Our presentation today on winter Wellness Pacific be looking at nutrition or our immune system my name is Christy Goff I'm a registered dietitian nutritionist with Pacific Medical Center and I run a program called The Living Well Alliance which is a workplace wellness program pacmed has nine clinics around Puget Sound that specializes in primary care and Specialty Care so let me know if you have any specific questions around that I asked you at the beginning to write down your favorite winter remedy so if you're just joining us you can add that in the chat bar here but today we're going to go over the basics of our immune system is a complicated system requiring a lot of Behavioral factors as well as just what's going on inside so we'll look at the generals of that will look at ways to protect in a support the immune system and then by the end of the presentation we're going to test your knowledge onto nutrition practices that you can Implement today or in your life to support that immune system I wanted to start with a general overview of our immune system so that we can really know what parts of nutrition are targeting different aspects of that amuses them so in general are immune system does a great job as a spending us against disease obviously sometimes we do get fixed so that's when a germ successfully invades our body and get in through various systems so it's possible to make your body stronger against disease with things like nutrition and exercise adequate amounts of sleep and stress reduction all these General things to make us more essentially and immune system is made up of two main parts we have the innate or general immune system and then we have the Adaptive or specialized immune system based systems work really closely together but on a little bit different of Taft so the innate immune system that General immune system is the body's first line of defense against germs during our body the response the same way to all germs so there's no like specific action at taped it has a job to do and it does that job over and over again on this is a very quick system it's reacting within minutes or hours of this foreign Invader entering the body and I'm you can see that it can incorporate our external so things that are physically blocking bacteria and viruses in the body and it also consists of these cells that are really supposed General in function so our killer cells are two examples of this innate immune system immune system consists of our skin and mucosal membranes to actually try to get that bacteria out which is why a lot of the first symptoms of being sick is a lot more mucus everywhere right about 70% of your immune system live in the gut Flora so I'm going to quiz you on that one a little bit later but we are going to talk a lot about probiotics and are bacteria in the gut protection offered by the immune system cells and protein also from this innate immune system moving on to the Adaptive immune system this one takes over if the innate immune system is not able to destroy the germ and usually Pops in around 4 to 6 days into a sickness it specifically targets the type of germ that's causing the infection so you might have heard about T cells and B cells these all have a memory associated with them so once they come across their exposure they're going to remember that and be a lot quicker to fight it off the second time which is why we get vaccinated so that we have these antibodies that are essentially memory cells that are called to the scene whenever were exposed to that specific organism adaptive immune system again is made up of cells that are in our tissue between all of our body cells we have are B cells which are found in tissues between the body and then antibodies are floating around the blood looking for anything that they may remember from before so like I mentioned we can do have a complicated system here and even if someone has a PHD in the immune system there's quite a lot that we still don't know but we do know that nutrition is playing a piece into every part of the immune system in some direct or indirect way so we're going to talk mostly about that today in our life on this is just another example of our adaptive immune system and an 8 so it breaks it up between the two and the specific and then a non-specific I can't decide which one I liked better so I threw them both in the what should we do to stay healthy a couple other people said that they like Elderberry gummies on a lot of people talked about different teas those are all going to be good and we do know a few things about that of course washing our hands is going to be the most important thing for protecting us against in germs right has to get in her body some way and most of the time it's because germs are on our hands are touching different parts of the body like our mouths and our eyes that that bacteria can get into usually when we wash our hands we want them for at least 20 seconds with vigorous rubbing because that is the point of actually getting the bacteria or viruses out the stove doesn't necessarily kill the bacteria right away but it will capture it and help it float the pain away so I was looking at the kind of studies around hand washing and they were quite surprising a 2013 study so kind of a while a trained observers discreetly watch more than 4,000 