# NCRPI_ Functional Medicine Webinar 1530-1400 EST via TEAMS for APRIL 2025-20250401_152946-Meeting Recording

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32m 31s

**Osik, Amy J CTR DHA WALTER REED MED CTR (USA)** started transcription

**Adams, Angela M CIV DHA PORTSMOUTH NMC (USA)** 0:21

So just a little bit about me.
I have been an occupational therapist for over 18 years, done inpatient rehab, acute and sub acute rehab, long term care and travel.
So pretty much everything but Pediatrics for the last seven years, I have worked as a certified hand therapist doing outpatient or orthopedics.
And I have been at Naval Medical Center Portsmouth for the last three years.
I'm the lead civilian OTCHTCHT.
I also completed I FM SA FM CP last year, so for those of you who have just started that congratulations, that's exciting. And I think it's pretty awesome because it is open to all different providers.
It's not just physicians or nurse practitioners.
I was in there with a dentist and of course the physicians as well.
But it's great to learn this knowledge because then we can all work as a team.
I'm also part of DH as advanced degree program. Getting my master in healthcare administration.
So for those of you who are unfamiliar, I'm just gonna touch on a few topics before we kind of connect the dots.
So functional medicine approach. What is it?
So it's a comprehensive approach. One of the the points being prevention is key.
So nearly every complex chronic disease is preceded by long term disturbances in function that can be identified relatively.
Early on and effectively managed.
We also know that changes to body systems can have an effect on overall health, so thinking about systems, we view that as a complex web of interconnected factors rather than isolated issues.

So many health issues are complex and require a multi faceted approach that goes beyond traditional interventions. By understanding this interconnection.
Of factors, systems thinking can lead to more effective and sustainable solutions.
And instead of solely focusing on symptoms, systems thinking seeks to identify and address the underlying causes of health problems.
So in health diagnosis were identifying the root cause, meaning going beyond the surface level of symptoms to uncover the underlying issue or factors contributing to a health problem aiming for effective and long term solutions.
This approach helps to expand clinicians toolkits.
And that is for every clinician. This also helps patients become partners in their health care.
It focuses on environmental inputs, mind body connections, as well as genetic makeup.
So for those of you who are unfamiliar with what occupational therapy is, it's.
A service that promotes health and well-being and participation.
So OTS focus on things that you want and need to do in your daily life.
This includes any meaningful activity that a person wants to accomplish, including taking care of yourself, your family, working, volunteering, going to school. So within our domain, we focus on participation in meaningful occupations.
That enhance health well-being and life satisfaction and some of those areas activities, activities of daily living, instrumental activities of daily living, health management, rest and sleep, education, work, play, leisure and social participation.
So within our scope of practice, I'm going to specifically focus on health management and that's going to be for developing, managing and maintaining health and Wellness routines.
Occupational therapist also are advocates for patient to help coordinate the care team to address issues and concerns.
So how do these things go together?
Within health management, we can work on symptom and and condition management and we're going to go into that in the next few slides.
As far as communication with healthcare teams, we help to empower and advocate the patient to receive treatment for their symptoms and help get answers that they're seeking.
For medication management.
I am not AI don't not have prescribing privileges, so I do not recommend medication.

I do not order any, so I'm a little bit different in OT. Focuses on helping individuals improve their ability to manage their medications, effectively, ensuring adherence and optimizing medication routines within the context of their daily lives.
Physical activity, which this one is what people are most familiar with.
So we're working on potentially a range of motion, strength, endurance, any kind of modifications that patients need.
Nutrition management. Again, I'm not a nutritionist or a dietitian, so my role focuses on helping individuals improve their health and Wellness through addressing nutrition related activities, habits and routines.
Focusing on areas like meal planning.
Food prep and safe eating habits.
Pain management. I'm not a pain management physician, but my role would be to address the physical, emotional, environmental factors that are impacting.
The patient's pain experience, which I think Amy, you said there was a speaker this week on CRPS.
So that sounds like a very appropriate topic.
And coping strategies. Again, I'm not a mental health provider, so.
So OT focuses on helping individuals manage stress and difficult emotions by teaching problem solving, promoting emotional regulation and improved well-being.
So for those of you who are familiar with the functional medicine timeline, So what areas as an occupation occupational therapist, do I focus on?
So I'm looking at the antecedents up in the top left corner. Those refer to pre disposing factors like genetic or environmental factors that can contribute to a person's health.
Then we're going to look at the mediators and perpetuators.
So biochemical and psychosocial, they can contribute to pathological changes and dysfunctional responses, especially causing symptoms to persist or worsen.
And then triggers or triggering events.
This refers to factors that can initiate or exacerbate symptoms of illness, such as physical or psychic trauma, infections, toxins and stressful events.
So I'm not necessarily filling out this form.
Every time.
But I'm listening for these things as I'm doing my evaluation to see if, oh, maybe there's a piece that needs to be addressed. And just in context, my patient population.

