## Introduction and Dr. Jen Flegaru2019s Background

This is Dr. Jen Flegar and she's a DO in Nashville and we're going to talk about peptides and other related subjects that she is interested in. And she has a book that we are going feature.

So Dr Jen, do you have a little background that you want to give us? Yeah, so board certified in emergency medicine and integrative medicine. About a decade ago, I did a fellowship in integrate medicine, still practiced in the ER while opening up my integrator medicine practice.

And now we live in Nashville. We moved from Ohio about nine months ago and I have a virtual practice And my interests are, you know, niching down. I came from just general integrative medicine practice because there wasn't anyone in Northwest Ohio providing that.

And now more hormone-based, specifically perimenopause and peptides and longevity. So I love dealing with all of those. Okay, great. So I have a strong interest in learning more about peptides.

I've been to a few sort of introductory lectures about that, and I do carry one. So my focus has been on the 7-step blueprint to optimal health. And so my current fan base, I guess you could say, are familiar with that because I've been talking about that since 2018. So I want to share the screen and show this document where peptides can fit into the seven-set blueprint.

Let me blow this up a little bit more. This was given to me by an MD. He also uses peptide. And the first step of the seven steps is step one, which is diet.

And like you were mentioning, peptide prep. So what does that mean in your office? Yeah, peptide prep means you're not just gonna take someone, you know, off the internet and say, hey, let's do peptides and they're gonna eat the same, they are gonna sleep the, same they gonna do all the things and you gonna just think that peptids are going to miraculously change all that.

I mean, that is what I'm seeing in the peptid world right now. We have influencers recommending peptida, we have non-clinicians, non providers, none physicians recommending peptides.

And I think peptides should be for everyone, but I also think that they can be used, they could be mismanaged, especially now that their trendy. So peptide prep is we're looking at sleep.

How can we optimize sleep before peptids? We might bring in peptidized to optimize these things. But first, we need to do the low hanging fruit. and create habits, lifelong habits.

So we're going to look at sleep, we are going look nutrition, are we doing breath work, meditation, prayer? Are we moving our bodies? So first we need to do that because, for example, you're not going put someone on a growth hormone secretagogue and not have them work out or lift.

They're just going to gain weight because they're not going gain muscle. So, I mean, there's certain things that we need to make sure and play, and I call that peptide prep.

## What Peptides Are and How Theyu2019re Used

And my peptid course that I have on my website, which is very inexpensive, it's literally just to teach people what we to do when we look at peptides.

I've been prescribing peptids for almost a decade. It's very important to Optimize when and how you use peptides

because one of the downsides of peptide is they're expensive.

So we don't want to just use something expensive and not have it work as well. I've felt like peptids work better when used appropriately and a lot of this takes working with patients.

It takes that just stault and it takes that knowledge and we're not seeing that. I know you see Dr. Schmidt like, have you seen these influencers for peptides now?

They're getting paid to like promote specific companies. It's almost like a pyramid scheme. Yeah, but so you're saying we can't use these out of context, right?

You have to have healthy lifestyle choices and habits, and then the peptides will work better. We got to back up though. I need a really good definition of peptide.

What is it? Oh, yeah. So peptids are chains of amino acids. Amino acids are the building blocks of protein. Now, proteins are usually a lot of amino acids together, and then that gets broken down and utilized in the body.

Now, peptides are shorter chains of amino acids. They could be, you know, a couple amino acid. We have a peptide KPV, which is just three amino-acids, or they could longer.

Usually, 36 aminoacides is the cutoff. So these are used in a body to kind of like a lock and key. have biological processes happen, you know, go into the body and help the buddy do these processes, like go in to the DNA.

And this is different from medication, which is like a crowbar, forcing things, okay? GHK copper, for example, is a peptide. It can turn on and off gene transcription.

And it's very fascinating. So this is what peptides do. There's also bioregulators, which could be another day we talk about that. That is really short snippets of amino acids, tissue-specific two to four amino acid.

They're, there's like kidney bi oregulator, heart ones, thymus, pineal. so that's, they're really small in their tissue specific. Now, peptides can, and bioregulators are oral, so taken by mouth, mostly.

What does that mean, though? Biore regulators of the heart, what's that means? So it's tissue specific. So, it going in there and it helping that tissue with these short snippets of amino acids.

