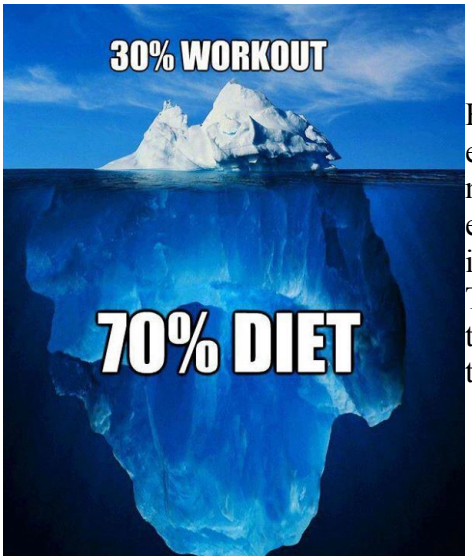
- Here is a fun dietary "hack" that will help promote weight loss and increase fulfillment during meals. Before eating, drink 8-10oz of purified water. Then, immediately consume your vegetables. TAKE TIME TO EAT. IT TAKES APPROX 20 MINUTES FOR YOUR BRAIN TO REGISTER THAT IT IS FULL. Next, eat more of your protein than carbs. Again, we're not demonizing carbs but if weight loss is the goal, filling your stomach up with high quality and dense food prior to eating carbohydrate will aid in rapid weight loss.

- For those that are very active or may need calories, nutrient timing is a fun new topic. After physical activity, have a dense portion of carbs to aid in recovery and promote energy for another training session. There are also studies which suggest that the majority of your carbs should be consumed at the end of the day rather than for every meal. This is called carb timing or carb backloading. If you want to experiment with this, have the majority of your carbs after 6 PM and after an exercise session

- PLEASE READ LABLES...on everything...we're not kidding. Manufacturers have a sneaky way of putting everything from cane sugar to high fructose corn syrup in products. This stuff CAN and WILL impede your progress for both feeling good, looking good, and functioning well during the day. The easiest and safest option is to shop the perimeter of the store and make your own food. SIMPLE RIGHT?

- It is all well and good that we suggest a certain percentage of food to eat daily but how do you know how much you are truly eating? There are numerous phone applications which are free and have a massive database of foods to quickly plug in throughout the day. The app, **"My Fitness Pal"** is very good and has a breakdown of the percentage of all macro-nutrients consumed throughout the day if you log. Just like anything, it is not a perfect system but it is fairly accurate. If you track your habits for about two-three weeks, you can then estimate how much you are responsible to eat rather than tracking EVERY SINGLE MORSAL OF FOOD. In short, the initial work is tedious but well worth the outcome.

Part TWO: EXERCISE



Besides diet, this is one of the most contested and confusing elements of overall health and well being. How much is too much? What exercise should I engage in? What is THE BEST exercise procedure, program, etc.? Can I really get six pack abs in 5 minutes? Does the thigh master REALLY master my thighs? The list goes on and products and fitness fads are promoted via television and the internet yearly.. So how do you break through the noise? Simple. Read Below...

I) Ages 10-15

- Emphasize movement and play. Engage in sports that are fun without significant weight training as bones and growth plates are continuing to mature. Furthermore, group based activities enhance social skills, problem solving, and co-operation.
- There is no "set" routine for this age group but certain studies show that a minimum of an hour of cardiovascular fitness five days a week is optimal. If you have "Type-A" kids, then body weight activities that mimic specific demands for a sport or recreational activity should be emphasized. However, the demands on children for success in sport appear higher in recent years. This is especially noted among females who are not strong enough to support the demands of their sport. For this population, it may be indicated to strengthen the legs and, specifically, the hips and core.

II) Ages 16-19

- Continue to emphasize sports and activities that are engaging and fun for the teenage years.
- **For males:** There may be a specific sport demand but it is easy to just throw plates around in the weight room to prove how macho they are. This ingrains POOR mechanics and predisposes athletes to injuries into later years. While resistance training should be progressive in nature, true max efforts should be used sparingly and ONLY when the athlete can express PERFECT form. Furthermore, men should not just train the big three of Squat, Bench, and Deadlift. And, consequently, an endurance athlete (cross country, soccer, track and field, etc.) should not just train to run. There should be strength training for endurance and endurance for strength. THIS IS SEVERELY LACKING IN SCHOOL PROGRAMMING. We are not bashing coaches at all or fitness professionals in public schools. What we are implying is that victory trumps movement patterns and MOST conditioning programs for sports emphasize sports specificity and "good enough" form with activity/weight training/running. It should be, in this age group, form following function which follows performance and NOT THE OTHER WAY AROUND where performance justifies a means to an end. Lastly, mobility and flexibility is usually decreasing at this

point for men. Yoga or even a proper warmup and cool down can delay stiffening of joints or muscle tissue. If that wasn't enough incentive, fully flexible tissues can express greater force and endurance output than inflexible tissues. GET STRETCHING GUYS!