Is primarily joint pain.
So whether that's post op Nonoperative but upper extremity joint pain with or without limitations and range of motion and strength.
So what areas do I focus on?
I can treat those modifiable personal lifestyle factors, and that's what we'll go into next.
So we'll address sleep and relaxation exercise and movement, nutrition, stress and relationships.
So as far as sleep and relaxation, some of the suggestions we might give minimizing caffeine, alcohol and intense exercise.
Four to five hours before bedtime, establishing a bedtime routine.
Minimizing light and sound utilizing relaxation techniques such as deep breathing, progressive muscle relaxation, meditation, and visualization.
Also, I would if this is an area that interests you, I would refer you back to there was a defense centers of Public Health, Aberdeen.
Wellness Council luncheon.
Learn as mouthful. March 7th of last year were Captain Amanda Hetzler.
She's an army OT and certified sleep stress management, health and recovery coach.
She gave like, a whole hour lecture on this that was super helpful.
So I'd refer you back to that.
And I do want to pull in a few when I say a few. I think I have like 20 total, but pulling a few research articles to support what we are doing and that it is helpful. So sometimes when we're talking to patients, buy in is part of.
The struggle trying to explain to them how stress and sleep and nutrition all lead into their joint pain when they're like, no, no, it's just, you know, my hand or my thumb hurts. Even though all of.
Is negative. All the imaging is negative.
So some of the research on and all the references are at the end, by the way.
So as far as sleep and relaxation, this study here.
The quote is because the deleterious effects of sleep loss on pain sensitivity are cumulative. They likely contribute to the complex sleep and pain profiles observed in chronic clinical settings.
So for those that are already experiencing pain, you can potentially experience an.
Increase in their symptoms due to sleep loss.
And then also sleep disturbances affect pain pathways at several anatomical levels.

So essentially, I'm not going to read every line of that, but insufficient insufficient sleep leads to a pro inflammatory state and enhances spinal cord transmission, which could result in an abnormal level of.

**Page, Andrew H LT USN USMC II MIG (USA)** 10:55
Yes, see me.
What's the old craft horse?

**Adams, Angela M CIV DHA PORTSMOUTH NMC (USA)** 10:58
Oop.

**Osik, Amy J CTR DHA WALTER REED MED CTR (USA)** 10:59
Sorry, we have somebody that is has a live mic. If you could make sure that you're muted, that'd be great.
Sorry about that.

**Adams, Angela M CIV DHA PORTSMOUTH NMC (USA)** 11:07
No, it's all right.
All right. The next area, exercise and movement.
So recommendations we might make are aerobic exercise routines, strength and flexibility, training, balance, Tai Chi and Qigong. Also as a little plug ncrpi telepane services, they do offer virtual therapeutic movement to include movement and meditation and yoga series groups.
There is 8 brocades of Qigong introduction videos as well, and of course there's classes, groups, videos and apps that patients can access depending on what works best for them.
So some of the research long term consistent individualized exercise based treatment approaches are most likely to result in improvements in pain and function.
So if we can help them develop, develop a plan, stick with it, do something they enjoy, this can help address their pain and dysfunction.
Also, findings here in clinical application exercise training could be preferenced as a therapeutic.
Tool to reduce pain sensitivity over passive modalities.
In my area of expertise, people tend to want a quick fix or a passive treatment, but when we look at this research, active engagement may actually be more beneficial

