Welcome to today's 11R where are talking about osteoporosis and how to prevent it on my name is Christy I'm a registered dietitian with Pacific Medical Centers and I run a program called The Living Well Alliance The Living Well Alliance is a workplace screening and wellness and education program that helps prevent with so giving a lot of education for community members we also have a primary care and Specialty Care site around Puget Sound which is where the map is coming from so you can visit us in clinic as well as coming having me come to your company for example alright so today we're going to go more in-depth about osteoporosis and what we should know and what kind of things we know in the science around how to have the healthiest bone interesting way we know about 62% of your bone structure is actually related to race and family history so that leaves about 38% of your bone structure and related directly to our lifestyle lifestyle choices like exercise nutrition alcohol and smoking so we're going to go into a lot of different information today about vitamins and what you can do for prevention as well as give you an idea of some kind of menu plan to put some of these things that you learn into action so again if you have any question throughout the presentation or have comments or just want to add your opinion about something I really appreciate participation in these makes it more exciting and we can have more of a crustacean osteoporosis your bones are continuously changing we have new bone being made every day as well as old bone being broken down as if he stays it does slow as we enter adulthood and when we were young that body makes new bone faster obviously for growth so we peek of around our bonus around age 30 that means that after that bone remodeling continues which means you're making some but you lose slightly more bone mass than you gain so Thursday is usually the cut off although that's not cutting stone for some it's really here for some later but it is Young right so we have to make sure we're using our bones to help them be able to make any repairs needed to Arbonne and to prevent that break down of old Bond going to rapidly essentially the higher you your Peak bone mass around that age 30 the more bone you have in the bank in the less likely you are to develop osteoporosis at your older age so let's look at what's osteoporosis actually is Osteo means bone porosis means pores so osteoporosis is when there's a higher breakdown of bone in comparison to the formation of which then results in Porous bone horse is not a good thing in this case it means there's a lot more holes in between the bone structure making them weak and at risk for fractures biggest risk for fracture in osteoporosis is typically in the vertebrae in the neck and in the wrist so those are all pretty tiny currently there's about 10 million Americans 8 million women and 2 million men that have osteoporosis so as you can tell by those numbers a lot more people that are women are getting another 34 million have low bone mass so while they're not diagnosed with osteoporosis they might be trending in that direction or just have more susceptibility to those fractures that we will talk about today a couple other types of osteoporosis that stuff and it's a big one there is osteopenia osteoarthritis and then osteomalacia and these are all similar but they have different types of bone loss in different speeds their doctor would go over that diagnosis with you we also want to look at the factors that affect how healthy are bones are so again you can kind of imagine that as we get older we were more at risk for osteoporosis is around 50 or 60 in women right after they hit menopause age your bond becomes thinner and weaker as you age gender can matter obviously because we saw how many more women than men had a decrease in their bone structure as they age race and family history you're the big greatest risk for osteoporosis if you are white or of Asian descent there seems to be some protection or African-Americans and osteoporosis genetic factors size the bone structure on can matter if you're extremely thin or have a really low body mass index at or a small frame you might have less and therefore you might have a quickening of that wear and tear will also look at Vitamin D which is considered a hormone as well we'll do a lot around nutrition my favorite will do some information around physical activity and then intersperse in our conversation around food and exercise will talk a little bit about medication and any chronic diseases that might enhance your risk for getting osteoporosis so again if you have any questions please let me know before we keep going there's two main classifications that can cause bone loss of primary is basically a bone loss resulting in agent gender and because of the reduction of estrogen for menopause and that's about again 62% of why we might get osteoporosis and then the other half is because of Lifestyle factors like the nutrition and physical activity secondary osteoporosis refers to Bone last that's caused because we have another chronic medical condition or if a medication can accelerate that bone loss or increased back fracture risk so again they would probably alert you to that if you were diagnosed with one of these there's a great video on YouTube by ozmosis that goes into everything that you could ever want to know about osteoporosis in about 8 minutes so I highly recommend that website I'll send it to you and your follow-up emails today but know that it's ozmosis on YouTube they have a great review of a lot of difference chronic conditions and what they mean and great visuals as well Define boosting Basics are to be aware of your own risk either talk