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ReachMD

www.reachmd.com
info@reachmd.com
(866) 423-7849

Focusing on Fitness for the IBD Patient

Dr. Nandi:

Welcome to *IBD Crosstalk for GI Insights* on ReachMD. I'm your host, Dr. Neil Nandi. Let's face it, nearly everyone can benefit from more regular exercise. Patients are always looking for modifiable risk factors that can be complementary to their medical therapies in healing their IBD. And exercise may be one therapeutic tool in our kit that remains unexploited. To date, we have several studies in the animal world of colitis that demonstrate exercise can decrease proinflammatory cytokines. Other studies have suggested that moderate-intensity exercise can actually reduce visceral fat, which may reduce proinflammatory cytokines, and even lead to the secretion of myokines that can actually improve intestinal healing. So let's talk more about fitness.

Joining me on today's program is Dr. Susan Kais. Dr. Kais is an IBD specialist who did her IBD fellowship at the University of Miami Crohn's and Colitis Center and is presently in private practice in Grand Rapids, Michigan, where she serves as the IBD director and as also a Clinical Assistant Professor from Michigan State University Medical School. Dr. Kais is also a fitness warrior, and today, she's going to elucidate a little bit more about how exercise can help our IBD patients. Welcome to the program, Susan.

Dr. Kais:

Hi, thank you so much for having me. And I really appreciate being here. I'm really excited for this very important but not so often talked about topic.

Dr. Nandi:

Yeah, absolutely. We talk about all sorts of things in the clinic room, mainly around disease state and primary education and drugs and treatment. And we're finally starting to talk about diet. But how often are we really out talking about fitness? Right?

Dr. Kais:

Absolutely. It's really very rare for us to talk about fitness. Maybe it's because we just don't have the time since we're talking about so many other things that take precedent during our interactions. But there are some patients that come to us and really do ask us about fitness. And we should have some answers for them and some guidance.

Dr. Nandi:

Absolutely. So let's talk about that. First off, for all our clinicians listening out there, what are the incentives or health benefits for IBD patients to engage in physical fitness?

Dr. Kais:

For our IBD population, patients should exercise because it's one of those things that's really ultimately in their control. And it's definitely a modifiable risk factor that could improve their quality of life, their symptoms, help them maintain periods of remission, and improve their overall mood and much, much more. Many of our patients, as we know, are often left very frustrated, feeling that they're not getting complete resolution of their symptoms. And they start seeking out alternative or complementary forms of therapy, whether that be diet, holistic approaches, or just going to their local fitness person for guidance, and they might not have the appropriate tools for a patient, because a lot of times their thought process is no pain, no gain. But that has to be really balanced in the setting of our IBD population, is where are they with their disease activity? Are they under control? Are they in a flare, and then that gray zone? So today, there is a lot of good information out there and data to support physical activity having its protective role, that is, like you mentioned earlier, improved immune response, improvement in quality of life, improvement in disease activity, possibly improvement in fatigue levels, and also bone mineral density.

Dr. Nandi:

Yeah, and that should be very relevant to our audience, right? Especially what you just mention about bone mineral density. Lifting, literally bearing the weight of gravity can actually increase bone density. And that can build good muscle strength, right? A kind of anti-sarcopenic, if you will. So there's a lot of benefits to that. Can you highlight a little bit more in detail, what does the evidence and studies show so far about changes in inflammation or even gut microbiome when it comes to exercise in IBD?

Dr. Kais:

Absolutely. So the benefits of exercise in IBD with the studies, granted, they are limited, but they are there, warranting further investigation. But what we know today, a lot of the studies so far have been done in the non-IBD populations. And they've demonstrated, like you mentioned, that low to moderate exercise can definitely improve immune function. The hypothesis is that moderate intensity exercise exerts an anti-inflammatory effect. And what you mentioned by both decreasing visceral fat and the release of proinflammatory cytokines and releasing of myokines, like interleukin-6, for example. And we know that interleukin-6 where we've seen from studies that increase in such release from glucagon-like peptides can be factors in repair of damage in intestinal mucosa. In addition, there are other studies with animal models with colitis that have demonstrated that exercise decreases expression of the proinflammatory cytokines like TNF alpha and interleukin beta, and increasing again, interleukin-6 and interleukin-10 alternative attenuates, rather, the stress-induced barrier dysfunction and actually improves colitis overall.

Dr. Nandi:

So I think what you're showing is there's definitely studies to say that there's a pathway that may explain how exercise can actually create healing, because I think to most listeners, it's not going to be intuitive that's possible. But you're suggesting that the studies show that there's a change in the pro- and anti-inflammatory cytokines based on exercise patterns.

Dr. Kais:

Absolutely, absolutely. And it's in that low to moderate. And as some of the other studies, which I'll talk about right now, that interplay between exercise and gut microbiome, the studies today have shown that in patients that adhere to a sedentary lifestyle, their microbiome in itself is not very robust or diverse.

And what we've seen also is with the studies is that when patients go from a sedentary lifestyle and they actually start exercising to low, moderate, and even intense, we see a shift in the microbiome to a more diverse and robust with some protective factors. And specifically, we've seen the Firmicutes phylum, which can produce short chain fatty acids that actually decrease inflammation due to their presence and their role.

Dr. Nandi:

So you know, it's funny, because I know that when I exercise, I eat healthier, and when I don't exercise, I slack. So part of me wonders if the microbiome changes are influenced by that or not.

Dr. Kais:

Absolutely.