people wash their hands and what you probably can imagine is that only about 5% of them followed all of the the washing hands Burger 22nd and having it under running water not touching the faucet after you're done so that your read exposing her hands to that so all of these things only 5% so I hope we're so much better at that this year from so much education around hand-washing but just know that the it's really common her people have the Splash and – where they're just wedding their hand one in ten people didn't wash their hands after a trip to the restroom and the most common or coming was that people weren't washing your hands for long enough really count 20 or sing the ABCs for the Happy Birthday song called very prominent in the media right now other things we are already doing a lot is socially distancing masking up especially when sick vaccines are going to be important for prevention especially around viruses so this helps again build up our specific immune system so that they're called to the scene sooner than that four to six days and you're more likely to fight it off much faster with the flu we get vaccinated every single year because there's always need stations in the different viruses do influenza has a bunch of different strands they pick the top three or four for the year through the city eat rcdc and then we'll make a vaccine out of that so I hope you guys got your flu vaccine it takes about two weeks to become immune to the virus so make sure again you remember that when you get any type of vaccine is it fits it takes awhile for your body to become immune to it we're so excited for the covid-19 but again no there's a lot of specificities around that so make sure you're up-to-date on all of those who can visit the cdc.gov to hear all the latest and how they're going to be spreading that around we want to eat while we're going to focus on that today they also want to stay active look at adequate sleep in a minute my stress all of these things we hear about her General Health actually play huge role in supporting the immune system so let's start with the food Portion I love that you guys already said a bunch of these things today but essentially with eating we can really build up our defenses by supporting all the cells that are immune system is operating and those are through the vitamins minerals antioxidants that were eating and I love that you guys already said hydration I didn't mention it in today's PowerPoint that is definitely Keith to help flushing everything out and just the General Health of your body other nutrients that we said was vitamin C A and D all of which were going to talk about today and then the vitamin C as well I think someone else said can you get that a lot of time to learn different teas and different so with our fruits and vegetables this is probably the most important thing to get out of the presentation today is to consider upping your fruits and vegetables not only for winter but for General Health about 18% of Americans are reaching the gold or are fruits and vegetables so it's important to keep remembering where can we add some of these fruits and vegetables into our daily most of them are going to contain fiber a ton digestible carbohydrate that's going to be hugely important for fueling our gut bacteria now I'm going to pull up a polling question and I already said maybe the answer but if you were listening what percent of our immune system is located in the gut open that hole you can choose from 20% 45% 60% or 70% you remember I meant to put this pulling question before I actually said it apologize build fiber fiber is going to be your main food for the gut bacteria in our bodies and we used to think that bacteria were there just to help us digest their food which is true but they're also be willing are immune system so they can help determine in a general way that in the immune system should be there and what should it be there there the more of these beneficial probiotics for calling them can also help kind of outcompete some of the bad bacteria that come into our system people with a diet high in fruits and vegetables and whole grains have a wide diversity of gut flora and this diversity is going to be key and it comes from how you're eating so those that are on Western diets tend to have low diversity. Lots of processed foods high sugar high meat intake people that are eating more of a traditional diet tend to have a wider diversity and we'll talk about that a little bit more Arthur looks like a lot of you were paying attention is 70% of our immune system is found in the gut that's a lot so we need to make our got happy when the one of the things to do is eat your fruits and vegetables doesn't matter what kind or how many necessarily but we want to have them at each meal if possible some of the stars or nutrients found in our fruits and vegetables are a c and d we also have the minerals that are found in both plant food and animal food down below so for example vitamin C contributes to buy supporting various cellular functions of both in general and the specific immune system vitamin C supports our skin natural killer cells that we saw at the beginning the neutrophils which are also kind of non-specific killers of our immune system it's needed or energy for the cell and a deficiency is results in