to your doctor about this there's a quiz that I put on your screen that calculates your risk for osteoporosis or if you've had any incidences with bone fractures they might want to be aware of the second thing that you want to make sure you're doing the best you can is getting the right nutrition so we're going to spend some time today talking about calcium and vitamin D recommendations these are the main nutrients that help with our bones although there's plenty other soul-tie and what those other nutrients are had a gift them and then what food sources you can get a lot of different physical activity especially weight-bearing exercises help our phone stay really strong and also slow bone loss which is really great right after we hit that age 30 in the last one on the left is avoiding ft possible substance abuse because we know that smoking and drinking can actually accelerate bone loss as well a little bit about that today too I hope you guys ate lunch so you not hungry I'm let's talk about the roles of nutrients for bone health and make sure that we're doing what we can do not only get those calcium that we always here recommend invite some of these other bone-building mineral let's start with calcium calcium is a mineral in the body that is there for many functions and one of them include building and maintaining your bones and your teeth others that it helps with blood clotting the transmission of nerve impulses in the regulation of heart's Rhythm which may be a new maybe you didn't about 99% of the body's calcium is stored in our bones in our teeth meaning that the rest of that 1% of the calcium is found in the blood in the muscle and other tissues not a ton right or body is really great at only having about that 1% calcium floating around there can be a lot of problems if that calcium gets higher in the blood the Bunny Gets calcium in two ways probably can guess these one is by eating food or supplements that contain calcium and the other is actually drawing the calcium out of the bone or the cheap one doesn't eat enough calcium Oregon there's a chronic condition that taking away some of the calcium this can accelerate bone loss by that borrowing aspect that we see however it's not as easy as just replacing the calcium later there can be more into absorption that we just don't know so some of the reasons why calcium is so challenging is because we don't absorb all of it when we're eating it and when were supplementing with it so a couple reasons that I'll mention today are people that are eating a diet high in phytic acid this is found in the brand coating of whole-wheat Isaac acid binds calcium and other minerals making them in soluble and not absorbed in the intestine so therefore your calcium and passes out of the body without being absorbed so if we hear a lot around whole grains and how they're maybe you've heard that they're not so healthy for you A lot of people talk about it because of you I take acid while I wouldn't say it get rid of all of them together those that are more in need of calcium may want to eat your calcium sources away from some of the whole grain foods and you'll notice that some whole grain foods have fortified calcium in it like cereal excetera so you just have to be careful around that second thing high levels of sodium intake can actually inhibit our calcium absorption so while we think of bone structure as just making sure we're getting enough in we also monitor how much we want to take out like this in the sodium so ideally we get about 2,300 mg a day at most of sodium a lot of us are eating much more than that and if you have already high blood pressure or some kind of compromise thing that you need to eat in lower that more it goes down to about 1500 another reason why we might not absorb enough calcium is in insufficient vitamin D and we'll talk about this more in the next life but vitamin D is critical in regulating how much calcium another thing to know is coffee and tea consumption so the caffeine and coffee or tea and some sodas may act as a mild diuretic so it's basically a lot of our valuable calcium is being excreted before the body can use it now it's not excreting all of it so one or two cups of coffee or tea is fine I seen four two four two six cups it starts to interfere with potential calcium and know that if your body does need calcium your kidneys are going to hold on to a little stronger and you won't have the same effect of someone that has adequate stores of calcium in your body can't regulate in that way a little bit smoking and studies show smokers reduced bone mass the reason is still not well understood however it appears that smoking can interfere with the absorption of calcium in our intestines so I I know there's a lot of reasons not to smoke but here's just another one for you and then if you have any GI disorders like celiac disease on this kind of essentially changes the lining of our intestine and impact a lot of our absorbability of many nutrients not just calcium so that's important to know and get diagnosed with those GI conditions that we can better off Arbonne house we see a lot of people also with eating disorder or any GI symptoms have really accelerated bone loss calcium rich foods some of them are on your screen we all know probably Dairy has some calcium in it but there are a lot of other sources that have calcium in it if you don't eat dairy or can't handle dairy in your body so there's fortified Foods there's some canned fish like canned salmon and canned sardines all of those have the actual bones in them so that they're absorbed a little bit more nuts like almonds are pretty high there in the moderate category beans some breads are fortified as well I have a question from someone