And it is helping with biological reserve, is what Professor Cavison would say. The Russians have used these for a while. Those are our oral bi regulators.

Now peptides, which are a little bit longer, some of these chains, they can be given in different ways. So they could be give an oral which we see a lot more oral peptide so capsules were taking it by mouth.

We see we've seen a long more in the last five years because of the FDA restrictions on injectable peptides and getting them from FDA-regulated compounding pharmacy, which is safe.

You can get peptide. It doesn't mean that it's real and it says it is similar to supplements. I just have patients go through a compound pharmacy so we know you're injecting into your body what it actually is.

There isn't any contaminants either. So injectable peptides are kind of the original way to get peptide. They work better, they work really well. versus the other modes like oral, still good, it's still utilizing it a lot and still works well, but some of them work better injectable, like thymus and alpha one, for example, and VPC 157 for tendons and ligaments works better, injectible.

You can also give intranasal, you can give topical peptides. I love GHK copper peptide, I loved that topically for the face, for hair. So peptids are really cool and it's kind of like drinking out of a fire hose when you start to dive into them, but it gets easier and the letters and numbers will start roll off your tongue, right?

So the most commonly referred to peptide would be the GLP-1 licozempic. So, the way that I see that, it's a glucagon-like protein, right? That's what GLPs stands for.

Glucagon is a hormone for digestion that's enhanced when you do a low-carb diet. When you a high- carb diet, your insulin is very high, glucogon is low, then you'd do low carb and it switches.

That how I CLP1, these are This is a medical therapy to try to mimic a low carb diet. Am I off on that? Is that correct? Yeah, or fasting or exercise can increase GLP-1.

There's a probiotic in the gut called anchormancia, and that can increased GLp1 production in a guy.

## GLP-1s, Weight Loss, and Lifestyle Support

But you know what, like we have seen that semiglutide interzepatide, they are doing a little bit more. They are modulating inflammation. And they're doing other things where I think we've Hit a bad name for this was that too much at once and having it be a crutch because no one's changing their diet and lifestyle and and this is because who came in who?

Came into the system the drug companies, so they're the highest dose You know who knows what else is in there? Um, I, that's why I use compounded with my patients.

I know it's pure semi-glutide. It's puriters, appetite, and we are having them on the lowest dose for the short amount of time. And the patients that I'm using GLP ones with a lot of my.

Women patients, they're impairing menopause. Maybe they have PCOS, insulin resistance. They've tried fasting, eating well. The peptide prep, we've balanced their gut, done everything.

We've even tried metformin, tried berberine, and they are stuck. And that will just help them get over that bump, help with the food noise and have them, get habits situated, and get the habits incorporated into their life.

And then we get them off and wean them. and they're not on super high doses because what we've seen with the GLP-1s is that patients' body composition was changing for the worse.

What I mean with that is they were losing muscle and not just fat. And you can see these people walking around, they look like baggy, saggy. They don't have muscle, and that we know muscle we need for longevity.

So it's very interesting that, you know, I mean, here's the honestly here is the hardest thing Dr. Smith, like anyone could get a GLP one tomorrow delivered to their house if they want, but it doesn't mean they should.

And it does it they're not doing it correctly. So my non negotiables, if someone's starting on a glp one, they have to be lifting weights, like in the weight room.

Lifting weights. They have eat protein. So 120 grams a day, try for 30 each meal, they to have be eating protein, which also means they shouldn't be on such a high dose of a GLP-1 that they're so nauseous they can't eat at all, Which happens a lot if you go to a med spa or get the prescription, you can adjust the dose.

I'd like them to be on creatine, like a good creatines five grams a day and something called Pepti Strong, which is a peptide from the fava bean which helps maintain muscle.

So they have to do these things to maintain muscles mass because I do not want them just to lose weight. I want to change their body composition and fix the insulin resistance is the big thing.

That's a brilliant way you just said so. But I'm assuming most doctors don't do all the things that you said. They just put people on the drug and then good luck, right?

Yeah, you get the results. You get results of weight loss, but a lot of it is muscle mass. Yeah. And it's out of control. Yeah, or they get short-term weight loss and they're losing muscle and then they try to get off the shot and gain the weight all back because the food noise comes back, because they haven't changed their body composition.