- **For females:** The same procedures for general sports conditioning such as weight training for endurance specialists and cardiovascular conditioning for strength based sports (throwing athletes, high jumpers, pole vaulting, etc) are imperative. Continue to strengthen the hips given a maturing post-pubescent female's increased hip->knee angle which, more often than not, place the knees in a "knock-kneed" position UNLESS the hip and core are strengthened progressively. So with females, having a strength training procedure USUALLY trumps increasing mobility. Of course, context matters and must be individually assessed. For instance, if the athlete is a catcher and has to maintain a posture which requires her to be on her toes, chances are that her calves and heel cords will be VERY tight and immobile; that would have to be addressed. In general, GET STRENGTHENING LADIES!

III) **Ages 20-29+**. Note: This procedure could be followed well into the mid 40s for both genders

- For Males AND Females: There are numerous options for improving and maintaining health but, generally, there should be a good mix between high intensity and low intensity efforts. An option of ONE ideal breakdown of weekly training sessions would be as follows...

Strength Training = 3-4xs per week. 1-2 hours each session

Movement Practice = 2-3xs per week. 20 minutes to 1 hour per session

Mobility and Body Maintenance = EVERY DAY for approx 10-15 minutes. Focused sessions are up to 30-45 minutes and should be performed AT LEAST 1x/week (NOTE: this is separate from warm ups and cool downs during other sessions)

Cardiovascular Conditioning = 3-4xs per week. Duration is varied and is dependent on the person's preference. For general health, it is recommended that low demand activity is performed for around an hour. However, recent studies suggest that health and longevity, as well as sports performance, is in favor of high intensity interval training or HIIT. HIIT involves performing a series of VERY HARD efforts followed by optimal and active recovery which is cycled until about 20-30 minutes is attained. We believe both have their place and new exercisers should begin with lower demand to build a foundation and then ramp up their intensity.

THE GOLDEN "80/20" RULE: 80% of your efforts should be easy-moderate. This means low heart rate/effort cardio and lower load, higher rep weight training. However, 20% of the time should be hard. Not just, "going for the ride" difficult but putting in real effort. This would be your HIIT sessions or heavy lifting for 5 sets of 5 reps in a primary lift. This maintains a nice cycle of recovery, effort, and progressing without making workouts stale or over taxing the Adrenal Glands. Again, this can apply to the general health enthusiast to the weekend warrior to the serious athlete.

NOTE: For the men, these are your prime brawn building years where testosterone is peaked and exercise output is, arguably, at the maximum ability. It becomes increasingly important to progress strength and endurance without sacrificing mobility.

IV) Ages 50+

- For both genders, it is important that you keep your body moving and active while emphasizing higher rep strength training and less demanding cardiovascular activity. However, we are not saying that life-long runners should immediately begin biking or healthy strength athletes shouldn't lift heavy. It is just imperative to continue to be active. Since the 1980s, heart rate based training was introduced and has been refined to current application. Although younger people would benefit from heart-rate based training, it may be ideal during these decades to know your personal numbers to get a good workout without overtaxing the body. Here is the gold standard method...

1) <u>The standard 220-current age = Maximum Heart Rate (MHR).</u>

- Using the chart above. Take, for example, a 50 year old. The formula is 220-50=170 BPM as the maximum.
- Next, muliply 170 x the percentages listed. **So, if we wanted to determine "LIGHT" activity for 50 years old, we would multiply 170x0.60 and 170x0.70.** This would give us a range of: **102-117 beats per minute**.
- For most activities, this age range would benefit from LIGHT to the lower end of HARD training. Again, using the "80-20" rule above would be beneficial where 80% of activity would be light-moderate and 20% would be moderate to the lower spectrum of hard.

NOTE: This method is, actually, slightly outdated. The more modern method is to do a time trial cardiovascular effort. This is difficult to administer, hard to pace, and requires a heart rate monitor to perform accurately. Also, it helps to be a previous endurance athlete to measure power, effort, pace, and perceived exertion during the test. For our purposes, the "220-age" will be accurate enough.