who has osteopenia and they're taking some calcium and vitamin D supplement once per day after dinner we'll go over to kind of the supplement part in a few minutes so hang tight I'll look back to the question over there but essentially are calcium needs are about 1000 to 1200 mg per day and vitamin D is around that 1000 I use so you're doing great so 600 mg of calcium from the supplement means that you're hopefully going to get some rest from food and we prefer a lower doses of calcium in our supplements as well see a little bit later this is a great graph of other vegetables that have calcium in it you can see collard greens are quite High broccoli rabe which is like those long skinny ones have a decent amount turn up greens kale soybean bok choy dandelion greens and then it kind of gets lower than that one thing to know is that some foods have what they call oxalate this is found in spinach broccoli rhubarb sweet potato oxalates are essentially inhibiting some absorption as well so while we don't discourage people from eating them it just might be that we don't eat broccoli for our sole purpose of getting calcium in the body I know that's a lot of what people think of her like spinach but it does hinder absorption as well sometimes with vegans which are eating a lot of fiber and a lot of these vegetable we have we promote a supplement as well away from some of these Foods because such high fiber content in a diet can also reduce the ability for our intestines to absorb some of that calcium it's all about balance and trying to get different sources and then like I said we'll talk about supplementation and what that looks like going on in a little bit funny questions about calcium we look at Vitamin D usually vitamin D is in supplement form because we don't get a lot of sources in our body vitamin D is the key that unlocks your body's ability to absorb and use calcium like we saw in the last side vitamin D is considered a hormone like I mentioned because it can be manufactured in our bodies and it reaches our intestines in the bloodstream to Signal an increase in absorption of both calcium and phosphorus in the blood it's also difficult and some argue and possible for all of us to get all of the vitamin D we need through diet so if you know the other way to get vitamin D from write that in the shop bar there's some place outside that we don't even need to eat to get our vitamin D you get it it's the sunshine that we're getting a lot of recently which is great so we can get some vitamin D from the Sun in our Northern latitude that were in we also sometimes don't get enough sunshine to produce the amount that we need this is really important to supplement with vitamin D in the winter time when we live in this Pacific Northwest climate and then you can or can't you can choose whether to supplement in the summer some of you that are darker skin or that are wearing sunscreen like you should this is all production of vitamin D in our skin if we have older skin that can sometimes inhibit absorption so there's a lot of reasons why we might not get the maximum amount from our skin it also has to go through our kidney and our liver to get activated into D3 which is the one that's going to be acting as a hormone so if you see D2 in the stores we are now recommending not supplementing with D2 it's not harmful it's still beneficial however if you do with a D3 we find that better gets into the blood and raise the levels if you are low the American bone health I know I put a lot of things around for you but that one is a great one for and a quick article looking at Vitamin D calcium in all of those other ones great question someone asked how long should you be in the sun daily to get sufficient amounts of vitamin D and that can vary depending on your skin so the consensus is around 2:15 ish minutes ideally it's not just through your hands in your face it's kind of a bigger portion of skin in the body and that is to be done before the peak of sunshine so usually around 10 or so is a good time obviously you can have it throughout the whole day but you're less likely to get any burning if you do it earlier in the morning but again if you have darker skin or if you have any like issues with absorbing Sun sunlight through the skin that could also do it national osteoporosis Foundation recommends that people supplement with vitamin D and ask her healthcare provider whether you should have a test to check your levels in the body so a few categories of people should be more apt to get these tests done and that's people over 60 those that spend little time in the Sun or live in a nursing home or homebound have a medical condition or take medication that affects vitamin D levels have very dark skin or also I'm if you're obese you send to have lower vitamin D stores and they're not sure why that so when you're supplementing will get to the amount that we usually about eight hundred to 1000 IU's of vitamin D everyday check out and check out your calcium Vitamins because all of the how's little amounts of vitamin D however we do need about that 1000 for sufficient levels so if you're a multivitamin has 400 I use on your calcium supplement has 400 IU there 600 I use that could be fine however know that you might have to do some additional supplementation in the winter especially if your levels are dropping it's sometimes cost money to get yourself vitamin D tested by totally recommend it so that you can increase your supplementation if you need it if your body is low you need to have 10000 IU there sometimes 50000 I use to make sure that level rises I'm let me know if you have any questions about vitamin D and then we'll get into magnesium the Magnesium is one that you might not have known as