1. Welcome to Nutrition 101. My name is Patrick, I am the Wellness Coordinator with the ESHCA. If you have questions or comments for me, please use the provided email address or phone number. This presentation will take roughly 30 minutes, please download the questionnaire and fill it out to verify you covered the material. Upon completion of the video return the questionnaire to me at the email provided and I will send you a $50 incentive card. If you are unable to print the questionnaire, record your answers on a separate piece of paper or include them in an email, I will take it! Paperwork can be emailed (attach a good cellphone picture), mailed, or faxed.
2. Sometime around 400 BC, Hippocrates said, “Let food be thy medicine and medicine be thy food”. Thousands of years later the world is struggling with the concept. The convenience of processed foods and “magic pills” are wreaking havoc! Currently, 6 in 10 Americans have a chronic disease such as high blood pressure, heart disease, type 2 diabetes, asthma, back pain, and the list goes on. National data indicates 80% of total health care spend goes toward chronic disease management. At the same time health professionals believe 80% of chronic disease could be managed or cured through lifestyle changes including diet, exercise, and smoking cessation. Some examples of food being thy medicine include, drinking 64 ounces water per day lowers the risk of heart disease, lean proteins repair tissue damage and control blood sugar, 3 stalks of celery per day has been shown to reduce blood pressure, a serving of almonds reduce cholesterol and control blood sugar, blue berries are loaded with antioxidants, and broccoli reduces the risk of cancer!
3. The Standard American Diet is “SAD”. Unfortunately, at the expense of our health, the “cons” greatly outweigh the “pros”. First, consider the “cons”, SAD encourages processed foods including junk food, fast food, and premade foods. They tend to be high in sodium, sugar (including artificial sugar), and saturated fats. Conversely, they are low in nutrient rich whole foods such a fruits and vegetables, whole grains, lean proteins, and healthy fats. The stated “pros” of a SAD diet, suggest it is less expensive, more convenient, and foods have a longer shelf life. However, is it really less expensive? Consider a 2-liter bottle of soda costs $2.69 and a glass of water (without all the sugar) is pretty much free. A 20-ounce bag of potato chips costs $3.49 while a 48-ounce bag of Gala apples costs $2.99 (17 cents per ounce compared to 6 cents per ounce). Not to mention there is a good chance that bag of chips will be gone in one day, while a bag of apples will last several days. It can be argued SAD is more convenient than cheap, Americans spend a considerable amount of money on fast food and take out annually. Health and wellness professionals encourage people to move more and eat healthier, in contrast, society continues to make things easier and more convenient. For example, most grocery stores now offer curbside pickup or delivery, not necessarily a bad thing but is our convenience centered on creating time to sit and binge watch tv or to create “active” time with family and friends? A common health metric is “daily step count” (as measured by a pedometer), it indicates how much general movement we get. Subtle ways to improve step count include walking around the grocery store and putting effort into meal preparation (rather than simply throwing a frozen dinner into the microwave). Like the hunters and gatherers of the past, we should be putting energy into our food!
4. The processed foods associated with SAD are high in poor quality nutrients (such as sodium, sugar, and saturated fat) that increase the chances of premature death through chronic diseases. Chronic diseases are conditions that last 1 year or longer and require ongoing medical attention including heart disease, high blood pressure, type 2 diabetes, high cholesterol, and so on. Six in 10 adults have 1 chronic disease and 4 in 10 have two or more. Chronic diseases are costly, yet it is estimated 80% of be cured or managed through lifestyle habits including diet, exercise, and smoking cessation. Look at the box on the right, the average American surpasses the RDA for sodium by 1,000 mg/day. Sodium can cause high blood pressure and researchers have identified it as the #1 nutritional killer! Processed meats such as ham, sausage, and bacon are high in sodium and carcinogenic nitrates. Finally, sugar has no nutritional value, the body will digest healthy foods and create all the sugar it needs. Ingesting additional sugar can lead to weight gain and insulin spikes. Insulin is referred to as the “fat saving hormone”. Sugar digests so fast that insulin levels increase very quickly to high levels. As a result the body saves “sugary” calories in its fat stores, possibly causing obesity and type 2 diabetes. The average American takes in 77g of added sugar per day, well above the 25g for women and 37.5g for men recommended by the American Heart Association. Added sugars do not include those found naturally in fruits (offset by fiber). Sugar-sweetened beverages account for 33% of the added sugars in our diets. Making an effort to lower sodium and sugar is a positive step toward better health. Moving to the box on the left, replace those processed foods with a variety of whole foods. What does the SAD lack? Start meal planning with vegetables and fruits, according to the CDC 47% of Americans have hypertension (defined as bp exceeding 130/80), while processed foods raise bp, fruits and vegetables contain nutrients such as potassium which lower blood pressure. Other foods lacking in our diets are heart healthy nuts and seeds along with Omega-3 fatty foods such as salmon. Both contain heart healthy fats and protein which is good for controlling blood sugar. Take note, research does not support getting more breads and pasta in our diets.