In addition to the intense exercise, what they actually have also seen is that the intensity can actually cause an increased permeability in the GI intestinal mucosa, leading to that leaky gut and actually diminishing the gut mucosal layer, the tight junctions become not as tight potentially allowing pathogens to cross over into our bloodstream and then setting off the inflammatory pathway.

So it's a very fine balance in the middle, almost like Goldilocks and the Three Bears picking the bed, you know. This one's too hard. This one's too soft. And this one's just right. It's just like an exercise, low, moderate, intense, you have to kind of navigate carefully what will be actually very protective in nature and helpful versus something that actually can cause more damage and actually maybe even potentially trigger a flare if you will.

Dr. Nandi:

No, absolutely. No, I mean, I see a lot of rationale for why exercise can be a therapeutic in IBD.

Let's talk about some of the obstacles, right? How do you advise your patients, certainly somebody who's not in flare, right, it's going to be easier, how about somebody who is in flare who might be suffering from dehydration or abdominal pain or is weak, where do they start? How do you get them motivated to get back in touch with fitness?

Dr. Kais:

You have to individualize it and kind of figure out where they are, what their motivation level is, and really encourage them. Just like when we have patients that are in the hospital and they're in the bed and we tell them, "You know, you really need to try to get up out of the bed, into the chair, walk around, because we want to prevent deconditioning." Well, this is also happening in a patient's home. So the first place that I like to start off is, when a patient is in a flare and having the uncontrolled disease, they're really hesitant to do

anything, because they feel like they're frozen, like if they move, they might have an accident. So I try to gauge where - what they're doing at home already. If a patient says, "Well, I just lay in my bed all day," well, that's my starting point, "Well, you really need to get up and move around in your home. You might not feel safe going for a walk outside or in the park or not being near a readily available restroom. But start in your home, in the privacy of your home." And give them that insight that by sitting there for too long can actually make them more deconditioned and possibly delay their healing process, if you will.

And as they see improvement, and I inquire about that further on their next visits to see where they are to give them some insight. Because then some patients with the right diet, with the right therapy, with overall feeling better and starting to engage in a little bit more activity, they're ready to like go crazy to the gym. And that's when we have to kind of put the brakes and guide them carefully through that transition.

Dr. Nandi:

Absolutely. For those just tuning in, you're listening to *GI Insights, IBD Crosstalk* on ReachMD. I'm Dr. Neil Nandi. And I'm speaking with Dr. Susan Kais about the evidence for fitness in IBD.

Now you were just telling us about how to get patients motivated, and especially if they're not doing so well. A little bit of exercise goes a long way. So what is the right amount of exercise for an IBD patient? Is it different from the average Joe?

Dr. Kais:

Well, the right amount of exercise will depend on where a patient is with their disease. Is it under control? Are you having a flare? And let's say you are under control, it's possible that too much can actually cause risk of causing a flare potentially with some of the studies showing that too much intense exercise can increase GI wall permeability and potentially enabling pathogens into the bloodstream because of that breakdown of the GI wall, the tight junctions, the mucosal lining being thinned out. So you do have to advise patients that they need to actually listen to their body. And if they're to a point where they're vomiting, or in some cases, we see a lot of these fitness shows that these trainers are really pushing their clients, "just push through the pain, push through the pain." For our IBD population, we probably want maybe more of a gradual increase in intensity of their workout, rather than just balls to the wall, you know, right off the jump off because that could possibly potentially, with some of the data out there, could induce a flare.

For those patients that feel that having a flare will not allow them to do any kind of exercise, they can do exercise. Simply getting up, walking around the house, going up and down the stairs, walking around their home on the outside can absolutely be more helpful than detrimental. Patients feel that exercise is going to worsen their symptoms, it's going to worsen their diarrhea, it's going to worsen their pain, worsen their, fatigue. But interesting, there was a study out of Great Britain that did an IBD survey of patients. And 23% of the patients that participated in the exercise survey felt that it exacerbated their IBD; 4% felt that it worsened their fatigue, 12% said that they felt that they needed to use a restroom more, 17% felt that it worsened abdominal pain. But interestingly, but not interestingly, 72% of those patients felt that exercise actually improved their symptoms and their overall quality of life.

Dr. Nandi:

Well, Dr. Kais, I think you've made the case for fitness and IBD. We've discussed a little bit of the evidence, the biologic rationale for why it's helpful therapeutic in healing IBD, how moderate exercise is best, and maybe not pushing it too hard may not be best for all patients. But certainly, we really need to get our patients active, fit, and moving. Before we close, are there any last comments or last thoughts you have?

Dr. Kais:

I just would like to really encourage our providers that are listening to actually inquire what kind of physical activity our patients are doing, and start using it as a metric to help our patients, guide them and encourage them to start moving for overall better quality of life and actually mood. Hopefully more studies will be done in the near future, that we can continue to give our patients really good, robust evidence-based medicine to support our recommendations.

Dr. Nandi:

One hundred percent. For all our listeners out there, especially our IBD specialists, or GI practitioners who are part of Crohn's and Colitis Foundation, the foundation offers many different types of fitness fundraising events from Spin for Crohn's and Colitis to Team Challenge, which is a destination-based event that has everything from half marathons to triathlons and Iron Mans. So there's plenty of activities to be encouraged.

Dr. Kais, thank you so much for joining our program.

Dr. Kais:

Thank you, Dr. Neil Nandi for having me as well this evening.

Dr. Nandi:

For ReachMD's *IBD Crosstalk*, I'm Dr. Neil Nandi.

To access this and other episodes in this series, please visit ReachMD.com/GIInsights, where you can Be Part of the Knowledge. Thanks for listening.