related and allows for proper calcium and vitamin D regulation and therefore is important with our bones write anything that's the main ingredients in magnesium sources are on your screen forgot to put avocado on there is also in chocolate those are some extra bonus one but a lot of Americans are low in magnesium which is why I wanted to bring it up today so we know about 18% of people don't sorry I'm probably messing up that I'll look at that percentage of the second magnesium can be lowered and those people that are drinking a lot of alcohol or have prescribed diuretic so keep that in mind as well because essentially magnesium is excreted through the urine and those are both diuretics that make us P Moore and excrete calcium people with higher intakes of magnesium have a higher bone mineral density so they've kind of again Associated that and it's in a lot of are Arbonne boosting supplements now because it seems to help reduce the risk of bone fractures and osteoporosis getting more magnesium in our Foods might help some older women even improve their bone mineral density so that is something to consider it's also used in over three hundred other reactions in the body so while we may not have osteoporosis or risk for osteoporosis it's still really important for a lot of other regulations that we see in the potty again more about magnesium and where you can find it on that link below and you'll get the PowerPoint if you're listening to this live there's some other nutrients that are needed for bone health and there might be less known then some of the ones that you've seen so it's a the list on your screen goes over phosphorus potassium and vitamin A and all of these have good evidence were consumption related to Bone house note that all of these things are found in a normal healthy diet so we're not saying you have to supplement with any of these particular ones however you have concerns about a particular nutrient you can always ask your dietitian or your health care provider if it's worth supplementing for phosphorus you can see food sources found in it and these are all important as long as you don't already have kidney Disorder so if you're in stage 3 or higher of kidney disease we want to make sure I mentioned that phosphorus and potassium are ones that we want to lower and regulate because we excrete them through the urine vitamin A is usually associated with Eye Health right he finds like the beta carotene and that sort of thing but we now know that it's been found to direct the process of borrowing Andre depositing calcium in the bone there's ways that we can get too much vitamin A and if we have supplementing on too much vitamin A that can also promote fractures to so there's a happy medium you would never get too much vitamin A unless you are actually supplementing with this therefore the recommendations for supplementing is less than 3000 IU's of vitamin A from food or supplement so you can see some of the food sources over there and vitamin A I know has used a lot in skin health and that sort of thing so if know that you can supplement too much there's also some really good evidence that that they did around Cruise have you guys eaten any prunes lately also date can be important to you but turn specifically they've seen that eating just five or six per day I know that's kind of a lot but if you get in the habit of it can help me bone density so this is a study that's really looking at prune specifically but know that prunes have potassium magnesium and vitamin K so if you like trans they help with your digestion regulation but they also are really good for your phone help these are a couple other nutrients that have a possible relationship to Bone house so know that the evidence still is not conclusive for the ones on your screen however once again and healthy and they can be readily found in it a diet so that zinc vitamin B12 vitamin C and vitamin K know that vitamin B12 sometimes has to be supplemented vegans because it's only found in our meat and animal sources so eggs and dairy contain it but no other plant foods have vitamin B12 that I would recommend supplementing if you are vegan or just don't eat meat or dairy I looked a little bit more closely and his Vitamin K because there is more and more research coming out about it and it's often included in the form of K2 and a lot of bone supplement the research suggests that vitamin K plays a role in controlling bone metabolism because it's essential for synthesizing osteoclast in which is a hormone that essentially regulates the release or the building of bone Studies have shown that poor vitamin K intake is linked to lower bone mass osteoporosis and more infrastructure risk we see specifically that vitamin K is found in a lot of are healthy foods that you might not be getting enough so colors are dark leafy greens broccoli and pumpkin boo berries grapes carrots when disclaimer about vitamin K that it does interact with Warfarin it's a blood thinner medication then we have to be cautious about overdoing our vitamin K if we're on some kind of medication like warfarin Vitamin K is also known for blood clotting which is why when you're trying to thin your blood it's not great to have too much vitamin K on Ford so typically your doctor will measure your blood levels and you can keep a consistent amount of vitamin K you just can't have like maybe a whole spinach salad one day and then nothing the next day they want you to have consistent intake of the greens and the food sources that have vitamin K that was a lot so any questions around these four minerals are nutrients again we probably wouldn't recommend someone supplementing with zinc for their bone health but know that it's part of the equation, there's