It's just very interesting. The other thing that I've done recently with my perimenopausal women is that we might just do a low-dose GLP-1 just during the luteal phase.

So the Lutea phase is the second half of the cycle. where your body is a little bit more insulin resistant, and you have those food cravings, which some women, you know, stress or whatnot, they give into it.

They eat a lot of sugar, They binge on sugar. So if they have a bit of GLP-1, we just cycle it those two weeks. they they do so much better and this is what women are telling me they're like that is when I have my food noise if I'm just taking it then I do better I can stay on my protein on diet and I don't know I just love it I love sinking Some of the supplements some of these peptides with a woman cycle because they're not like men they don't have twenty four hours same hormone release it's different every day and that luteal phase.

You know we can look at papers we look out whatever people are saying on the internet but women when i'm working with women. they do struggle sometimes with that part of their cycle and all of those studies everything goes out the window because it becomes an emotional response you know food does and and they're busy so it's nice when we can use peptides to assist when they've been trying everything because I I know you've probably seen this, like you might not believe that a woman standing in front of you who's overweight has tried everything.

You might think that they go home and they eat all day, but some of these women are at such a calorie deficit, they're so insulin resistant, or I just had a patient that had mold toxicity, so was gaining weight while eating at a caloric deficit.

their body's just holding on to all this. So, you know, sometimes we will use the GLP-1 peptides to get them over that bump and then they can start healing better.

But yeah, it's hard, and this is why we have to look at each patient separately, which is what you and I do versus the conveyor belt of conventional insurance-based medicine.

Right, so when you're saying use it to you get over the bump, how long? Like they would be on that For a few months only yeah yeah sometimes a couple months I have patients on they stay on a low dose for a year.

Usually not much longer than that sometimes we pivot away from that and say hey like is there something like root cause that we need to adjust is this.

you know, do we need to try a different diet? Do we to change things up? A lot of the times it's with women. It's just stress. So we are going to balance out their parasympathetic, you get that activated more.

I mean, it is pivoting and then we could throw in other types of peptides too, to help if we think that they are gaining weight because they're just not motivated to work out.

We can work on mitochondrial health with some mitochondria-derived peptides like MOTC or SS31. we could increase muscle mass with a growth hormone secretagogue, Epimorlin CJC1295 as an example, take that five nights a week to help with muscle growth.

So there's different things to pivot from, but where I think the concern is, is that, you know, I was at a conference with a bunch of DOs and one of the older DO's, his alarm went off for his blood glucose monitor.

And I'm like, Oh, hey, like how's that stuff going? And he's like well, well I am on the highest dose of wagovi. I've lost a lot of weight. But then he was eating a donut for breakfast.

That's not gonna help. So this is where this as a concern, because I mean, now, like, honestly, we're at the point

where anyone can get everything and anyone could put anything into an AI, you know, and be an expert, but it's Not wisdom.

It might be knowledge, But we are lacking wisdom right now. I think when it comes to peptide. Right, yeah, we're lacking wisdom in a lot of things. There's so much data, single data points everywhere, right?

Like a trial and a study and survey and it's like we'll put it all together into a system that makes sense. So having said that, If you don't mind, I'd like to go back to this list here.

Because in my system, it's primarily around cleaning, right? Detoxing. So it is almost like step one and two are preparing for cleaning. And then the last step is cleaning the cells.

Then step O is optimization for enhancing nutrition. But like, why would somebody take a, you know, vitamin pill if they got four foot tapeworms in their gut or if the have mercury and cadmium in themselves?

Yeah. Yeah, so. See, mentioned so energy mitochondrial enhancement for step two, he mentioned MOTC and then SS 31, right? Mm hmm. Yes. So give us a little rundown on what those are.

Yeah, MOTC, I would start with that one, and then you could always follow up with SS31. So they're mitochondrial-derived peptides. And MotC activates AMPK, so it helps with metabolic flexibility, really good with fatty liver disease, it's really with metabolism.

This helps weight loss too, a metabolic support. I love MOTC for actually kidney disease. There's a lot of studies on this. I think that this is something that should be given to anyone with any stage kidney problems because the kidney is one of the most mitochondrial dense organs.