an impaired immunity and higher susceptibility to infections so that was a lot of studies done when people weren't eating your fruits and vegetables like when you get scurvy you can also I'm just a remarkably lower immune function vitamin A and C are also known as antioxidant so these are going to be important for just the health and repair of your body tissues vitamin A is also known as beta carotene in this is found it and converted back to a vitamin A in the body but this is found in a lot of our orange foods a lot of are dark leafy greens and it's so important to protect your lung function and act as a strong Defender against diseases so vitamin D is often in a multivitamin and you can usually find it in your immune boosting supplements as well because of the good morning Sergeant showing on our immune function we'll get to the bank and some of the other minerals below but let me know if you have any questions as we go through I know I'm kind of flying through to just make sure we get to everything one other thing that's found in our person vegetables is a sulfur compound compound that specifically in are cruciferous vegetables do brussel sprouts kale cabbage broccoli all of these things have been shown to a Samsung activity of Defense sells creating a stronger immune response so there's a lot of time studying specifically on the cruciferous vegetables because it has a unique process we're not only the school for component but it also help detoxify your body through enhancing your liver function so it's a great one to add on the weekly to make sure you're getting enough of this cruciferous vegetable also been shown to helpful and cancer prevention because of this process so a lot of these things were promoting today or going to be home a lot of the second one on the list is it rude and not mostly because it's have a good fat in here called omega-3 fatty acids this is an unsaturated essential fat meaning we have to eat it through and it's very low in the food supply so most of our Omega threes are coming from Seafood which we're highlighting today you can get some omega-3 from your flax seeds and chia seeds and hemp seeds the some of you might have those included in your diet for health as well they do have to go through one extra conversion process in the body so typically when were looking at Rich omega-3 sources were focusing on are fatty fish like sardines that are pictured here salmon mackerel and there's a couple other and I can put that in your follow-up rainbow trout has higher amounts sometimes grass-fed beef out there the main benefit of omega-3 fatty acids on our immune system is that it's helpful for lowering overall body inflammation we hear that word a lot inflammation so essentially I think of it especially around the immune system is any type of reaction that's going on with your immune system is it trying to repair your arteries from high cholesterol or high blood pressure is it kind of repairing some of the damage from a high diet full of salt in processed food so this is low amount of inflammation or high amount of inflammation can almost destroy your immune system away from foreign Invaders that might come in contact with it so there's not much research on how much Seafood we need but we do know that it is important for General Health especially around managing chronic diseases so ideally we get two servings of seafood a week for some of you that might feel impossible especially on find show me a fish can be very expensive so I wanted to include a little bit on supplementation we don't have against Pacific or recommendations on how much but if you get a general just make sure it is 3rd party tested and doesn't have any mercury in it so this is a fatty part of the fish that can hold onto Mercury and when it's condensed can be harmful so just know where you're getting your supplements from and I have a slide on how to determine if it's third-party tested in a little bit I'm one other thing I wanted to mention about Seafood is that you do get some vitamin D from it so one of the only food sources of vitamin D is for my fruits and vegetables is mushroom and the most the majority of come from seafood or C products to write so you can get it through algae sometime and some other seafood and vitamin D will find out later but this is going to be really in helpful or our response to certain viruses specifically covid-19 been some research now that having adequate levels of vitamin D in the body gives you a stronger response if you get diagnosed with Clovis to lot of hospital patients have very low vitamin D and they're not sure which is causing was there is some research that might have been. It's helpful for you mean something specifically upper respiratory diseases so that could be where it's acting in the body more to come on that so we talked about our fruits and vegetables are Seafood next they want to just quickly mention all of the bad things that we probably need to cut out or at least limit and that is sugar alcohol and smoking smoking is probably the worst for your immune system it's going to drastically decrease your response to foreign Invaders coming into the body sugar and alcohol are both in a spectrum right and kind of wondering how much people are doing and it could be different for everyone but the main goal is to reduce all