for symptom management.
Stress management.
Some of our recommendations may be meditation, prayer, deep breathing, singing and dancing, spending time with friends and family, and, if needed, seeking professional counseling.
There are a plethora of.
Ways to access stress management apps and resources.
So DHA has a breathe to relax app.
It trains you on belly breathing techniques and helps you to relax tension.
There is free health and Wellness coaching from military one source that can help you manage stress and reach goals of well-being. There is a military meditation coach which is a podcast that helps strengthen.
Your mind, with a variety of meditation, mindfulness, and relaxation exercises.
And military one source also has different Wellness apps that have been developed by Department of Defense, the VA and other partners.
So there's a whole suite of resilience tools, and there's also a de stress and relax with chill drills, audio relaxation.
So those are exercise developed specifically for the military community.
All right, for stress, given the parallel mechanisms underlying the physiologic effects of a maladaptive response to pain and non pain related stressors, physical therapists can consider screening for non pain related stress to facilitate treatment, prevent chronic disability, improve quality of life.
So we have to remember to look at patients holistically using that functional medicine timeline and matrix can help us to establish.
A complete picture of the patient. If they're coming in for shoulder pain or knee pain, they're more than just a shoulder and a knee, and I'm not talking about just more body parts. They have, you know, stress at work.
They have stress at home. They have other medical conditions that are contributing to their symptoms. So we have to look holistically.
And then there is a mod.
That mindfulness based interventions such as meditation, yoga, and stress reduction.
Lower the perception of pain.
Increase mobility, increase functioning and well-being. So by integrating these interventions and other therapeutic interventions as a multidisciplinary pain management plan, clinicians can improve treatment outcomes and potentially

decrease pain related medication utilization.
So we can help patients open their mind to the possibility that pain reduction can be accomplished with more than just medication.
Another area is relationships. So some of our recommendations might be to spend time and energy with people who are supportive and loving. Find support groups and social outlets, and again seek professional counseling if needed.
You want to develop caring connections by spending quality time with others.
Establish and respect boundaries.
Develop healthy conflict resolution skills.
And relationship research.
Neuroscience research has highlighted commonalities of neural pathways connecting the experience of physical and social pain, suggesting a substantial overlap between these phenomenon. So healthy relationships lead to healthy management of pain symptoms, while impaired interpersonal and social relationships can lead to to poor.
Pain management.
And the other article we now have.
Substantial evidence that social connection has a protective effect on health and longevity.
Conversely, that lacking connection is linked to risk, so research shows that people who have strong social support tend to report lower levels of pain. And a study published in Pain Medicine found that individuals with strong social networks experienced less chronic pain.
And higher levels of pain tolerance.
Research also suggests that prolonged loneliness can have significant negative effects on both physical and mental health, comparable to other well known risk factors like obesity and sedentary lifestyle.
So we're going to make a switch now 'cause the last.
Modifiable lifestyle factor at the bottom was nutrition and I kind of want to transition into the.
Nutrition. Instead of just jumping right in.
So some of you may be familiar with the gut joint access.
So if there's dysfunction in the gut, it can lead to presentation of joint symptoms.
So dysregulation of the gut microbiota and their metabolites is involved in the pathogenic process of intestinal disease.
And several pieces of evidence within the current literature.

Have also highlighted a possible connection between the gut and unfolding of inflammatory pathologies of the joint.
This dysregulation is defined as the gut joint access and is based on the gut joint interaction.
And for anyone who is in the afmcp Lisa Proctoro Perry, she was my small group leader.
She has tons of knowledge on this if you're interested.
So it's widely recognized that the microbiota of the gut produce a variety of compounds, including enzymes, short chain fatty acids and metabolites.
As a consequence, these pro inflammatory compounds that produce bacteria such as lipopolysaccharides, move from the leaky gut into the bloodstream, therefore leading to systemic inflammation that ultimately.
Results reaches the joints and with consequences.
Such as osteoarthritis and rheumatoid arthritis? That could be a whole.
Another discussion for a different day.
So a very interesting topic.
So gut joint access, so some of the causes of that leaky gut or increased intestinal permeability, use of Ppi's, NSAIDs, alcohol use stress, TBI and decrease testosterone that probably.
Describes 90% of the patients that I see.
So I have to keep this in the back of my head as a potential.
Contributor to my patients.
Symptoms and the correlation between the gut and pain.
So lifestyle intervention could be a suitable choice to improve the gut microbiome.
This fact could be extrapolated into a better quality of life and lesser levels of pain.
So by addressing those modifiable lifestyle factors, we can address the gut as well.
So nutrition, some of the recommendations.
Again, I'm not a nutritionist.
I'm not a dietitian, but some of the recommendations that I can give are to improve gut health and decrease inflammation.
So some of the things that we can suggest is a diet rich in phytonutrient, so colorful fruits and vegetables, making sure you get clean protein and fiber, staying hydrated.
Getting adequate amount amounts of vitamin and minerals, which we'll go into next.
Incorporating probiotics and prebiotics and probiotics. For those of you who aren't familiar are fermented foods such as yogurt, miso, tempeh and prebiotics are foods