So it's very helpful with that. It also helps with mitochondria and stabilizing the mitochondrial membrane. So that's also a mitochondrion-derived peptide that is used.

That also help with the fatigue and the energy. It could be part of that step one of your process or are we on step two. But those could definitely help because we're revving up the powerhouse of the cell and improving that.

## Mitochondrial, Gut, and Immune Support Peptides

Okay, cool. And then for drainage, oral bioregulator. So when I say drainage I'm talking about kidney function, liver function and lymphatic system. you know, sinuses.

I could see that. Yeah, I mean, you could do some of the the oral bioregulators you can do. Um, yeah, kidney, You could, do, um, stomach. You can, to different ones.

And you, can you do pineal and thymus? So the, so the world by regulars are kind of like glandulars. That's is it? Yeah. Yes. Yeah, so that could help for that.

Also, if you go back to that, because that is step is technically drainage. Yeah. So then step four for support. Yes. If you're doing more intestinal cleaning and you are going to be getting out like parasites and SIBO and Candida, is that what?

Yeah, yeah. And ideally, I mean, ropeworms, but most of pudica seed is an herb that does a great job. But I was hoping some kind of peptide for support and assist.

So you mentioned lorazetide and BPC-157. Yeah. Bpc- 157, you would take it orally for that support, and that would help the tight junctions in the gut and support inflammation in that gut.

is naturally occurring in the gut and very helpful. So that would aid with that. Also, lorazotide really is great for tight junctions. If you have a lot of intestinal permeability, that is going to just seal it right up whenever I have like a

stomach ache or I'm like, oh, maybe I ate something off.

I always take a lorazetide. Or if I thought I was like gluten bombed, I'd always travel with lorozetides. So I mean, but lerozotide is also, it's actually looking to get into a drug.

It's in phase three trials through the FDA. which hopefully it's still available for at reasonable price when that goes through. But lorazetide, it is also good for kidney.

They're saying autism, Crohn's, all sorts of places, right? Because it helps tight junctions of the cells. So it makes the body do what it supposed to do and only have selective permeability versus Like everything is permeable because we're so inflamed.

So that one's great. Also KPV is great, that's that tripeptide I spoke about. so KPB, it's actually really good for inflammation and I'll use it with gut health also.

It's one that sometimes I will throw it in early on patients. because it's really good for inflammation, especially like mold patients, almost like antihistamine kind of response.

So it really helpful for that. It's a derivative from alpha melanocyte SH, which is low in those mold, patients especially in their NERS. That one, I like that one.

I just think it calms down inflammation. And it is very good like any acute inflammation even like joint inflammation, I've had it work well on patients because it's anti-inflammatory.

Nice. Awesome. Cool. All right, so step five, that's cleaning the body of immune challenges from head to toe. So parasites, virus, bacteria from had to tell.

Yeah. Yes. Thymus and alpha one definitely for supporting that. That is derived from the thymis gland and as we age, we have thimus gland involution and it is a good part of our immune health, and there's a thymus bioregulator, but thimus in alpha one is an injectable, which is great.

This is one that has been looked at during the pandemic. It was being used in China for patients that were very sick in the hospital and it was working very well.

Then the FDA pulled it away from the compounding pharmacies and now we're able to get it at select ones again. It's also something that I have patients that have cancer, I put them on thymus and alpha one so their immune system is more revved up and ready to fight the cancer.

As we know cancer is a breakdown of our immune systems, basically, so that is really helpful. Also, you can just cycle it. I'll have patients use it if they have an autoimmune disease and use that along with the other gut health bioregulators or peptides that we spoke about, the oral ones that will help.

So, yeah. Thymus and Alpha-1 would definitely just be great for that systemic support for sure. Yeah, let me throw this in. So I have a variety of supplements that, like I've Thymex from Standard Process and Thymos PMG.

Those are the glandulars of the thymus gland. And then here I put it, I typed in IPS, standing for intestinal permeability support for the step four next to the lorazetide.

There's supplements they have lamb intestine in them. We have these glandular and the technology of that goes back to 19 teens and 20s. But now we have the peptide, so I don't know if you know why…

So peptides being more expensive, probably more effective, faster, more powerful than the glandulars. Do you have experience with glandular? Do have a comparison between the two?

