Thanks for joining me today for the popular topic of brain health today will be describing how nutrition plays a role in the prevention and treatment of brain disorders and we're going to focus on dementia and Alzheimer's so just as a reminder I'll put your phones on mute on Entry but just make sure you're muted either on the phone or the computer throughout the presentation to reduce some background noise how to get started let me introduce myself my name is Christy Goss I'm a registered dietitian here at Pacific Medical Center pacmed has nine clinics around Puget Sound and we do primary care and Specialty Care my program called The Living Well Alliance is a workplace wellness program that deals with nutrition education I'm getting people their resources that they need so at the end of today's presentation if you signed on to the live by Minar you'll get an email with follow-up handouts and the PowerPoint presentation and then if you're listening in a group setting I'll send that to your organizer as well you are learning objectives today the main goal is to get at what lifestyle factors will help prevent the psychological systems not to break down before they actually start there is not a lot of research on stopping the progression of dementia and Alzheimer's but we know a lot about prevention before I get started and even slowing down the delay they're going to focus on how nutrition relates to the brain and then also some lifestyle factors that have been shown to be really prominent in preventing cognitive decline so why do we care about brain house well brain health are increasing our disorder isn't in that case are increasing worldwide and today we want to focus on dementia disorders because they constitute about 36 million cases in our country and that is projected to increase additionally about 60 to 80% of all dementia cases and this is an umbrella term for any type of memory loss disorder in elderly populations is now Alzheimer's they love this little umbrella just to show you that Alzheimer's is one of the main sources of dementia with dementia covers a couple other things that will go over today as well I know that dementia is really common and you're either your family your personal story so I'm just curious will start with a polling question around have you personally experienced Dementia in a loved one or family member and if you are using the computer you can just kind of picked down one if you're in a classroom typesetting you can just thought about it for a second there's a lot of information about dementia I gave you a couple of resources on the bottom of your screen here so the first one is just different types of dementia so if it's not Alzheimer's you can look up what that one might be and then there's a great video on looking at specifically how Alzheimer's disease develops and they've don't understand all of it but they know that there are certain neural neurological Pathways that are being disrupted and they call them these interruptions either plaques or Tangles so that essentially you stop some of the nerves tingling signaling and then eventually your brain get smaller and smaller that's a great video by osmosis so looking at the polling it looks like a lot of people have experienced General dementia and then a good portion of us have known people that have Alzheimer's disease thanks for participating that one so what we'll look at today is the relationship more from what were eating and what we're doing and as far as our lifestyle factors to really influence our brain so that we can have good brains going forward it's not supposed to be you get old and you have these brain disorders are more common as we get older but we can do a lot for prevention so the first one is trying to get the right cocktail of nutrients from fresh and unprocessed Foods so if you think about it like an expensive car your brain functions best when it gets the best and honestly it nutrition relates to a lot of diseases but there are other things going on as well to make sure you're absorbing those nutrients and making sure your body is working on the inside the same like a car something obvious might be broken and then something might be more intricate and underneath the hood so to speak Whole Foods is kind of the general term for Less processed food that I think of it like anything you can picture growing such as an apple and if you start to manipulate the app and put it into other ingredients they making an apple pie or even buying a store-bought apple pie it starts getting less and less of its whole form and therefore usually less fiber and less nutrients that way don't talk a lot about different vitamins and minerals that we need for our brain the second one in a big area of research now is looking to cow to keep your blood vessels healthy so anything that's going to affect your blood vessels is the end of the day going to affect our brain because of how the blood and nutrients are transported around the body so the three contenders for keeping blood vessels healthy are controlling blood pressure and diabetes is not smoking so smoking can actually cause damage and less flexibility in our blood vessels and then we want to increase our physical activity to keep those blood vessels nice and healthy and auction and keeping a lot of the blood and oxygen circling around the body the next one we know that keeping the brain active mentally and socially is really important so that old slang use-it-or-lose-it we know that we actually create new neurological Pathways when we're learning something new or even going home a different direction we start to activate different parts of our brain our brain likes to be on autopilot to save energy in time but when we can stray away from that autopilot once in awhile and even learning a new language for example we start to really strengthen and grow the brain in a variety of ways especially as we get older and finally we always want to work on our stress reduction and also our sleep so while we're not going to cover these that much today know that these all affect our health of the body especially our brain health I want to start with the general recommendations for nutrition the research continues to suggest that a healthy eating pattern protects our brain and this is exemplified by more of a way of eating as opposed to specific nutrients although we will talk about some of those today so we know that it's more of a trend of what we're eating over time and not what we ate yesterday or what we're going to have today the two eating patterns that have shown great outcomes in preventing