Top Tips to perk up your microbiome

WITH COLORFUL AND DELICIOUS FOODS!

We are covered in microbes.

"Every millimeter of our body, for the most part, has microbes in it. And they play a very significant role in how we function.

"When it comes to guarding and protecting the body, that is an understated function of the microbiome.

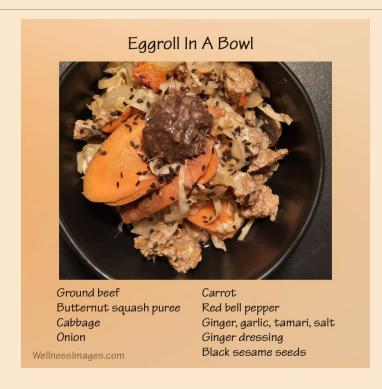
"They are really the guards of what enters our body and how our immune system responds to the various things that we get exposed to."

> -- Kiran Krishnan, with Dr David Jockers: Leaky Gut, Endotoxemia, Inflammation, and Microbiome Reconditioning.

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https://youtu.be/AFI_8Tselkg

Let's think about what creates a happy, healthy gut microbiome.



What foods appeal to you?

When we consider choosing foods for ourselves and our families, of course appeal and flavor are super important.

We want our food to look appealing, to taste delicious, and to create a sense of satisfaction on all levels when we eat it.

What are some foods that accomplish that for you?

Can you recall a few times when you had a meal that was especially satisfying – where you felt content and comfortable after finishing?

We also want our foods to build health

What qualities affect our health and that of our microbiome?

- 1. Dietary diversity. Simply "mixing it up" and eating a more diverse diet of whole, minimally-processed foods is one of the simplest ways to make a positive impact on our microbiome.
- 2. **Nutrient content** (carbohydrates, proteins, fats, vitamins, minerals). This is where our brains usually start thinking.
- **3. Color!** Color is amazingly important for building a healthy ecology. Certain chemicals called polyphenols are present in different food colors. But wait. It's also a major factor in the visual appeal of our plate!
- 4. Dietary fiber. Fiber is kind of a big deal when it comes to satiety that feeling that we've eaten just the right thing in just the right amount and our hunger signal fades. It's helpful for other reasons too, though. Fiber provides the substrate for many of our "helpful" gut bacteria strains. They love it as much as we do!

Lifestyle factors that affect our microbiome

What else helps to shape our microbiome? Aside from foods. Let's think:

- 1. Antibiotic use and certain other medications.
- 2. Exposure to environmental toxins: Herbicides. Pesticides. Toxic fumes. Mold. And so on.
- 3. Encounter with a food-borne or water-borne pathogen like giardia, campylobacter, Escherichia coli.
- 4. Significant illness, stressful life event, or physical trauma.
- 5. Head injury.
- 6. Various outdoor environments whether it's a day hike in the mountains, an afternoon in the garden, or a week at the beach, any outdoor experience makes a difference.
- 7. Hanging out with our pets!

The vast majority of microbes are either beneficial or not harmful

"About .1 percent of all that we've discovered are harmful in some way. Which means that 99.9 percent of all microbes that we've discovered are either benign or beneficial in some way.

"That .1 percent gets so much attention!

"At the end of the day, the best way – always – to control the .1 percent is to let the 99.9 percent flourish."

Kiran Krishnan with The Gut Farmacist (Riley Romazko) Gut Microbiome & Gut-Brain Connection

https://youtu.be/HmoBaZW50P4

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Food is one of the biggest inputs

Let's explore a few meal ideas from the perspective of microbiome health.

We'll consider:

- Dietary diversity.
- Nutrient balance.
- Color.
- Dietary fiber.



Family-friendly smashed potato bar

Check out the color on this plate! Reds, greens, purple, orange, black, tan / white.

We have lots of plants! (Microbiome loves plants.) And also some omega-3 rich salmon.

Dietary fiber from the veggies, fruits, and seeds.

Potato is almost a comfort food, and it's satisfying.

You could serve this as a "you-top" potato bar and let different family members create the variations they want.

Healthy, colorful breakfast? Sure!



Creamy Chili - ish Think outside the (cracker) box



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Chili

- *Beans: Good Mother Stallard, Black, Garbanzo
- *Ground beef
- *Garden tomatoes
- *Butternut squash
- *Red onion
- *Carrot
- *1/2 turnip (optional)
- *Chili pepper
- *Garlic
- *Smoked chipotle
- *Garam masala
- *Salt

Toppers

- *Coconut milk
- *Cilantro
- *Avocado

How about a bit of comfort on a cool day?

Soups and stews are a great way to layer in flavors and food variety.

I don't recommend tricking people with foods you know they wouldn't want to eat.

However, we can make veggies very easy on the taste buds when we whip up a tasty puree and offer a familiar presentation.

(We really don't need saltines with this, do we?)



Flavorenhancers

There are some flavors that can make just about any meal taste better.

Ginger.

Garlic.

Seriously, try this dressing / sauce.

It's in the show notes of this video:

https://youtu.be/8xixnsLnkkk

Wraps & Rolls

If you like to play with your food ...

You may enjoy trying some different wraps and rolls.

This colorful wrap idea is perfect if you have kids who like to get creative in the kitchen. I mean ... It's "fancy."

We've got colors, flavors, black bean & beet hummus, pickled radish and cranberry, leafy greens.

And it's delicious!

Let everyone assemble their own. ©



Rice Pudding with Apple - Berry Compote



Rice Pudding

1 part rice
3 parts coconut milk
[Salt - optional]

Cook over low heat until liquid is absorbed. Cool.