Some glandulars that I've seen with patients, like, you know, I like MP thyroid and stuff. I think with some of the

glangulars, maybe they're too big of proteins and not as specific enough.

And then more I have found with some glandulars for thyroid, they weren't consistent enough and they were very inconsistent and that caused my patients problems when they would come to me on them.

So I'm more I think I just want it to be very, very specific. So that's my experience with more glandulars versus the bioregulators. They're just very cell specific, you know what you're getting, how they're going to work.

The thymusin alpha-1. That's a peptide, not a glandular. Right. And then how large is that peptid? How many amino acids is it? Mm, not off the top of my head.

And so the purpose of that would be to rejuvenate the thymus gland. Like, what does it do? Yeah, it helps support the immune system. So it's going to help.

It's gonna work like a thimic protein similar to the bioregulars. There's also thiamid gin that is oral. so it can help activate and support. The immune systems again, because when we age, we lose that thimas.

Yeah. You know, we lose that and things like obesity, things, like metabolic imbalance and that can also cause our thymus and immune health to decline.

And this is aging too. You know our immune system and this is why we get you know diseases of aging and a lot of them are thymic related such as cancer.

Right and maybe so I've given people the thimex glandular and it's like their body goes through Like the flu, like they're sweating and they are killing off organisms from head to toe.

So that's it's good that there's like it is parallel, right? Parallel thinking. Yeah, yeah, nice. Okay, so step six, toxin binding. You mentioned these three and then at the top says clearing senescent cells.

What's the senestent cell? Yeah, senescent cells are like zombie cells in our body. So if you think of a zombie, you know, they're dead, but they won't go away.

Then they just cause ruckus and inflammation there and aging. off and get those away. FOX04 can help with that. That one's harder to get, I feel like, but that one could be used for that, and it's important to clear these senescent cells that can cause inflammation.

But really, when we look at clearing senesen cells, supplements work. So there's senolytic supplements that could help that you use for five days of the month that supplements, the herbs, and that can help.

Also, fasting can clear out senescent cells. We call this the fancy word autophagy. Autophage basically means taking out the trash for cells and clearing those cells, but if we're eating 24-7, We don't get in that process of autophagy.

We're not supposed to be eating all the time. Americans do, right? So we never clear out those bad cells and take out that trash. So then we have cellular debris and that's causing inflammation.

Think about if you left you know, garbage in your house for a couple of weeks and never took it out. Like it's you're going to smell and see the effects of it.

Oh, yeah. Yeah. So so we're not taking out our cellular trash. It's a problem. You had mentioned supplements that you would take for five days to clear out these cells.

Well, like it would give me an example like what brand or what what's the name? Yeah, there's one that I mean, I'm blanking on the one because I was using one.

Oh, qualula is one they have a pretty good synolytic. I'm trying to think of the other one that I used for a while and you can type it in, you know, or I could give some of those later, but quality law is a pretty good one.

They're bigger. And then for females, I'd want you to take senolytics during the first half of your cycle, the follicular phase. So I like to time even some supplements like senoletics with that, cause it's gonna, it sounds like a stress on the body, But you are taking out cellular trash.

Though I liked to do that in the fullicular face for women. Nice. Okay, so we haven't, have we talked about Matzi yet? Yeah, that was one of the groups, the mitochondria.

We named her one of our cats after Motzi. Oh, did you? Yeah, so she she because we found her in my office is stray. So we have a cat named Motzy and then a Cat named Foxo for and Then a Kat named Mito, but for short for mitochondria.

## Senolytics, LL-37, and Cellular Cleanup

I just like to mess with like, I don't know. Like to name animals weird things. Then it's a talking point like Oh want to hear about peptides anyway. Yeah, I had a dentist who had white lab and he named that dog sugar.

Oh, no, that's true. Yeah. I mean, got to keep him in business. Yes. So then l thirty seven. so tell us about that for cleaning out cleaning up the inside of the cells.

Yeah. So LL37 is a really intense biofilm disruptor. It can really disrupt mitochondrial membranes. In fungus, viruses, it's actually interesting. I was digging into studies because I'm sure you're the same.

What do we like to do? We like read PubMed studies for fun. But Ll37, I think I hypothesize in the next decade with some of these really resistant candida fungal infections, you know, the super candita you read an article about every once in a while on the news.