and delaying the onset of cognitive decline are the Mediterranean diet what you may have heard of that's the picture that you see on your screen and the mind diet so the Mind diet is an acronym and it's an eating plan that combines the Mediterranean diet principles with the low sodium diet called Dash so these are and that's what it stands for if you're curious about it both of these diets recommend a high intake of plants limited meat consumption moderate intake of alcohol wine in particular as you'll notice in the picture and high intake of good unsaturated fats like olive oils omega-3 fatty acids and those good fat seem to be protective against cognitive decline at this point and really good for a blood vessels which is great the differences Mediterranean diet places greater emphasis on fish and overall fruit and vegetable consumption whereas the Mind diet specifically put picks out foods that they have known to be higher in nutrients and especially the nutrients that are great for brain health such as dark leafy green vegetables berries and they have a mouse so it's a little easier to digest if you have some regulations where the Mediterranean diet every country around that Mediterranean region eats a little bit differently so it can be confusing to know where to start or what kinds of foods to even make one research study found that the Mediterranean diet specifically increases your brain volume so just like a muscle your brain actually can shrink and grow depending on if it's being treated well. We know that if we see more of this preserved white matter in the brain then that's protective against all simers disease specifically so Mediterranean diet is used in a lot of different research studies specifically looking at different cultures and how they're not getting a lot of these brain disorders that America is is unfortunately seeing a lot of so this is the Mind diet recommendations and there's a lot of great books around the Mind diet with some more information about why they're choosing me things but these are common ones that we see really benefit the brain and also the heart so I know it's heart health month as well so we know that anything that were eating for the brain luckily is really great for the heart and you'll notice that on the bottom there there's a couple things that you want to avoid or at least eat less of so they kind of put both in their diagram so I wanted to go through a couple of the macronutrient categories and pick out specific nutrients that are really great for the brain so first we'll talk focus on the type of fat I know notoriously we've had issues with is fat good as fat bad but we do know now that some fats are better than others and some fats actually protect us against some of these chronic diseases if you can remember what those bats are maybe you can say it to your neighbor or write it down since we have a lot of emphasis on those good fat so to speak when were focusing on types of fat we can find fat in all of the different food groups but I listed a few of them at the bottom of your screen so nuts and seeds salmon avocado olive oil seeds as well we'll all have these good monounsaturated fats and omega-3 fatty acids when looking at the research omega-3 fatty acids are seen as the stars for reducing inflammation in the body and also protecting our brain cells so if you think about our brain it's all protected by various types of fat and so we need to replenish this overtime and one of the things that does that is are Omega-3 we kind of do reverse studies a lot of time when we look at brain house and we'd look at people that already have these brain disorders and see what there might be lacking so one study showed a dietary deficiency and Omega threes in humans has been associated with an increase of several mental disorders so this includes not only dementia but also attention deficit disorder just be a depression bipolar and schizophrenia so there's kind of this all of these different disorders affecting what were eating potentially and how we're living Our Lives we find omega-3 fatty acids mainly and fish and seafood and specifically the fattier fish so things like salmon and sardines and mackerel have a higher content than your Crustaceans like shrimp and lobster and some of those things we get some omega threes from plant sources like ground flax seeds or chia seeds however they do have to go through an extra conversion so when we look at amount we don't know how much were actually absorbing from the seeds sources the second fat listed up there is called the monounsaturated fat so these have been shown to be really helpful for our blood vessels specifically dealing with our cholesterol so monounsaturated fats like olive oil avocado and nuts and seeds any type of a lot of different liquid oils all seem to lower the LDL cholesterol the one that we want lower and raise HDL the one that we want higher in the body so that's a cool thing and these are plentiful in the Mediterranean in the mind diet which is probably a main component of why we're seeing less risk for brain disorders all the ones at the bottom of your screen or just sources of those two so now and turn diets that are high in saturated fat so those are the ones solid at room temperature that we want to minimize in the diet are are notorious for increasing the risk for neurological dysfunction in both human studies and animal studies so there's this inverse relationship between people that are eating a lot of saturated fat and greater risk for brain disorders and then those people in the Mediterranean region that are doing a lot more monounsaturated and have less risk associated with it lastly I want to just point out and mention vitamin D this is a fat-soluble vitamins that's why I put it on the screen for you and they're starting to find that low by levels of vitamin D are associated with poor moods and cognitive decline so it's not a sure thing at this point it's still a lot of speculation but they're noticing a lot of symptoms from people that have low vitamin D levels especially in the Northwest Winters when we're not getting exposed to Sun and making our own vitamin D there's some sources of vitamin D and our food supply but it's really hard to get some minimum amount that we want a day which is 10000 IU's from food so it's worth the thing that I usually say just supplement it's a lot easier to get to that level that way here are some other sources of Omega-3 rich food so again salmon mackerel sardines are up there and then some other sources that have some are things like eggs or grass-fed meat have a little