three of these if possible and just acknowledge how much that were actually consuming of sugar in alcohol specifically do all of these things will increase and drive up the inflammation in the body specifically smoking will distract your body is busy repairing from the damage that the smoke has done so overall it's going to be just a weekend and less responsive to a sickness coming in meaning that. Sickness or that bad virus or bacteria has more time to kind of become a resident in your body then if your immune system was on it to begin with for sugar we want to limit it to at least 10% or less of your total calorie intake for the day so if you're on a 2000 calorie diet that's a no more than 50 grams of sugar Heart Association is putting more restrictions on this saying 24 to 36 grams of sugar is all that we need when we need to do less than that but I suspect you're right if I'm eating the average of 88 grams of added sugar a day maybe I'm going to just work to get it to that 50° am if you're at 50 grams leave you're going to work to get it to that 36 or two that 24 what does notice where you're added sugars coming from is it from your soda your cookies or candy is it just from condiments like barbecue sauce granola yogurt there's a lot of products in our food supply that have added sugar in them and know that this does not include fruit so are natural sugars are still important to consume daily and they are providing us fiber and vitamins and minerals which is why we allow them in our diet so loading up on those can be helpful for curbing some sugar breathing so this is a question I get asked most like it's all good to limit your sugar but how do you do that especially during December in the holidays so just three chips and there's probably more to come on this but trying to reset that sugar with natural sugar so our body has this natural limit of tolerance so to speak or to Sugar silver used to a high sugar diet might not taste very sweet but after a week or two of doing more natural sugars you can actually adopt and things will start to taste weird and be more satisfying so it might be that you start with a dessert that just contains fruit that has bad as sugar to it as well then maybe you try to reduce that added sugar to the point where you can just eat the apple or the pair of the Kiwi those things are going to be awesome for your immune system having enough protein in each meal is really important for curbing sugar Cravings a lot of our Cravings come from being hungry in the most quick thing to enter the body is sugar everybody wants that it's crazy that it makes me want to eat it all the time so it having adequate protein and nails and that doesn't have to be a protein shake or anything crazy just having about 20 grams of protein for most people on each meal throughout the day evenly can help fill you up and have a nice even blood sugar throughout the day the last one I'll add her on here that's really interesting research is that bitter who's with your eating bitter foods during a meal people tend to have less sugar Cravings after them yell and this might be because they're guessing is targeting a lot of Sensations in your taste buds hitting on all the different flavors and kind of masking that need or extra seats do things like dark leafy greens are vegetables are mostly listen Bitter Root category and also some of condiments as well so I thought that was interesting research to share and it is hard to get rid of all of these things especially alcohol as an addictive substance I talked into the body and all of these are creating these feel good hormones these dopamine spikes which makes you come back for more so please take this with a grain of salt we don't have a ton of time to like go deeply into every individual person but having that awareness is the first step minimizing judgment over at the beginning and just noticing where your sugar is come from how much alcohol are we doing is it more than the one to two glasses of beer or wine a day or is it ironic right alcohol is especially important to reduce right when you're starting to feel sick because again we want our immune system to be on part and on target making sure that we are able to fight as much as we can the one person on suggested that they notice after the first two days of reducing or eliminating sugar that the sugar Cravings actually go way down so that's again about kind of resetting your focal point to like what tastes meat and sometimes just the more you have it the more you're craving it because you get those dopamines by the pretty powerful hormone not just will power so I feel you on that let me know if you have any other comments or questions around that waiting on some other food we got our prison vegetable we got our Seafood the next thing is to add actual foods that have probiotics in them these are mostly fermented food and they consist of a couple different things I have one more pulling question for you which food does not have any probiotics is it kombucha yogurt soy beans or sauerkraut which one does not have probiotics are live bacteria give you a minute to do that we talked a lot about diversity already so I'll do we don't know that if specific strand of bacteria have more benefits for immune system or not we know that that why diversity is going to be a key for