definitely some research that shows it's interacting with her bones and that makes it more of a complex picture then just are calcium and vitamin D I did put a link about vitamin K2 and the current research around bone health if you're curious about the I wanted to show you a day in the life of a healthy diet that would contain enough calcium just with food alone so if you hate supplements like me, you're going to try a little bit harder to get calcium through your food and know that you're probably won't absorb every single milligram of calcium from the food you're eating but do you don't have to be hypersensitive about that it's all kind of Epsom in your body does do a good job at absorbing more calcium when you need it rather than explaining it through the urine some oatmeal scrambled eggs to fight orange juice and some coffee with skim milk in it you get about 600 mg of calcium just from that breakfast that's a huge amount you'd still have a decent amount from all of these various sources and you also get vitamin A little bit from your scrambled eggs and especially the ones that are fortified with vitamin D you got a little magnesium and you also get protein from there znakovi peanut butter with banana you'll get a little bit of calcium let me know if you have any suggestions for an alternative breakfast that would contain some calcium in it milk can be the main source but you can also use fortified milk like almond milk or soy milk have calcium in them as well let me know if you have any meals suggestion almonds is a fun one so I have a soup that I call a calcium-rich soup because it has almond meal as thickener instead of dairy products so I know a lot of us are sensitive when it comes to lactose so there's other ways to get some of that calcium in and without doing Dairy all day long stuff for lunch we have a turkey sandwich this has whole wheat bread turkey cheese and lettuce and tomato you can see that that has about 200 mg of calcium the big lie when we talked about servings of calcium it ranges between one serving is equal to about 2 to 300 mg of calcium I can get three servings a day dinner we're going to do some salmon if we did can salmon we get even more calcium hear a salad as some broccoli steaming or cooking your green actually helps the calcium be absorbed a little bit more so that can be a motivation to not everything wrong all the time and then you have a big sweet potato for your vitamin A and some cheese on top for some additional calcium so when you add all that up you get about 1100 mg of calcium 700 IU's of vitamin D which is pretty impressive you get most of it from from fish magnesium about 360 and then protein we're not really looking at around phone help but we do know that some older women that aren't getting enough protein have more of a risk for bone fractures so know that we want adequate amounts we don't want to go crazy with protein powders and that sort of thing about your own daily intake of calcium I recommend going to myfitnesspal.com I'll put it in the chat bar that was a great one you can sign up for free or I think you have to sign up to actually get in but you can add what you think in today and look at your calcium levels as well as your protein and some of the other macronutrients so that's a really good option if you're just kind of curious you don't necessarily have to be obsessive about how much calcium eating per day to deal with supplements but it's a good knowledge around what you're eating and how and how much salt you're eating two can be a huge one to look at let's talk about supplements I know that it's supplements are always a very confusing time and going to the supplement aisle in any store is like that's right it's really overwhelming so supplements can be helpful as part of your bone house because sometimes we just need that extra little bit of calcium and vitamin D to put it all together there's one thing to know about calcium is that you can overdo it though there's a lot of research around what is the right amount of calcium we should have and even though they have a consensus around about a thousand milligrams of calcium for most adults there is still not a consensus around so that's like a loose estimate as we get older we need about 1200 mg and then children are about that 1200 as well the biggest kid bit around supplementing is start small if you have a supplement that's a thousand milligrams of calcium that may be too much for your body especially if you're eating another thousand from your food or even last night so that's why I kind of remote checking where you're at their not overdoing it it's better to do like a 500mg supplement or cutting your supplements in half and taking those at a lower dose so that's why I'm the person at the beginning that was saying I'm taking 600 mg of calcium that's perfect that means you're still getting some from food but you're not overdoing it which is great there's a couple kinds of calcium supplements you can buy there's calcium carbonate the less expensive option it's what's in Tums and it requires the acid in your stomach to break it down and then turn it into how you absorb it so it's the same as if you were eating something your body has to actually digest it this can be a little harder on your stomach because of that and we recommend to eat it with food because of this the second one that is popular is calcium citrate this is of the word a lot easier and it can be taken with or without food because it's not passing as much to it's not requiring your body to break it down it's already in the usable form and because of this is more expensive so there's kind of pros and cons to both of them there's not one that I picked tickly recommend over the other