Like I think LO37 would be the answer to that because it is such a strong biofilm disruptor. This one, honestly, I don't use a lot. We were talking earlier about like how many peptides do I use?

I'm like, well, probably like 20, but some them not a lots, like we keep them in our pocket. So you can get these internasally. I have a patient that has really bad like marcons in her nose.

We've tried a lot of different things and she feels a better after when using the LL-37 and after that it really cleared out a of that. You can also inject this too but you really want to go low, start low and go slow with this and only use it, you know, for a short time, like two weeks max.

I mean, this is just a very strong one. And this also, I couldn't imagine using LL37, higher up on your protocol list because you'd feel miserable. You would get a Hertz reaction.

You know, so this is something that is like a like if something's chronic, you would use LL 37 for you know hand in hand with your doctor and use it slow because it is so strong.

Okay, interesting. Yeah. And, and I've had colleagues that have, you know, used it too fast, too early and like not good reactions to that. So you definitely need to use it.

Just give this one, the respect, respect that it deserves, I would say. And just do the other six steps before that so your body's prepared for it. Okay, so here's step O, optimization.

So the idea of step 0 is to add in minerals and glandulars to support the body as they're going through detoxing and then when they are done cleaning the some maintenance.

Does the term peptides fit with the terms maintenance or optimization? Yes, optimization, longevity, fun, and fun

stuff. So you could do TB 500. This is basically thymus and beta 4, we like to call it, this is for like repair.

So you could do this with BPC 157 is like a Wolverine combo they call it. Your patients are feeling good, they're optimized. They're like, okay, I want to start lifting and I wanna lean down and just look so good.

And I'm gonna optimize. You could put them on that. you can put on a growth hormone secretagog such as epimoralin, semimoralin, CGC 1295. so you you do that five nights a week.

um, two day break, which, you know, talking about just everyone's a peptide expert right now, we were out to dinner with some friends and this guy really buff, really gym rat.

And he's like, Oh yeah, I'm taking, You know. I think it was taken in Sarah Moreland. He's like, yeah, I take it just every night and or no, he didn't even take every day.

He took it in the morning. I'm like Okay, first of all, you need to take the best time to it because it's a growth hormone secreted it helps your own body secrete its growth hormones.

It's not we're not giving growth Hormone. You want to Take it at night on an empty stomach because that's going to mimic the natural pulse of growth. Horman between 10 p.m.

And 12 a. M. And five days a week and then off to because the receptors need to reset they need that break if you're just on the gas pedal that's not good.

So it's another thing about peptides is you do want to rotate them. You don't want So those are great. A fun one for optimizing like if you want to optimize sexual function would be PT 141. Love that as a nasal spray.

You can inject it. It's actually FDA approved. drug for female climatic disorder, but one of the side effects of injecting it is nausea. So kind of defeats the purpose.

Um, so I, I get good results with patients using it intranasally, um, and add oxytocin in there, a little oxy tosin. and male and females can use that like 30 minutes prior to intercourse.

So those are some fun ones. Oh, five amino 1MQ, that is a peptide for mitochondrial health. Also some lipolysis or fat burning properties. That is an oral peptid that you can get compounded.

The five-amino 1 MQ is great. I feel like I have some patients where they're like, I love it. I want to be on it all the time. It's great for me. And then some people are like eh, didn't really notice a difference.

So, but yeah, have a lot of high performing patients that love five amino one MQ and do really well with that. Nice. That's a whirlwind of amazing data.

She's been working with peptides for 10 years. Mm hmm. Awesome. Yeah, I really appreciate this. So let's talk about peptide and hormones. Is that the relationship there?

Like for female perimenopause? Mm hmm. Oh, yeah. Yeah. And when we when look at peptides with perimenopause, we want to support the individual and like what's happening to them.

So if they're having problems, you know, with their gut health first, obviously, find the root cause, make sure there's no toxins, parent sites, infections, Candida mold, but we can support that with BPC-157 and KPV, lorazetide, there's lots of choices.

Women that are aging, their skin changes, you know, we're getting older, our skin is changing. So GHK copper peptides are great for that. GHk is the tripeptide and then copper, it has a high FNA for copper.