5. The GHA is a tool used to assess one’s personal health habits, it consistently identifies “nutrition” as the #1 health risk that we can improve as a group. This is not unique to ESHCA but is consistent with national norms. As previously discussed, the Standard American diet is high in processed foods and low in whole foods including vegetables and fruits. When reviewing the GHA, the check mark represents the average ESHCA response and the solid mark represents the ideal response, you can see responses are low in all the good choice categories and high in all the poor choice categories. Ideally, you would get 2+ servings of fruits, vegetables, protein, complex carbohydrates (breads and cereals), and low-fat dairy each day. While at the same time, limiting or eliminating simple carbohydrates, processed meats, fried foods, unhealthy saturated fats, and sweets. It has been my experience that successful change is more likely if a vision or blueprint is provided, outlining what a daily meal plan looks like and how one would fill it in. The blueprint used in this case is called the “Eat Clean Principles”.
6. I use the “Eat Clean Principles” because they do not eliminate any macronutrients (protein, carbohydrates, or fat). Instead, focus is on a balanced diet using the best quality of foods in each category. For example, it is not low carb but focused on healthy carbs and it is not low fat but focuses on heart healthy fats. The Eat Clean Principles are: read the slide.
7. Filling out a food log is a beneficial exercise when learning to use the principles. It can be filled out retrospectively or in advance. If you are “practicing the principles” and want the best results, I would recommend filling it out in advance so you are taking some time to plan and prepare a head of time. Planning and preparing (including buying the proper groceries) increases the likelihood your meals will be filled with healthy options.
8. The food list provides some ideas of proteins, fruits, vegetables, starchy complex carbohydrates (include whole grains – breads and cereals), and healthy fats. Simply choose a fruit or a vegetable (or both), a protein, and if necessary a starchy carbohydrate. Note, some vegetables are considered starches (not vegetables). Also, healthy fats will fit into a different category, for example, nuts and salmon are protein and avocadoes are a fruit. The list is not exhaustive, every food you eat would fit into one of the macronutrient categories (protein, carb, or fat). For example, I once had someone tell me they were frustrated with the food log and it did not work for their diet. In asking for clarification, she said she had eaten lasagna and it did not fit into the program principles, I explained to her she was both right and wrong! First, the lasagna would be a starchy carbohydrate and should be “categorized” as such, therefore, she should stick to a fist size serving (which I will explain in the near future) and balance it with a serving of protein (which is probably already included in the lasagna), and a vegetable. Second, what was wrong? The food log and food list help to simplify choices making it easier to stick to whole foods, for example, a “healthy” meal of chicken, sweet potato, and broccoli are easier to put into protein, starchy carb, and vegetable categories than lasagna which would have a variety of ingredients. I am not saying it is bad to eat foods like lasagna, in fact, you should be comfortable eating what you desire. However, if you are having a similar issue on a regular basis it might indicate a need for change. Following the principles 80% of the time or every 8 out of 10 meals would have you on the path to success! The best of choices on the food list are highlighted in red.
9. The first 3 principles can be linked together, when done properly eating will actually boost your metabolism! Eating regular meals, 5-6 times per day, keeps the “fire stoked” and keeps your metabolism constantly burning. Digestion requires muscle contractions, chewing and churning of the stomach and intestines burns calories! Eat breakfast to break the overnight fast and get that “fire” started. Research shows that people who eat breakfast typically eat less total calories per day. Eat a combination of protein and complex carbohydrate at each meal. Not all calories are created equal protein is hard for you body to digest, 25% of it’s calories are burned just through digestion. The fiber in complex carbohydrates (fruits, vegetables, and whole grains) is not digestible. The combination of protein and fiber keeps you feeling full for a longer period of time (reducing daily calorie intake) and stabilizes blood sugar.
10. Does your food digest or dissolve?
	1. Think about this, put a combination of chicken and broccoli and in bowl, fill the bowl with water and walk away for 20 minutes. When you return to the bowl, what do you find? Yes, you find chicken and broccoli, the water does not affect it. To eat it, you would begin by chewing it (mechanically breaking it down), when it goes into your stomach and intestines the body continues to use muscle contractions to break it down and process it. It is estimated that process would take 2.5-3 hours and 25% of the calories of that meal would be burned through digestion alone.