like artichoke, garlic, leeks, onions, tofu, soy and all of these things help to increase the good bacteria such as bifidobacteria and Lactobacillus.
Some things that we want to educate our patients on is decreasing intake of inflammatory substances. So tobacco, alcohol, caffeine, refined sugar and saturated fat.
Again, that's probably 90% of my patients as well.
So this article right here pain severity is positively associated with fat and sugar intake in chronic osteoarthritis, pain and pain threshold.
Is positively associated with protein intake, so if we can increase protein and decrease fat and sugar, we can address some of potentially that joint pain.
So some of the minerals and nutrients.
Zinc zinc helps to reduce inflammation and oxidative stress and this study here findings provide evidence of the significant protective effect of increased zinc intake against tibio subchondral bone deterioration in individuals with OA. So potentially the use of zinc can help.
With that degradation.
Calcium, that is a mineral primarily for bone and tooth production. And so there isn't enough calcium in the diet.
The body takes this mineral from the bones to support and maintain steady blood levels and support other critical bodily functions.
So this article here calcium intake demonstrates an interactive effect with zinc suggesting a potential synergistic relationship, so.
Potentially those two things can go together to help some address some of that joint pain.
And magnesium is important for energy production, blood pressure regulation, blood sugar metabolism, bone health, mood, digestive regularity. Much more.
And magnesium inadequacy is very common with almost half of the US adults getting less than the recommended daily allowance, and this article here the findings of a cross-sectional study indicate.
That magnesium intake is inversely associated with radio graphic me, OA and joint space narrowing.
It suggests potential role of magnesium and prevention of neoa.
So I wanna go back to this one also, just remembering these minerals and nutrients we have to consider the content and the bioavailability when selecting foods for supplementation.

So some of the antioxidants which these protect against free radicals and oxidative stress.
So vitamin A helps to support immune health and mucous membranes.
B complex supports cell metabolism and nerve function.
Vitamin C supports growth and repair of body tissues, including for wound healing, cartilage, bone and as well as immune function and vitamin D.
Supports absorption and retention of calcium and phosphorus, critical for building bone as well as immune function.
So vitamin A the body can only process a certain amount of vitamin A at a time and too much can lead to toxicity, especially from preformed vitamin A which is found in animal sources and supplements, and good sources of vitamin AI. Don't know that I can convince myself.
To eat this but beef or chicken liver and then also carrots, sweet potatoes and dark leafy greens.
So this article right here, serum vitamin A is positively associated with osteoarthritis. Risk. So within a certain range, vitamin A concentrations, vitamin A is protective against OA, but beyond that it becomes a causative factor.
So like we said, it can be toxic as well.
And by no means am I prescribing certain amounts of this.
I'm just educating patients so that they can talk with their PCMS or other medical providers.
Vitamin B complex, so this will help to decrease inflammation and pain.
Vitamin B6 deficiency is well established as a contributor to inflammatory related conditions.
While B6 supplementation can reverse these inflammatory effects, so that would suggest to me that increasing your B6 while remaining in a safe range obviously can help decrease some of that inflammation.
And B12B12 is essential for the synthesis of myelin fundamental for nerve regeneration and therefore could have an important role in neuropathic pain.
And it can be said that these vitamins affect several physiopathological pain mechanisms and hence they can be significant in the treatment of various pain conditions.
Vitamin C can help to reduce OA and pain.
Also reduce reduce the risk of CRPS so high intake of antioxidant micronutrients, especially vitamin C, can reduce the risk of cartilage loss and disease progression in