bit hot and June are pretty low but they have some and then halibut and shrimp are also pretty low there the next time to carb we want to make sure we're talking about complex carbs when we look at someone's diet right there is a big difference between complex cards which are full of B vitamins and fiber you can see the little diagram here where refined grains like white bread and white rice have everything stripped except for the endosperm which is the good starchy layer that's what makes it taste so good but we're forgetting all of the nutrients and the fiber that you get from a whole grain so when we look at brain health we know that B vitamins provide a lot of good source of energy and also they help to regulate a couple things in the body so specifically I'll look at folate and b12 what they're both of these B vitamins they regulate the breakdown of a toxic molecule called homocysteine so you don't need to remember that for the quiz but homocysteine is this component it's an amino acid that's been linked to our having a high level has been linked to having depression cardiovascular disease and cognitive decline like dementia and Alzheimer's so usually people that have a lot of homocysteine in the body is often a byproduct from a diet that's high and meat products and dairy some more of the saturated fat and things that we know are good occasionally but not for an everyday occurrence will start to hear more hopefully about homocysteine levels right now there's not a way that you can really test your level but in the research study that use it as a marker for knowing if a certain diet is working so to speak so again B12 and folate are there to regulate the breakdown so they have that it gets out of our body in a safe manner we also know that carbohydrates and specifically the whole grains provide us with a good source of fiber and we know fiber helps to regulate our digestion it also seems to be linked to a decrease inflammation in the body and there is something to be said about feeding all of the good bacteria in the body while we don't know specific bacteria that result in better brain health then others we do know that there's a correlation between a lot of diversity so many different kinds of good bacteria and health of the heart and the brain so the more different types of fiber that we eat this is essentially feeding are probiotics and that has been linked to overall Better Health in general lastly on the reverse side of it we know that eating a diet high of refined carbs does have negative impacts increases the inflammation in the body and we see a higher incidence of or like the speeding up of Alzheimer's disease and people that are already have that disorder so here's some inspiration for your whole grains we have some pharaoh and the first picture from whole grain bread with lots of vegetables and then assumed but that could be quinoa or barley kind of use whatever you enjoy the most and lastly we have protein hopefully you're not overloaded yet I always throw a lot of information at you but I'll follow up with lots of resources and videos to make it more digestible so with protein we get us we got a lot of times D12 so B12 is the only B vitamin that we get only from Meet the rest you get from fruits and vegetables and whole grains we also know that think I think my screen just lost contacts B'Elanna II hopefully you guys can all see my screen again sorry about that so we also know that zinc and iron are also really important for brain health so these are sources of B12 foods and then I'll go into how much protein we actually need so B12 is again that partner for folate to regulate the homocysteine think is important for the function of neurotransmitters so how fast and how fiery they are to information throughout the body so we know that that is really important and I think is also found in a lot of protein foods it's really high and oysters and meats and things like that so again we do need some meat we just want to make sure we're doing different sources of protein that have the vitamin B12 in it and then iron is also great for the proper development of brain cells especially in our younger kiddos so iron is again transports oxygen throughout the body but it also helps with our muscles and the contractions of our muscles so it's really important to have adequate iron on board for the function of our brain so they all kind of work together to help with the communication throughout the body and then also to essentially detox the body because they're helping to break down certain things that shouldn't be there in like 15 I got questions a lot on how much protein you need and while there's not necessarily like an automatic amount that everyone should be taking it is based on weight so I did a simple formula and just some estimations if you are like a hundred and seventy-five pounds you may need about 79 grams of protein a day and that greatly depends on your activity so notice at the bottom I put \* 1 but then it says activity Factor so this could go from about 1.2 if you're fairly active if you're working on a racing a marathon or doing a strenuous activity I would even put the activity factor to a 1.5 or even a 1.8 sometimes so that will dictate higher amounts of protein for those that are more active and lower amounts of protein for those that aren't more sedentary so what to eat right essentially using the MyPlate is a great tool to get started because it all encompasses does nutrients I just talked about so even though I can feel overwhelming to say did I get enough folate did I have enough B12 typically if we're eating a quarter of the plate are protein some kind of brains and hopefully there are whole grains they have more fiber and B vitamins and then a lot of fruits and vegetables we can feel rest assured and a little, that we're getting all that we need couple other things that we know about different cultures is that a lot of international cultures do more legumes and beans and these are great for not only fiber but they have a lot of nutrients as well like magnesium iron and and so forth so trying to just mix so then where you can can be a really good start and trying to reduce the protein from meat sources to some plant-based proteins as well I like this picture a little bit better because it actually has real food so this is technically the Mediterranean plate so it's really similar to the MyPlate although they transfer for out the dairy for more hydration from water or even they emphasize green tea which is potentially used as a preventative for cognitive decline because of certain nutrients