Compote

4 cups apple slices
1 cup cranberries
1 cup blueberries
1" piece ginger,
shredded
[Honey - optional]

Cook over low heat 20 minutes or so.

Plate & sprinkle with cinnamon.

Is anyone ready for a treat?

Sure, we get treats!

Cooked and cooled rice provides resistant starch that our friendly gut buggies love. And it's easy on the metabolism.

This fruit compote contains lots of pectin and polyphenols (red and blue berries) that contribute to the "milieux" in healthful ways.

Ginger helps us digest food, warms us when it's cool, and even helps us utilize iron. (Seriously.)

No sugar added.

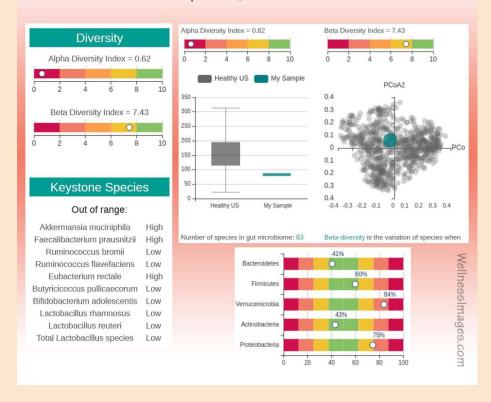
And it's delicious.

You can do this, right?

Let's review:

- 1. Diversity. See how we mix it up here? Lots of colors. Lots of flavors. Small amounts of many different foods on the plate.
- 2. Nutrients. Lots of plants, but not only plants. For most of us, animal proteins are an important part of our healthy meal plan.
- 3. Color! The more the better. Eat the rainbow. Red, orange, yellow, green, blue, and dark colors.
- 4. Dietary fiber. Mix this up, too. Veggies, fruits, nuts, seeds, legumes, whole grains in moderation as part of the meal, herbs, spices.

Diversity is super-important when it comes to the microbiome. Alpha diversity here is very low. Low number of distinct species. But the distribution is pretty good. That's beta diversity.



How do you know if it's working?

Well, you're likely to feel better.

Your mood may improve.

Your sleep may become more restorative.

You may lose a few pounds, if you have pounds to lose. Healthy microbiome = healthy metabolism.

But we can also quantify it with testing.

We can check your microbiome diversity and track progress.

Uh oh. We have a little situation.

We can check to see if there's "anyone" in the neighborhood whose presence is less welcome.

It's a matter of degree.

Sure, a few of these guys are fine. But when we find too many of them, then we know something is up. Most likely the "good guys" aren't prevalent enough.

It's a big hint that we need to get with the program.

We may find that the "neighborhood" has been "infiltrated."

Oops. This isn't good.

Pathogen Species	Healthy RA IQR %	My Sample RA %
Clostridium difficile	0.02 - 0.17	0.7326
Escherichia coli	0.04 - 0.47	0.0167
Klebsiella pneumoniae	0.02 - 0.22	0.5110
Bilophila wadsworthia	0.05 - 0.18	0.3604
Bacteroides fragilis	0.07 - 0.79	0.1141

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-- Kiran Krishan

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Keystone bacteria species are beneficial and protective to the gut terrain. They impact acidity / pH. They produce nutrients and intermediate products that feed other bacteria. Their end products protect and defend the gut tissue itself.

"It is an ecology. Like any other ecology, you can revive it. Even if it's been decimated for decades." -- Kiran Krishnan

Keystone Species		Healthy Relative Abundance IQR Range[%]	My Sample Relative Abundance
'	Phylum: Ve	rrucomicrobia	
Akkermansia muciniphila	Acetate Producer	0.15 - 2.295	Not Detected
	Phylum: A	ctinobacteria	
Bifidobacterium longum	Acetate Producer	0.127 - 1.268	Not Detected
Bifidobacterium adolescentis	GABA Producer	0.077 - 1.536	Not Detected
	Phylum	Firmicutes	
Faecalibacterium prausnitzii	Butyrate Producer	0.675 - 2.032	Not Detected
Ruminococcus bromii	Cellulose Degrader	0.155 - 1.391	Not Detected
Ruminococcus flavefaciens	Cellulose Degrader	0.007 - 0.014	Not Detected
Roseburia intestinalis	Butyrate Producer	0.062 - 1.116	Not Detected
Eubacterium rectale	Butyrate Producer	0.665 - 2.238	Not Detected
Butyricicoccus pullicaecorum	Butyrate Producer	0.011 - 0.04	Not Detected
Lactobacillus rhamnosus	Lactate Producer	0.016 - 0.051	Not Detected
Lactobacillus reuteri	Lactate Producer	0.011 - 0.016	Not Detected
Total Lactobacillus species	Lactate Producer	0.028 - 0.577	Not Detected

We can rebuild!

Yeah, like we said...

Sometimes there just aren't enough of the "good guys."

But that's really good to know, isn't it?

Maybe we have symptoms and we want to understand why. Well, here's a reason! Our most helpful bacteria have flown the coop!

No worries, friends.

We can rebuild.

For more information...

I hope you've found this introduction helpful.

Maybe you're wondering now.

How balanced is my microbiome?

What would life look like if it was really [like really] optimized?

What about my mom? My kids? My BFF with the autoimmune condition?

If you'd like to explore a little more, feel free to email me: wellnessimages@gmail.com

We can have a short conversation to consider what the next steps might be.