	2. Now do the same mental exercise with Rice Crispies. Pour milk on a bowl of Rice Crispies, walk away for 20 minutes, when you return what do you find? Yes, a bowl of “mush”, the milk starts to digest the food before it even goes in your mouth. Because it is a simple carbohydrate (high in sugar, low in protein, and low fiber) it actually “dissolves” rather than digests. When you put it in your mouth, more than likely, you do not even chew it, you probably just swallow it. At that point it goes into your stomach and dissolves into your blood stream without even going through your intestines. No calories are burned, digestion occurs very quickly, most will be hungry again within 30 minutes, and insulin levels spike. The high insulin levels stimulate hunger and the calories taken in are efficiently stored as fat. It is important for your health that your body goes through a complete digestion cycle, different nutrients are processed in your stomach and your intestines. Food should go in one end with waste (fiber) coming out the other.
11. How or why does fiber work?
	1. To simplify, fiber does not breakdown or digest, it goes in one end “scrapes” through the body and comes out the other end bringing harmful elements with it. There are 2 types of fiber:
		1. Soluble fiber turns into a paste that collects “bad” ldl cholesterol and excess blood sugar.
		2. Insoluble fiber acts like a “brush” cleaning the digestive tract as it passes through.
		3. Fiber can help you lose or maintain weight and reduce the risk of chronic diseases such as type 2 diabetes, heart disease, and cancer.
	2. What is the recommended daily amount?
		1. The average American gets 10-15 grams per day! Well short of the 21-25g recommended for women and the 30-38g recommended for men. Sources include fruits and vegetables. Beans, lentils, nuts, and seeds are good sources of fiber and protein and are healthy substitutes for meat proteins. I am not a vegetarian but would recommend having a plant based meal every now and then. Whole grains are also a good source of fiber including oatmeal, brown rice, whole grain breads, wraps, and pastas; you will need to focus on reading labels to ensure you are getting good quality sources.
12. Let’s compare 2 types of bread to discuss reading labels and choosing quality whole grains. Breads and pastas are processed foods, however, the amount of processing can vary with those containing whole grains considered to be healthier choices (think less processed, more raw material like fiber). Look at a complex carb (Ezekiel bread) compared to a simple carb (Wonder bread). Remember our chicken and broccoli example, the theory is the same for breads and pasta; Ezekiel bread has lower total carb and more of that total is in the form of indigestible fiber while less of that number is sugar (note: carbs are made up of fiber and sugar); Ezekiel bread has more hard to digest, metabolism boosting protein; to top it off Ezekiel bread is higher in heart healthy unsaturated fats, and lower in sodium. A technique often taught to those with diabetes is use of the “net carb score”. Simply subtract fiber from the total carbs, the lower the score the better. Ezekiel bread has 10 net carbs to 19 net carbs for Wonder Bread. Diabetics are often given a net carb score to stay below for their daily intake. Overall, when reading labels, I suggest using processed foods with fiber numbers greater than 4g per serving and sugar numbers less than 4g per serving.
13. Dietary fat can be beneficial to your health, providing energy, protecting organs, helping with cell growth, and it is essential to absorb some nutrients. Typically, I do not address dietary fat because the “Principles” would focus on healthy choices such as salmon, nuts, and avocado which all naturally fall into a different category. Salmon makes a nice heart healthy entrée a couple of times per month and would be the protein in the protein/carb combination. Nuts are a great snack idea, again, holding the position of a protein, they can be combined nicely with an apple or other fruit or vegetable. They can also be used in a variety of salads. Avocado is a fruit and can be used in a variety of ways, personally I just cut it in half and eat it with a spoon! Taking all that into account, many are intimidated by dietary fat, let’s see if we can break it down a bit. There are 2 kinds of fat, saturated and unsaturated. Saturated fat is often considered unhealthy because there is evidence it may increase “bad” LDL cholesterol, in contrast, it is believed unsaturated fats reduce LDL cholesterol. LDL cholesterol potentially clogs the arteries leading to heart disease. Does your fat pass the eye test? Saturated fats are solid at room temperature, picture a steak, even after being cooked at 400 degrees the fat is still in a solid state. Unsaturated fats are liquids at room temperature, picture olive oil. We have already reviewed heart healthy fats (salmon, nuts, and avocado). Sources of saturated fats include: animal meats (beef – limit to once or twice per week), dairy fat (prostate cancer – adults should focus on low or nonfat), processed meats (ham and bacon – high in sodium), and pre-packaged snacks (read labels). When used correctly fats can benefit weight loss programs, they are calorie dense (caution with serving size) but they do digest slowly helping to maintain a feeling of being fuller longer, therefore, if done correctly incorporating fats into your diet can reduce overall daily caloric intake. In summary, research on fats shows it is beneficial when used appropriately and hazardous when abused. Reading labels is helpful, one will notice that the fats in processed foods are often accompanied by things like excess sugar and sodium. Again, poor health points back to processed foods!