it's more about your individual preference and I know a lot of people complain about the size of calcium pills because it is a larger molecule so that's why I cutting it in half can be a great option if you do buy one that's a higher milligrams per day any questions about specific calcium supplement there's some medications that do interact with your calcium so if you're on a specific antibiotic you want to take them at least 2 to 4 hours apart from that medication specifically tetracycline and chorulon I'm probably butchering that name so I can put those in the follow-up email but we want to avoid large doses especially like a supplement of calcium there's some Sam channel blockers are beta blockers that can interfere with calcium absorption so that could be something you talk to your pharmacist around or your doctor when Sinners again that Warfarin is a popular one we don't want to mix that with a ton of vitamin K so if your supplement does have vitamin K just be aware of that and I'm definitely chat with your doctor about it they might have to alter your dose of that warfarin you should have weight supplements that also contain rowanty on so I'll put this in the chat bar I have not actually heard of this one before the heavy mineral takes the place of calcium in the bones and can falsely Elevate bone density results so they probably put it in because they saw such benefit from it and then they later found out that actually it's not really helping your bones it's just kind of falsifying the results about that drink your supplement with a lot of water on this can help flush out any excess calcium that you might have in the blood if you have too much calcium in the blood is called hyper cuz this is just having an abnormal volume of calcium in the blood and can cause nausea vomiting confusion and some neurological symptoms so again lots of water flush it out make sure you're not overdoing it some supplements can have a mild binding effect so it can cause some constipation and some people not usually by itself but when it's combined with some other finder like if you're on iron supplements for example than it can just worse in the problem some calcium supplements also have magnesium which luckily is a stool softener so kind of counteract some of the binding effects from calcium all right let me know if you guys have any questions about supplements I put how to get the best out of your calcium supplement link below from American bone help so that goes over a lot of the different types of healthy they don't go over brand-specific but calcium seems to be pretty straightforward when you're talking about Brands so like when I'm talking more about fish oil or probiotics those can be I want more solid brands that have third-party testing and that's really clear on what's in their supplement calcium is just a mineral so it seems that even some of the cheaper brands are still really effective have to be too careful you can find one that works for you or that your doctor recommend one particular more than the other all right so that was kind of the food for osteoporosis let's look quickly at physical activity and then we're we're done so we looked at weight-bearing exercises and this is one of the three primary colors of bone house along with a calcium rich diet and vitamin D impacts on Bones the the actual impact from a weight-bearing exercise help them adapt and become stronger and also stimulates bone building which is what we want after 30 right we want to increase that building rather than break down there's a couple that you can do it you can do low impact exercises if you're already have some incense of osteopenia or osteoporosis or fragile bone this can be like you are Tai Chi is actually moving into one of the best ways to build balanced body awareness as well as having that low impact exercise for the phone we find that she's actually better if you're still young and healthy you want more of high-impact activities like vigorous walking running jumping things that are actually providing some and a spring on those bones because that's actually helpful for them ironically so definitely and kind of pick your battle you can work with a physical therapist if you do have signs of osteoporosis they can give you exercises that are going to help build areas of your body that might be weaker specially around the spine the wrist and the neck what's left look at your risk factors unless your doctor help with this that's their job I need physicals to be assessing your risk for bone fracture if you've had some risks they can do a bone density scan it's a really easy procedure where you lying in bed and at light kind of moves over you it takes about 5 to 10 minutes and it just scan your bones and it can look and give you a number based on that scan so we won't specifically go over it what the numbers mean but I did add a link there that goes over your results of a bone scan if you haven't been kind of talk through it with your you can also do that at pacmed which is why I added an article around what to expect with the machine looks like What insurances cover it that sort of thing so most insurances would cover it with a referral but you probably can't go do it just to know so it's there has to be some kind of reason to do it because it is an expensive procedure both of those things are for you guys I will send them again to you at the end or after the presentation these are the two main resources that use that Americans own house and then the national osteoporosis Foundation it is National osteoporosis month the whole month of May so keep thinking about your bone let me know if you have any other questions I can answer today you can either email me or use the chat bar on your screen