a lot of different Health Salem is out there so when we look at supplement I caution people because most supplements only have a couple different strands and since were overpowering our body with just a few strands that the company has picked out we just don't know if that's going to be beneficial so I usually try to convince people to eat their probiotics to replenish some of those things as well as eating fiber to to keep alive the probiotics that are already in our body so it looks like you guys mostly got it alright soy beans do not have live probiotics in them I put this on there because one commented food called Tempe which is made from soybean does have some probiotics in it so it's a little trick of a question if you're familiar with something the picture here is our this is kimchi this is keeper that the fermented milk products this is kombucha down below someone is home making it using a scoby it's a mixture of bacteria and Archaea and sugar mixture the bacteria actually eating the sugar which is why most fermented foods are Tangy and have some extra flavor is that you might not be able to otherwise identify most cultures have a signature probiotic but America is lacking in that since we can have a lot of different foods that were eating yogurt is usually the most common we do want to make sure it has active cultures in it and lower sugar if possible alright any other questions about probiotics you guys have any favorite foods with probiotics in them I'm really honest sauerkraut kick which is fermented cabbage you can add that to a lot of different things and although it has quite a high salt content you only have to use a little bit in your foods to get the benefits of probiotics and staying with you don't have to drink a whole 16 oz to get the benefits you can just do a shot a day and that really stresses out the money that you spend on those bottles of Kombucha someone started home brewing kombucha at the beginning of the pandemic. Awesome if you have a buy nothing group in your neighborhood you can usually find someone that has a scoby at least in the Seattle area and yeah it's pretty easy to make so you can find I can give you guys instructions if you want who used to make it back in the day my house is too cold now for it though like the 70 degree house the lamp and not read is adding some Zayn your herbs and spices are going to be cheat for offering some nutrients but also offering some really cool other benefits that help with your immune so ginger root for example is a warming anti flammatory spice and anti nausea remedy we probably have heard of it for that before you want to make sure you're using fresh or dried ginger as opposed to the prepackaged ginger ale doesn't have much benefit to it he really want what's in the actual ginger root in order to have the effects of anti nausea and anti-inflammatory it's also been studied as an antiviral property that can create a negative environment for viruses multiply in so again it's a nice one for lot of people use it I already saw and cheese in suit you can you can do like different drink with it so it's a really nice one to utilize and very cheap usually a large piece of fresh ginger is only about $0.30 so play around and find something fun with ginger I can be spicy so maybe start less if you're new to fresh ginger garlic and onions contain an active molecule called Allison that will help fight off infections and bacterial so it's known as an antibacterial we want our garlic Vampire Breath to ward off some of the foreign Invaders out there so there is some research on it you don't have to eat it raw you can also just cut it up wait about 10 minutes for that active male to become active and then cook it or put it in suit Ortiz so you don't have to eat it wrong that tastes horrible draw most of us won't like that but no you can add a lot into food items if you tolerate it you know some people can't do two digestive issue it also has that sulfur compound we talked about that's in cruciferous vegetables there's a lot of herbs and spices out there with Benefits neither just might Ops 3 so time can be helpful for drying out mucus membrane I also assumed to be antiviral along with oregano and rosemary so these are mostly tested in a lab so it's hard to say if it's going to really support you but because they taste so nice it's also offering just more variety in your meal and a lot of these will live outdoors in the Pacific Northwest all year round so if you don't want to keep buying them a nice option is to get a plant and have it keep growing I have a rosemary plant outside which is awesome it's a beautiful wrapping decoration if you want that in as well that's my new thing as shared putting plans on my present for some reason all right so I want you to come up with to one or two nutrition practices that you could already Implement in your meal for stuff that you already do again we talked about fruits and vegetables we talked about probiotics and the seafood we talked about limiting sugar alcohol and smoking and we talked about increasing our herbs and spices so is there any things that you could do this week to enhance or support. 