- If you do not want to test based on heart-rate, you have the option of using perceived exertion or "RPE" (Rate of Perceived Exertion). This is not as accurate and is limited by how you "feel" versus how your body is truly responding. For instance, you may feel that your "heart is pounding out of your chest" and your effort is high but you are really in a "light-moderate" intensity level. However, here is how you translate heart rate to RPE using the BORG scale of Exertion...

BORG 6-20 Rate of Perceived Exertion Scale (RPE)		
No Exertion	6	Little to no movement, very relaxed
Extremely Light	7	Able to maintain pace
	8	
Very Light	9	Comfortable and breathing harder
	10	
Light	11	Minimal sweating, can talk easily
	12	
Somewhat Hard	13	Slight breathlessness, can talk
	14	Increased sweating, still able to hold conversation but with difficulty
Hard	15	Sweating, able to push and still maintain proper form
	16	
Very Hard	17	Can keep a fast pace for a short time period
	18	
Extremely Hard	19	Difficulty breathing, near muscle exhaustion
Maximally Hard	20	STOP exercising, total exhaustion

Conversions: 12-16 on the scale is usually an excellent range for **healthy** adults. This would translate to approximately 60-75% of your max heart rate as per the chart above. Notice how this translates to "light to moderate" on the scale. Your "hard effort" is approx 17-18 on the scale. The general rule of thumb is that if you can sing, you are going to light and if you can't speak in a complete sentence, you are going to hard. Again, these are rough estimates, but they are fairly close. As with everything in this packet, discuss all changes of exercise, diet, or lifestyle with your family doctor!

Final Thought: The best exercise program is the program that you will stick with and enjoy for the rest of your life. It is much harder for someone to exercise and be active if they "have to do it" rather than if they "want to do it". Rule of Thumb? If you're breaking a sweat at least 4-5xs per week and you are doing what you like, you are doing alright.

PART THREE: GENERAL WELLNESS ADVICE

I. Sleep

In the United States, one study suggests that 40% of American citizens do not meet the required amount of hours of sleep a night. The accepted range is from 7 to 9 hours of sleep. Not getting enough or, getting too much, can result in adrenal fatigue, lethargy, brain fog, cardiovascular illness, increased risk for type-2 diabetes, cancer, and early death. Yes, sleep is that important. However, this study did not address the QUALITY of sleep even in those that attained the optimal 7-9 hours. How do you know if you are well rested? You should be able to wake up feeling energized and without a stimulant (coffee or tea) to feel ready to take on the day...too simple to be accurate right? The most restorative sleep is the "deep sleep" or stages 3 and 4 (out of 4) of the sleep cycle. Attaining this depth of sleep allows for tissue growth and repair, hormone release optimization, and energizes the body. Think of these stages as plugging your smart-phone into the wall. Without recharging your batteries, you will always be draining your reserves. So how do you get into the optimal sleep pattern? Here are some tricks that will pay you back in years to come...

1) Eliminate all caffeine from 3 PM (ideally 12 PM) onward and switch to water, decaff coffee, and clear liquids. This does not mean start drinking a lot of fruit juice (see diet from the earlier section).
2) Turn off the TV, smart phone, and other electronics at least 30 minutes to 1 hour prior to getting in bed. These devices not only stimulate the brain from the visual images and noises, but they emit a specific kind of light called "BLUE LIGHT". This reduces or impedes that production of melatonin in the brain which is your sleep hormone. Switch to a calmer activity such as journaling, breathing practice, light flexibility or reading with low light.
3) Make your sleep space light proof. Try to cover up any ambient source of light. Even the red light on the front of your television in your bed room can cause the brain to pick up on the signature which decreases melatonin. Now, we do live in the real world and you can't put black duct tape on all light emitting objects so simply make the following changes. Invest in thick and light blocking curtains so that moonlight or street lamps to not get into your room. If a hall light needs to be on for children or other members of the family, place a thick rolled up blanket at the base of the door (takes 15 seconds of effort and well worth the time spent). NOTE: If you are arguing that it is impossible to see if you have to go to the restroom in the middle of the night, the light from your smart phone can be used as a flashlight to see where you need to go.
4) Climate of the room. The human body attains optimal sleep around the 45-55* mark. Yes, that is cold and you wouldn't want your entire house to be that temperature. To simulate this, get a fan and position it so that it is facing your side of the bed. Next, slide your feet from under the covers (if you do not have an aversion to this; some people do). If you don't like these methods, you can try a cold/ice pack positioned around your core during the final 30 minutes prior to sleeping. This will only affect your side of the bed if you have a resistant sleeping partner.
5) Herbal Tea. It may be a good idea to brew a cup of warm, non-caffeinated liquid and sip in that 1 hour window prior to bed. So you are cooling down your core as you drink a warm liquid. Seems counter-intuitive but studies suggest that this combo promotes good results.