in the green tea so you can use that as your afternoon beverage or your morning beverage to get that little extra boost in your brain lastly we can't talk about nutrition solely without mention mentioning some other lifestyle factors so as promised we're going to get into the benefits of exercise so with exercise we get immediate effects from exercise including increased levels of mood-stabilizing neurotransmitters so things like serotonin and dopamine we get the ability to shift our Focus Shift the focus of our attention that are so we have a better ability to multitask improving reaction times even and then summertime exercise again as a muscle and we see changes in our brain anatomy we also see a growth of certain areas of the brain when we're exercising so this is a hippocampus and this is been associated with our long-term memory and attention so essentially when we're exercising were kind of growing part of our brain and I love this analogy that it's kind of like our 401K the more you exercise the bigger and stronger the prefrontal cortex and the hippocampus of the brain which protects us from wear and tear as we get older so it's not about saving yourself for not exercising now how you can get motivated and different ways to add exercise more into our daily lives regular exercise when they've done research studies can reduce your risk for heart and circular to Torrey diseases by 35% so that's a higher percentage than most medications around blood pressure and cholesterol and then a side bonus is that it's going to reduce your risk for osteoporosis bone Digger diabetes and even certain cancers so I was listening to a Freakonomics podcast a little while ago and they have a great episode about exercise and although it's called the 0 minute exercise they really just go over a how amazing exercise is and how it's almost impossible to replicate that into any medication or any pill so if you want some motivation it's a good half an hour episode before you go exercise or even while you're working out this study was really important because it shows the benefits for not only cardio exercises but the fact that if you combine different types of exercise and improve your symptoms of people that have Alzheimer's even greater so this can be said to for regular people that are exercising and using strength balance some kind of coordination or flexibility within their exercise program so we saw that their cognitive function improve so it's especially their attention their memory and executive functioning they had less behavioral disturbances so I know a lot of folks have to go on anti-anxiety medication or kind of sedatives when they have Alzheimer's if they get upset to know that certain types of exercise even a little exercise can help with these baby behavioral disturbances and then we also look at some psychological conditions and we see a decrease in depression mood fluctuations anxiety and delusions so it's pretty amazing that just exercised can do all that right cuz we know that even one medication has trouble focusing on just one of those aspects so although this was a study in 2008 I just love that showcases that it's not just all about aerobic exercise you have to include things like yoga and strengthening exercise to really compliment your jeans the last we hear some other tips for keeping your brain strong as other lifestyle factors I mentioned at the beginning so the first one is exercising your brain social studies against oh that mental stimulation can help do nerves grow and connect effectively speeding up your brain and protecting against some of that degradation that your you may experience those things like reading something new doing a puzzle some of the word games that you see a lot of crossword Sudoku are those types of things joining a new class whether it be like drawing class or trying to learn a new skill can be really effective especially if you have the beginning signs of Alzheimer's they do know that things like learning a new instrument or trying out something new actually starts to slow down the degradation so even though they might have already trouble remembering things just always trying to exercise that brain and Nu-Way can really help kind of slow that down socializing so strong strong social ties can be tied to lower blood pressure lengthening of our life expectancy improving our mood and then we also know that it increases levels of are neurotransmitters which in essence helps with prevention of cognitive decline Stress Management so that we see can decrease our cognitive functioning making you feel foggy and forgetful in the moment and then over time it can just tax the body increase your blood pressure which is not great for your blood vessels and increase feelings of anxiety depression stress and things are not great for longevity of your brain and then finally sleep so sleep and brain function are very interconnected you might have been awake for a lot of last night and now you're feeling like a little bit out of it not as sharp as you usually are so we know that if that happens in just one day of lack of sleep that overtime that we can just not have that neuroregeneration that does happen overnight so kind of heels and repaired different areas while we're sleeping so just to summarize they've done a lot of studies on longevity in adults as those that are mentally still aware and social and they found that people that do regular exercise they don't smoke engage in a lot of mental activities have a social network and then maintains healthy blood sugar ranges if they do have diabetes lived on average five years longer than those seniors that didn't do those five things so that was from Assisted Living Federation of America so it's pretty drastic write 5 years and still being mentally aware and live it is really important I know to a lot of the people that I'm teaching with that I hope you guys got some good information about some of the research around different foods and also some of the lifestyle factors that can really be preventative against cognitive decline is a really scary disorder right we we know that there's not a ton that we can do to stop it although just knowing these little tidbits about different culture than what they're doing differently than us can really feel empowering when it's like such a big and terrible Disorder so feel free to ask questions in the chat bar today you can also email me personally I will send that email as a group afterward with some additional resources as well for information around dementia I'll put the videos on there and that so so any questions