1% of the question about who you mean and if it's okay if we should eat them after having cancer so soy is fine to eat after cancer or even before cancer specially breast cancer is now it's a bump that meant that it's interfering with our estrogen hormone so I feel comfortable recommending whole forms of soy like home home tofu tempeh and edamame I do caution with a lot of likes boys protein and soy fake meat products I would just don't go overboard with those right so whole forms are good there in there nice natural form these other products are very process and could have more impact on that estrogen alright system answers coming in and is more brussel sprouts for dinner you like them you could roast them put them into various things possums keep a fermented food and add it at least one day to every meal that's great I didn't kimchi to a condiment or sauerkraut jar garlic I would assume that still is helpful for you face they don't add much to the Jarred garlic I think they just put it in water to make it so it doesn't rot so I would I would say that that's still fine to do red wine good questions what are the positive and negative of red wine red wine does have some antioxidants in it you might have heard about that before which is why it's still promoted but all red wine has alcohol so it's like you take the good with the bad you can get more of the antioxidants found in red wine if you're just meeting great so I always caution people to not utilize red wine as like help mechanism they do find that it can be part of a healthy diet saying the Mediterranean diet or Italy just a lot of wind but it's all in moderation so one to two glasses for most people is fine to have over that can be affecting our immune system and I find that a lot of people experience disturbances when they're doing a lot of alcohol so it could be just your own sensitivity to it and it's actually making you less likely to go into heat so again just noticing if it's making you sleep last or have any negative side effects of zinc Ginger adding ginger in kimchi adding more Pitch Perfect and protein awesome roasting vegetables use olive oil that's a nice healthy fat and spice them with lemons are rich in vitamin C and some of the spices yes I just had to create a mocktail and I did an orange time recipe so it was just a boiled time with a little Cayenne you steep that for about 15 minutes and then you mix that in with some fresh squeezed orange juice it was pretty tasty a little bit better on the back end but I enjoyed it and you can also put ginger in that sardines yeso sardines are really high in a the most sustainable fish has lost on you guys a recipe on how to make sardines taste good if you are new to the 13 world alright thanks for that here's some other inspiration so some fish the musical soup yogurt oatmeal paste does have some probiotics in it we can boil it to death so you want to add your neither Pace at the end of making soup instead of at the beginning so that's just a quick tips there alright let's talk a little bit about supplements I can take more questions and comments as we go as well so are supplements and Herb industry is not very well regulated sore Food and Drug Administration decided a long time ago that they weren't going to be responsible for testing and verifying supplements and herbs so a lot of companies don't have any additional testing than what they're doing themselves and that does result in sounds disparity they can really write almost anything on the label but you always see a little ass trick that says FDA not approved myself I would take those slogans with a grain of salt about how they can cure certain ailments especially around immune system the little labels at the bottom of your screen are all companies that do third-party testing meaning they are not associated with that company in any way but they go into the company test the product to make sure it is what it says it is if it's for example Omega threes they want to make sure it has the amount that's on the label and that it's safe to take so it doesn't have mercury a pure data racks that around so consumerlab is some a company that goes in without the company's awareness and test a bunch of store products of that company and writes upper review for it other ones a company will hire so usp-nf NSF are all a third-party parties that come in with the company knowing about it so good to look on your supplement label to see if this logo is on it and if it's not usually you can call the company and ask if they have any third party testing or just know about certain stores that only select thing with their greatest thing it's good to know if your drugs are interacting with your supplements and herbs so I encourage all of you if you're on any type of medication to go to the website at the bottom of your screen type in a supplement or herb that you're taking and see if there's any interaction a lot of times and go through the same detoxification process. Can alter your medication or alter the herb to make it more toxic so just be careful about that all right let's go through a couple of these vitamin C is often a woman dicey in the immune boosting section and we do know that small frequent doses does work for prevention and symptom reduction of certain respiratory illnesses it's more for prevention so you want to have an even source of vitamin C all year long not just during a sickness and note that it is a water-soluble vitamin and we can only absorb so much at a time