6) Should you supplement? If all else fails, and with permission from your doctor, you may want to look into a melatonin supplement, a valerian root supplement, passionflower extract, or magnesium. We personally think magnesium should be the first option because many Western (US) diets are devoid in this mineral. Adding it to your dietary/nightly regimen may provide a host of benefits beyond improving sleep.
7) Besides the tea, try to decrease liquid consumption gradually throughout the night. You don't want your sleep interrupted by needing to go to the bathroom.
8) If you want to track your sleep, there are very good apps on the phone which use the accelerometer or microphone to analyze movement patterns and noises which are specific to the user. Our recommendation is: SLEEP CYCLE which is $ 1.99 in the app store.

II. Assessing Mental Health and Breathing Practice

1) A quick and easy way to become more productive and improve daily is to reflect of the day's victories, defeats, and lessons and it only takes about 5-10 minutes. When you are winding down prior to bed, either sit into a chair or lay on the bed on your back and progressively try to relax your muscles with your eyes closed. Afterwards, think of at least three positive events that happened throughout the day and then think of at least three negative situations which occurred. Re-frame the negatives and find the silver lining. An example would be if your boss called you into the office and yelled at you for a job not being performed adequately. This would be the time to consider if the boss is just a jerk or if your performance truly needs to be improved. If it is the latter, how could you perform better at your job. Once established, make it a point to make small changes the next day towards the improvement. If the former situation happened, maybe a face to face conversation or email to your boss would be appropriate. If your are performing at your maximum capacity and your boss may not see it, it would be wise to come up with a game plan to prove to your boss that you are a valuable asset; a more stable working environment decreases stress and won't make a job dreaded.

2) **Box breathing.** This is a military concept which involves quieting the mind and deepening the work of a muscle called the diaphragm. Most people breath into the chest and do not fully expand the lungs. Shallow breathing in this manner creates tension on a system called your “sympathetic nervous system” which is responsible for your fight or flight mechanism. This can be summed as “stress breathing”. To test to see if you are a “chest breather” or a “belly breather”, lay on your back and place one hand on your chest and the other on your stomach. Take a deep breath five times and see which hand rises more often. Chest=Shallow, Belly=Diaphragmatic. NOTE: Do not confuse pushing your stomach out as belly breathing. It is easy to use your abs to create the illusion of the diaphragm working. Instead, imagine that you are trying to fill the deepest part of your lungs. If you feel light-headed during this exercise, breathe normally until this subsides. The procedure is 3-5 seconds of deep inhalation, followed by 3-5 seconds of a breath hold, 3-5 seconds of exhale, followed by 3-5 seconds of another breath hold. Start with the three seconds to judge your tolerance and work up to 10 seconds (if you are really into this and it works for you). You can use this prior to bed, prior to a “high anxiety” event (speech, performance in front of a crowd, etc.), or just to regain composure if life gets stressful.

3) **Gratitude Journaling.** This is a physical representation of what you are grateful for or if you are grateful for what you **DON'T** have in your life. This does not have to be done in a fancy journal or every night. Do this on your smart-phone in your note pad or a physical note-pad two-three times a week. Write five small phrases or sentences that are specific enough to be relevant to you. Generalities work but are not as effective. An example would be "I love my husband/wife" which is general and "I love the way my husband/wife prepares meals for the family" is more specific. After a month, read all of what you wrote and it should enhance your sense of well being. The journaling, just like every other concept in this pamphlet, is optional. However, studies do suggest that this method of gratitude helps re-frame perspective when times get rough and can decrease stress.