people with OA. Higher intake of vitamin C had a reduced risk of developing knee pain.
And then as I alluded to, moderate level of evidence supporting the use of 2G.
Of preoperative dose of vitamin C as an adjunct to reduce postoperative morphine consumption and high level of evidence supporting perioperative vitamin C supplementation for the prevention of CRPS which, if anyone's ever worked with a patient with CRPS.
I know that that is a challenge.
So if this is potentially something that can help, that would be a great adjunct to treatment.
Vitamin D While further research is needed as there are still divergent opinions regarding these extracellular effects of vitamin D.
Strong, convincing evidence supports the benefit of vitamin D in promoting bone growth and maintenance, and this has been acknowledged in the recent Institute of Medicine report.
And a positive association of vitamin D deficiency with a variety of non specific bone pain particularly.
In women, so vitamin D will promote bone growth and maintenance while decreasing pain.
The struggle, which again this is probably 95% of my patients, once I learned about this, I started pulling up their labs.
And again, I would probably say 95% of my patients are low in vitamin D.
What is the best source of vitamin D is actually sunlight?
But as we know, we don't want to get too much sunlight.
So that is the best source.
So even just getting out 15 minutes in the morning when it's sunny, get that vitamin D obviously there is supplementations and some are better than others.
Also essential fatty acids, so these cannot be created by your body.
You must get this from diet so this helps to promote nerve function and play a role in inflammation.
So results from a meta analysis indicate that this supplementation.
Of essential fatty acids is effective to relieve pain and promote joint function in patients with increasing the risk of treatment related adverse effects.
So this might be a place to start with patients with joint pain.
This will actually help repair the gut and ink as well as joint decrease joint pain.

And amino acid glooming.
So time to wound closure can be shortened.
And by oral antioxidant and glutamine containing supplements in trauma patients with disorders in wound healing.
So I often see.
Traumatic or postoperative?
Wounds so this this might be something that can help wound closure.
It also helps repair leaky gut, promote protein synthesis and support immune function.
So just something to think about.
So again.
And in summary, these modifiable personal lifestyle factors can be implemented as interventions for joint pain and dysfunction.
This can hopefully decrease utilization for pharmaceuticals and potential need for invasive treatments.
So in conclusion.
These modifiable personal lifestyle factors can be implemented, implemented as interventions for joint pain and dysfunction.
This can hopefully decrease utilization of pharmaceuticals and potential need for invasive treatments.
And I have my contact information there. If anyone would like it and all of the references for those articles as well.
So thank you very much.

**Osik, Amy J CTR DHA WALTER REED MED CTR (USA)** 30:52
Wow, that was a great, thorough presentation and perfectly on time you time that down to down to the second. I will give people the opportunity to see if they have any questions in the chat or any comments.

**Adams, Angela M CIV DHA PORTSMOUTH NMC (USA)** 30:58
I know, right?

**Osik, Amy J CTR DHA WALTER REED MED CTR (USA)** 31:08
Just right now, I said.
Thank you very much.

Great presentation from OT perspective.
Awesome. Great.
They were great little snippets in there, probably if we had more time, we probably would dig a little deeper, but we really appreciate.
Yeah, this I do wanna mention that obviously this session has been recorded and will be available on the ww.ncrpi.org website password protected in the next four to six weeks. I will put that in the chat.
I will leave the chat open for another 5 minutes if you don't mind staying for 5 minutes so that we can answer any. If there are any questions. Additionally, join us next month because we actually have a functional medicine presenter.

**Adams, Angela M CIV DHA PORTSMOUTH NMC (USA)** 31:43
Yeah.

O

**Osik, Amy J CTR DHA WALTER REED MED CTR (USA)** 31:51
Putting her information in the chat, doctor Mary Ellen Chamblers that has a oral health perspective.
So we're looking forward to that in on May 6th.
So we're excited to have that. And if you have any questions, leave it here.
Other than that, thank you so much. Again, it was excellent.
And we look forward to seeing you next month.

**Adams, Angela M CIV DHA PORTSMOUTH NMC (USA)** 32:15
Thank you.

O

**Osik, Amy J CTR DHA WALTER REED MED CTR (USA)** 32:16
Thank you.
Yeah.

**Osik, Amy J CTR DHA WALTER REED MED CTR (USA)** stopped transcription