so it's really important if you're doing large doses of Vitamin C to know that you're peeing out anything above 500 Every few hours especially if you're eating a healthy diet your body is probably going to be out and even more of that supplement so something to know and you can always cut yourself Wilmington half or do half of an Airborne or half of a vitamin C packet over the course of the day so that you're spreading the amount that you're getting out so I always encourage people to know that vitamin c does support our immune systems and NoDa a red bell pepper has about 230 ml mg per pepper and orange has about fifty to a hundred grand and same with our kiwis are pears are lemon even our garlic has some vitamin C in it Nexus are vitamin D I talked a little about this earlier because it's so important for our immune house that's not only for our bones and some other things but they're finding that it's going to kind of give you that extra Edge against some viruses so get your levels checked if you've never had your levels checked before some people that are darker skin or don't go outside very often in the Sun have very low vitamin D is especially in the winter when we're not absorbing energy from the Sun there are some food sources that are listed on the picture however know that these are not going to provide all of the amount of vitamin D that you need for a day unless you're eating a lot of fishing which is right here they have probably the most amount of vitamin D mushrooms has a couple hundred fish has another couple hundred some eggs will be fortified with vitamin D some dairy products are also fortified with vitamin so you'll get a tiny bit there but probably not enough for your daily dose ideal you're taking a supplement of 100000 to mm I use a day and if you're lower than 40 we would actually recommend choosing that supplementation up to 5000 a day 10000 a day and if you're really low up to 50000 I use a day now that would be once a week instead of every day but we do want levels to increase in this wouldn't be enough to do so don't you get your levels checked in the next month it's probably at the lowest it will be for the year because as soon as the sun start getting below a certain point on Horizon we're just not absorbing anymore from the Sun it has been shown to be effective at preventing respiratory infections especially when someone has asthma there's some new studies that vitamin D is likely to reproduce both the risk of severe asthma attack and health cases who has mild to moderate cases of asthma and with covid-19 let me know if you have any questions on that 13 will have a little bit of vitamin D and says 13 avocado toast is really good and I will send that article with you as well if you're curious about it for the Cove in so blank is one of the nutrients or minerals as been helpful to activate our immune response and is really only seen to be taken when you have symptoms as opposed to as a preventative all do you need a certain amount for a normal help with when you supplement it's usually found in supplements or cold pills kind of thing and I'll pretty low. So 5 to 10 mg every few hours or you can do if you're doing a supplement or say it could be upwards of 60 to 80 mg per day you want to take things short term because it can override your copper absorption which is one of the side effects of zinc supplementation is just having a deficiency in Copper so we want to make sure we're not doing it and if you do a high dose it can have some upset stomach affect as well as a metallic taste Elderberry so Elderberry is a fun one because it is one of the herbs that isn't a lot of traditional medicine there's this active component in it called sambucus and this has been long studied or its antiviral immune modulating an antioxidant properties it's been tested against at least 13 different strains of influenza virus so that's the flu virus intestine pain strength of the one of the only kind of herbs that has a lot of good evidence for it and like echinacea what is still kind of on the fence if it's helpful for us and some of the other ones out there so it's very safe for all ages it's from this natural Berry that is typically made into a syrup or supplement or a cocktail kind of in conjunction with think so those are good to take as well it does seem that you have to take a lot of it to have them benefits from it so far prevented preventive methods this is a recommendation from Bastyr University Hits 1 tablespoon a couple times and then when you're sick it's more often so a teaspoon of every hour I have a handout on how to make your own that I'll send along so you're curious about making your own you can also buy it or you can find it at most pharmacies now I see a lot everywhere alright so let me know if you have any questions about those supplements I had one person talk about cod liver oil you can get flavored so that is a mixture you get a lot of vitamin Q also get a lot of things omega-3 fatty acids that was a good one to keep around and now it doesn't have the aftertaste that used to that you're probably Associated from your childhood another really important aspect of your immune system is exercise I want to just put a plug in there for that since been pretty challenging for myself to get out in the darkness and keep up with my online