That's why it's going to look blue. There's scalp GH K copper You can put it on your face. There's cream for the

body. It's actually In the studies, they've shown that it increases follicle growth and actual the diameter of the hair follicles growing.

It helps with wrinkles, it helps skin damage, and it also helps wounds. So I always carry a bottle of GHK copper with me if we're going on vacation, anything, because it help with wounds, sunburn, aging.

My kids know what it is and they know to use it. So muscle loss, I would say, you know, pepty strong. It's an oral peptide that is from a plant peptides from the fava beans.

That's great for muscle growth and recovery. Joint pain and inflammation, which comes with age. BPC-157 injectable, KPV can help with that.

## Optimization, Hormones, and Perimenopause

And then the growth hormone secretagogues that I spoke about, and then terzepotide and semiglutide, the GLP ones, that can helps in pairing menopausal with hormones while we're getting hormones balanced, while our fixing diet and stress, which is rampant in midlife for women.

then we can layer in some of those to support them. But yeah, so all of these are helpful just depending on what's going on with the individual patient.

I think that's key too to come up with these individual plans and rotating them and moving through midlife hormones and then into longevity is the goal.

want to talk about pricing. So the injectables are more expensive than the oral, right? But the injections are going to be more effective. Give us some like ballpark figures for pricing on both oral and injectable.

And then the sprays to intranasal. Yeah, yeah. Um, Yeah. It depends. You want To go to an FDA know, a compounding pharmacy that has FDA approval. Okay.

And make sure you're getting what you getting, because there there's actually been like some in Ohio, there was this med spa that got shut down because they were getting semi-glutide from China, you know?

And then injecting it in there, like, oh, You have to come in once a week for your shot and charging hundreds of dollars. who knows if it was even what they said it, was or if It had contaminants in it.

So it's very interesting. But I would say for like the GLP ones, they're a little bit more expensive, like per month, it might be, you know, for four to $500, depending on the dose you're on.

MOTC, yeah, four or $ 500 for six week course, but you only going to do that one to two times a year. Intranasal PT 141, I think a couple hundred for that.

We say four two 500, first six weeks course meaning the whole six Yeah, not per shot. Because that's the thing with my patients. You get the vial, it's a multi-dose vile, you keep it in your fridge, your drawing it up yourself.

It's individualized for a lot of these and they have the control and the power, right? They have to draw it off, they The oral peptides are going to be, you know, 100 to maybe 150 for 30 days worth.

So yes, less expensive. You want to take those on an empty stomach. And that's the thing, like you want make sure you're doing the other things. Like if you are eating gluten, which opens up the tight junctions and activates the And then you're taking lorazotide for your gut inflammation, which blocks insulin and tightens up the tight junctions.

That doesn't make sense. Yes, you'll feel a little better, but why are you spending money on this? So this is where it's not just a… I'm gonna just take them and I'll be better for it.

Actually, you have to do work like everything in life. I mean, not to say you can't take all the peptides you want and have a horrible lifestyle and eat however you like.

It's just not going to be as effective and they're expensive. We want to respect that these things cost money and use them properly and get safe peptide too.

Yeah, nice. All right, cool. Anything else that you want to say regarding hormones? Sure, yeah, hormones, perimenopause, just make sure you're working with someone that has proper training and is testing appropriately, not just going by symptoms.

If you are getting a topical application of hormones you need to be testing saliva, and not serum. So a lot of different tips and tricks when it comes to hormones because we still have to have knowledge and make that we are still getting the right care.

Because with the explosion as you have seen, of integrative and functional medicine, everyone is opening a wellness practice, but they might not have the training and they may not experience.

So you can still get burned and I see it a lot. That's why people are listening to your YouTube. They want to be informed. Grab a copy of the perimenopause reset and go through a whole lot in there.

about hormones and how to get hormones safely, how they navigate midlife too. Yeah, what's your favorite lab test? You said saliva, but what brand? I'll use ZRT or doctor's data.

I guess Vibrant just came out with their saliva hormones, so I want to see them. use a few different to just make sure you know keep it not one-sided but i usually use the rt and yeah yeah i've had women come to me regarding hormones and i say i don't really deal with hormones i mean i'm fixing up organs and organs can be happier and work better and then hormones can balance but if you want some kind of a you knows estrogen progesterone cream or whatever go see a a good doctor and um I just had I had a patient, this is a couple years ago, she demanded that I run an extensive hormone panel so I picked a saliva one.