14. Eat Clean Principle #4: drink 66-99 ounces of water per day!
15. How important is drinking water? First consider this, we previously mentioned that most Americans get way too much added sugar in their diets and 33% of that comes from sugar sweetened beverages. Replacing those drinks goes a long way in reducing and controlling the daily sugar intake. Diet drinks are often just as detrimental, many contain harmful chemicals and artificial sugars that stimulate the same harmful insulin response we discussed earlier. Remember, spikes in insulin levels can result in weight gain and increase the risk of type 2 diabetes. Research on the benefits of drinking water has determined as little as 40 ounces per day reduces the risk of heart disease 41% in women and 54% in men (statistically more significant than diet or exercise). The Heart Foundation attributes these results to dehydrated blood being thicker, which increases your heart rate and blood pressure. Simply stated, staying hydrated lowers the stress on your heart! What about coffee? Coffee is good but should be used in moderation because it has caffeine and is a diuretic, limit yourself to less then 32 ounces per day. Others to consider are herbal teas along with green and black tea. Obviously be cautious with what you are adding (cream and sugar), avoid drinking your calories.
16. Eat Clean Principle #5: Make fresh fruits and vegetables the foundation of your diet!
17. Isn’t it interesting that fruits and vegetables are the healthiest foods on the planet! They are nutrient rich and found in abundance, yet most people do not get an adequate amount. My recommendation is to make them the starting point of your meal planning. Non-starchy vegetables should make up half your plate! Plan to get 3 or more servings per day. At roughly 25 calories per serving, with no to low sugar, and high fiber numbers, vegetables are a “free food”. Some nutrition programs suggest you limit or avoid fruit because they have higher sugar numbers. I believe it can be argued that sugar is sugar regardless of it’s form. What sets fruit apart? Not only is the sugar offset by the amount of fiber in the fruit but fruit is also too rich in nutrients to simply remove from your diet. Most fruit is also fat free and if it does have fat, it is heart healthy fat (avocado). I do encourage people to eat more or an equal amount of vegetables, so my recommendation on fruit is 2 plus fruits per day. Some people talk about fruits and vegetables being “negative calorie foods” which is the idea you burn more calories eating them then you take in. It is an interesting term and I will leave you with that to research on your own, you may find it interesting to see what those foods are. Regardless, replacing processed foods with fresh fruits and vegetables will improve your health. I am often asked about supplements and juicing. I prefer to encourage people to get their nutrients from food because of the whole digestion and metabolism process we covered earlier, that is not to say a supplement is not beneficial but so many people lack a healthy diet, I prefer to start there. I hesitate to encourage juicing because it takes the fiber out of the food, again going against some of the principles discussed earlier. It may be a good way to get some nutrients but I prefer to suggest whole fruits and vegetables.
18. Eat Clean Principle #6: Be prepared, buy the right groceries and carry your own food! Filling your pantry and refrigerator with the right choices is critical to success. Imagine trying to reduce added sugars and fat yet every time you open the freezer you are staring at a half gallon of Heavenly Hash ice cream. Now imagine replacing that nightly pleasure with a half cup of blueberries topped with non-fat Greek yogurt. I know it is not the same, but I think you would be surprised how satisfying it can be, not to mention is much healthier. One of my favorite snacks is an apple and a 100-calorie pack of non-salted almonds, again, it is pretty easy to plan for the week. Do I have 7 apples and 7 packages of almonds? I try to encourage people to pack their own lunches and carry snacks with them. A couple of years ago I wanted to find 5 healthy restaurant meals and include them in the newsletter. The thought was, with so many people working out of town it might be useful information. However, what I found was everyone of those so called healthy meals had more than one days total allotment for sodium, yes, in just one meal!