work out so I keep in mind that exercise is not only good for weight management but it can help relieve stress and anxiety which hinders our immune system it slightly elevator core body temperature so you want to you don't want to exercise when you're feeling sick but you want to exercise before you get sick and that can help your immune system also helps to improve our sleep so any amount of exercise you can get in during the day even a small walk around the neighborhood can be really helpful when questioned about vitamin B vitamin B is also helpful for just General Health there's no specific on immune system but it can be extremely important for heart health management for brain health and energy as well so you get your B vitamins mostly through fruits and vegetable full green you get a lot through meat products and protein sources so hopefully if you're eating all those things already talked about you'll get your B vitamins as well as question and I just skipped right over. I'm sleep is also going to be so important is your immune system is at full strength and operating when you're sleeping so it helps to just kind of minimize other things going on like stress like your digestion when you're sleeping so it's really great if you again feel your some sickness coming on to not only eat your fruits and vegetables and drink lots of water but also get plenty of sleep typically college students always get sick after they get home from from school after finals are over because they're stressed and they didn't sleep a lot and suddenly it's all catching up themselves really important to get 729 hour in quality and adequate amount is going to be really important so more information at sleep. Gov I'm sorry org that one has a lot of tips on how to get better sleep there's also sleep foundation and I can't remember if it's not work or. Gov so I will send that in the follow-up email but those are great for like learning about sleep hygiene and other tips to get better sleep and lastly stress those dressed definitely impairs your immune function causes inflammation in the body and distract your immune system from the foreign Invaders and it's more focused on internal repair so to speak so we see that people that are chronically stressed have a much lower immune system than people that are handling their stress better and having tools that they're utilizing everyday so this has been a very big topic this year and I hope that we all have some tools that we can always go to to help with that Stress Management all right so I would love for you guys to add 1 Word in the chat bar question answer bar that describe or Kings you on what we talked about today that stands out to you can answer some questions while we come up 1 Words flash so what benefits of anything to Sunshine supplement labels and given relation to absorbing sufficient by a great question you actually can get your levels higher if you have one of those special bulb it's a specific UV ray that's going to help convert the vitamin D from your skin and get it into your body it's a three-step process so if you have any like darker skin usually doesn't work as effectively if you have any like week or skin like older skin typically doesn't absorb as much if you have any kidney or liver issues again you're not going to get the same amount of vitamin D than you think. Lamenting is still the main recommendation especially with d a r e that's going to be your active form of vitamin what that can be really helpful for reducing your risk for seasonal affective disorder or sad and can just make people moral I have more energy so I still see a benefits of having some of the words that were seeing our bitter practice vitamins reduce and I would say a Dodger vegetables in there are Community diversity self care awareness I like awareness piece a lot we have a lot of Shame over what we to eat that's like not perfect for us for trying to get away from that and seeing what we can do and as can be kind of a better talk more positive strategy incorporate vegetables nutrition 13 yes on 1 question about 30 and are you talking about the little fish from the can yes so I really like the brand Wild Planet I don't have no affiliation with them but they are very sustainable in there fishing practices and I feel like they have a slightly less fishy taste than some of the other ones I've tried you can get them at Costco now in like a really large quantity if you like them but yes there are very small that usually have their heads cut off that's on his growth they mashup like to now so you can I like to put a lot of lemon juice in my thirties and that helps cut some of the fishy taste as well good all good words. Probiotics on there so making sure we're washing our hands or social distancing masking up get vaccinated find out more about when you can get vaccinated with covid-19 if you haven't got your flu shot yet definitely get that and it's not going to help hold for preventing Cove, Tennessee flu from getting to you we know that eating while there's some great stuff you guys took away today staying active sleeping and managing stress thank you so much for joining me on our winter Wellness webinar last one of 20/20 if you guys have any more questions you can email me I can also stay on the line for a couple more minutes to assist you link.