I didn't want to do it but we did it and I said look your symptoms are not from hormones just based on like my experience and what she was saying and sure enough like everything came back pretty normal and she is very disappointed and i was like well you know like you got some other physiological things going on so Yeah, but yeah, I appreciate that.

Yeah. It's good you checked at least because a lot of women they are gaslit, you know, by their conventional doctors and at the start of perimenopause, it's always the same.

They're always put on birth control and an antidepressant. And they need neither of them. Yeah. What about the women's study back in, was it 20 years ago, and they stopped it early because it was causing strokes and cancer or something?

And the problem was the synthetic progesterone. Yeah. And so like, and now they're saying, oh, that was a mistake. It was totally safe and we should start doing it again.

Yeah, um, the women's health initiative was awful. So they were using estradiol, which is bioidentical, but they we're using progestins, pro-thrombus formation and effects on the heart.

Progestin, they are still prescribing them. is not progesterone, which is bioidentical. So that is, yeah, that was devastating for women's and women health.

And I will still see women overdosed on estradiol and some still getting it oral, which is crazy. Now they're pushing the patch, if you look at the ingredients on an estrdiol patch it's all derived from petroleum, So all the patch ingredients that you're putting on your body twice a week, you are literally applying endocrine disruptors versus a compounding pharmacy where you can get a cream, which has coconut oil-based cream and non-petroleum-base,

Versa-Base is very non toxic.

So, like I said, follow the money and see where all these patch Pushing, patch pushing, I like that actually. All these, you know, they pick the curate female physicians for this agenda.

I'm very, very hesitant on this, but yeah, so this is what I am combating. So wait, the problem was, 20 years ago I thought, well okay, The problem is progestin plus the estrogen, that estradiol, and that was what was causing you know, major pathology, right?

Yeah. But but why? And is it was it true or was that false? Because now people are saying, oh, that women's health initiative was a disaster and it's totally fine to do progestins.

And I don't know what they can. Oh, no. What are the problems? Right. So now but now, people were saying well, the women health initiatives, That was the problem because they didn't use projesterone or a bioidentical.

They used projestin. That's a problem. Right? Yes, yes. And but it's crazy still because it almost like you know when doctors said that smoking was healthy and they let you smoke in the doctor's office so it was like these doctors like have to die off before we Oh, totally.

Yeah, yeah, science advances by funerals. That's a quote from a long time ago. Yes. And I mean, we see we saw this with the pandemic and you know, this is just like a whole thing.

So because I still see women just if they don't have a uterus. This is the thing, if you get a hysterectomy and they just put them on estradiol without progesterone, and that is not good either.

Our body needs pro testosterone. It's balance. We need it for breast health. And that, that's another thing I'm still seeing is I'll have women come to me and they're like, well, I don't need progesterone because I didn't have a uterus.

So I need to protect that from, you know, endometrial cancer or pro testosterone. Like, what about your breasts? So that that is another hurdle. I always go low and slow with hormones.

Women are also being way overdosed on testosterone. These testosterone pellets are like a big thing in med spas and that is very dangerous and unnecessary.

So we're just seeing a lot of craziness right now in the hormone world. So there was a time when there's a multi-level marketing company pushing progesterone cream, and there is a woman, she was trying to get everybody to buy it, including men.

Men need projesterones too. I got my husband putting it on the inside of his elbows, right? And then within a year or two, people are testing sky high, crazy high projesterones.

So yeah, that was long time ago. Oh, I mean, that's the thing, like the internet will say whatever they want to sell something. And yeah, it's very scary out there.

So you always have to look at like, what are they selling? And why? What are their credentials? and are They honest about their credential? So that is what people have To do when looking at peptides, hormones, everything, right?

You mentioned your book, where can people get your Yeah, they can go to Dr. Jen book.com or healthy by Dr Jen, either of those. And I'd like to hang out on Instagram mainly at integrative Dr mom, integrate of DR mom.

Okay, nice. Very nice, thanks for being on Dr, Jen. I appreciate it. Thank you. That was awesome. Totally awesome, I loved it, did you like? Yeah. No, i love I love being interviewed.