19. Eat Clean Principle #7: Adhere to proper portion sizes!
20. Hopefully I have successfully argued, what is on your plate is an important consideration, focusing on the combination of protein and complex carbohydrate (vegetables) to drive your metabolism. Portion control is also an important variable, I once had a personal training client who lost 30 pounds by simply taking half of his plate and dumping it into a Tupper Ware container for a future meal, stretching the normal caloric intake over 2 meals. Calories matter, especially when you are dealing with starchy complex carbs. Carbs are often labeled as “bad or evil”, the main issue is most of us get too many in our diet. Based on what we have covered, I would hope you recognize starchy complex carbs would make up only a ¼ of your plate, however, what happens when you order pasta at a restaurant? I think it is safe to say you are getting at least 4x the recommended serving size! That can be 800 calories just in pasta, not including the bread, the sausage or meatballs, the soda or wine, and the dessert. While it is beneficial to read labels and measure out your food based on the information it is helpful to be able to identify what a serving size looks like. You will hear people say, have a protein the size of a deck of cards or a serving of pasta the size of a baseball, those are good visuals. The Eat Clean Principles use the “handy guide”. Take a minute to review the slide.
21. In summary, Clean Eating is focusing on good quality proteins, carbs, and fats; reducing your intake of sodium, sugar, and saturate fat. I would recommend following the example on the right: half your plate is non-starchy vegetables, a quarter lean protein, and a quarter starchy complex carbohydrate (whole grain or starchy vegetable). When indulging (pasta, pizza, etc.) consider leaving yourself leftovers, stick to the serving size and balance it out with a serving of vegetables (garden salad or steamed veggies).
22. Don’t get discouraged, change is difficult, small changes are big first steps! Consider someone drinking 2 Cokes per day, cutting back to 1 would cut 40 grams of sugar out of their daily intake, that is 2,080g of sugar per year (8,320 calories). Put 8,000 calories into perspective, if the average person eats 2,000 calories per day, drinking 1 soda per day adds 4 additional days of “empty” calories over the course of a year, that is 2.5 pounds of weight gain per year. Sometimes success is easier if you work on being better rather than perfect. Similar to cigarettes, soda is made up of highly addictive ingredients including sugar and caffeine, making it a challenge to quit cold turkey (it may be a work in progress). This slide has a number of suggestions, others would include replacing French Fries at a restaurant with steamed vegetables or removing the processed bun from the hamburger. Regardless, there are relatively pain free, subtle steps that can be taken that pay dividends in time. Can you identify a consistency in your diet you can work on changing?
23. This slide goes through the steps of meal planning. When learning to use the principles I suggest pre-planning your meals. Use the food list to fill in the food log and use the food log to create a grocery list. Planning a head reduces the chances of getting into situations where you may make bad decisions.
24. These are some protein/complex carbohydrate combinations you might consider adding to your meal plan.
25. What should you take away from this exercise? Keep it simple, you don’t need to stress or entertain yourself with fancy recipes (save that for special occasions, yes, there is wiggle room to indulge), a chicken breast, with half a sweet potato, and some broccoli is quick, easy, satisfying, and most of all healthy (remember, try to follow that model 80% of the time). Focus on reducing sugar and sodium, read labels and start to get an idea of how much is currently in your diet. Is there a food choice there that you need to eliminate or replace with a healthier option some are obvious and some are not (for example, there are yogurt brands that are high in sugar and can be replaced with plain nonfat Greek yogurt flavored with blueberries). Drinking water is a great start to improving health, it has no sugar and is heart healthy, reduce or eliminate soda intake (including diet soda). Also, consider eliminating or watering down fruit juice, it is high in sugar and the fiber is taken out of it (eating the whole fruit is a healthier approach). Flavor water and add nutrients with lemon or infuse other fruits or vegetables. Start meal planning with vegetables and fruit, combine with a lean protein such as chicken, turkey, fish, egg whites, or a good whey protein powder. When using starchy complex carbs read labels and focus on improving the quality (high fiber and low sugar). Incorporate some healthy fats into your diet: nuts, salmon, and avocado are good choices to improve heart and joint health.
26. Finally, the best way to be successful is through practice! It took me years to understand and use the Eat Clean Principles, the more you practice the easier it gets. Consider signing up for the Winter 35-Day Challenge in January. You will receive registration information in the December and January Online Newsletters (contact me if you need to register for the newsletter). The program is done completely through e-mail. You will get 2 e-mails a week from me, one on Tuesday recapping the previous week and one on Thursday coaching the week to come. The program focuses on one variable per week, for example, week #1 is water, week #2 is fruit, and so on. The member and the member-spouse will receive a $50 incentive card for participating. What will I need from you? You will need to read the 2 emails I send out and submit 5 logs recording the variable for the week, recording can vary with as few as 3 days per week being acceptable. Sign-up, it is easy and educational! Contact me if you have questions.