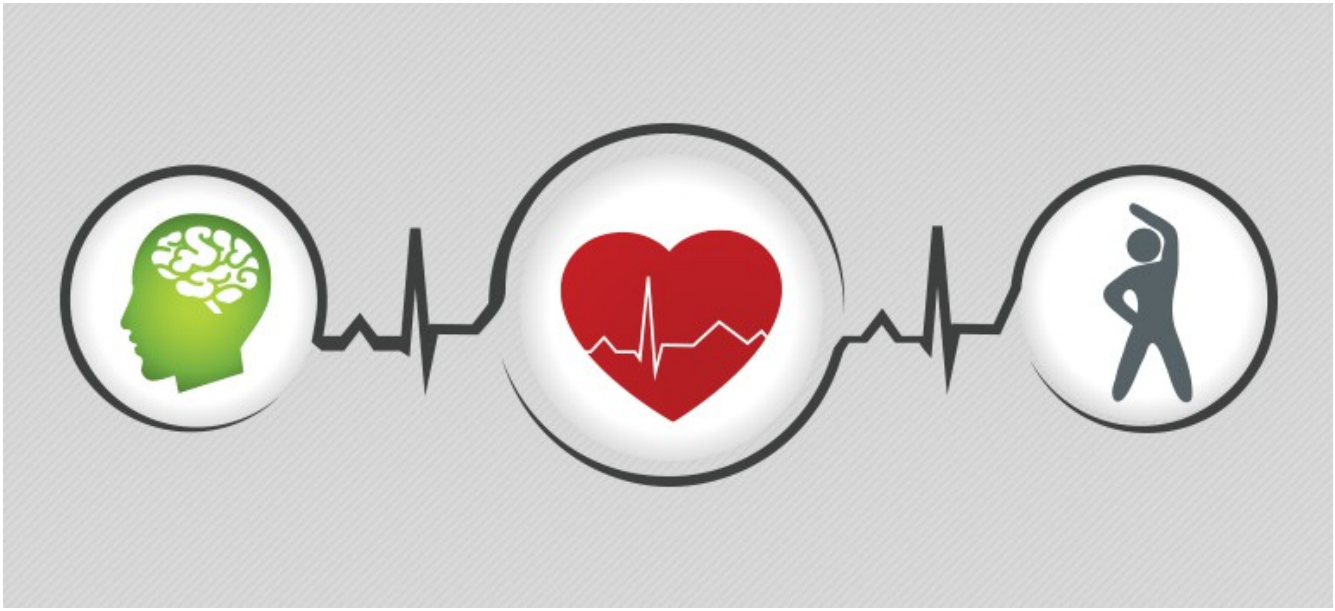
4) **Sunshine and Vitamin D.** In the North-east part of the country, we tend to not have sunlight exposure in the winter months due to our predisposition to staying indoors and, if we venture out, need to wear multiple layers. This prevents a very important biological function from happening. In essence, we are slightly solar powered. When light from the sun hits our skin, receptors in our bodies begin converting the energy to vitamin D. This vitamin, in appropriate amounts, helps mineralize bone, decreases anxiety/depression (Seasonal Affective Disorder "SAD" anyone?), reduces risks of certain cancers, improves immune function, and decreases potential for auto-immune conditions. The dose? **20 minutes a day. That is all.** A simple walk around the block and a brief stop to pull some weeds out of your flower bed would be about that time. Alternatives to sunshine in the winter can be a sun lamp which is a household item, slightly pricey, and not as effective as true sun exposure or Vitamin D3 supplementation. Although we cannot recommend exact dosing, talk to your primary care physician if vitamin D3 supplementation is right for you.

5) **Challenging yourself and Goal Setting.** Happiness is a hotly debated topic. Can you buy it? Do you have to be completely engaged in a hobby which takes time away from family to be truly happy? One thing is for sure, setting a goal which may be difficult, frightening, or makes you uneasy creates a sense of accomplishment and self-worth when attained. This, effectively, re-frames your perspective on stress and "the daily grind". Come up with short term goals and long term goals which promote personal growth. Can you only walk a flight of stairs without being winded? Aim to do three flights without trouble in a month. Not happy with how your kids are performing in school? Take a more active roll in their studies. Run a marathon? Write a book? Try a new cooking procedure/recipe? Learn a Language? There are too many options to write. Do three-five short term goals which you can accomplish in about a half year and 2 BIG, long term goals which may take up to 5 years to accomplish. The payoff? Greater skill development, becoming a much more well rounded person, and increased happiness and well being. The short term goals should be re-written after they are checked off the list. WRITE ALL OF THEM DOWN IN ONE AREA. AFTER TWO YEARS, RE-READ THE LIST. You will be amazed at what you have accomplished. When you feel unmotivated, re-read that list and your current list of goals. If you hold yourself accountable, compliance is nearly 100%.

VITALITY BEYOND REHABILITATION

"A brief wellness guide for enhancing health and longevity"

Courtesy of Faust Physical Therapy



CARPE

DIEM

Note: *The information herein is not meant to diagnose, treat, or cure any condition or disease. As with any change of lifestyle be it dietary, exercise, or otherwise, always consult with your medical professional prior to making these changes.*