FUNCTIONAL FEED

A FUNCTIONAL APPROACH TO MEDICINE, NUTRITION & MOVEMENT.

MENTAL

HEALTH

ANXIETY AND DEPRESSION: INFLAMMATION STRIKES AGAIN

MENTAL & EMOTIONAL NOURISHMENT

5 WAYS EXERCISE FIGHTS FEELINGS OF DEPRESSION AND ANXIETY

Workouts & November Week Meal Plan Recipes & Shopping List

NOVEMBER 2017

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The Functional Feed is a health and wellness destination for health warriors, active individuals, and functional medicine enthusiasts. This collaboration between Brigid Titgemeier, MS, RDN, LD from BeingBrigid.com and medical residents Julie Foucher, MD, MS and Dani Urcuyo, delivers easy-to-use meal plans, articles, and resources to help you incorporate functional medicine, nutrition and movement into your dayto-day life.

With your subscription, you get access to the <u>The</u> <u>Functional Feed Facebook group</u> where you can ask Brigid, Julie and Dani questions and engage with a community of like-minded individuals aiming to optimize health and nutrition.

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ANXIETY AND DEPRESSION: INFLAMMATION STRIKES AGAIN

Daniel Urcuyo, MD

We all get anxious or depressed every once in a while and that's normal. But when these emotions become frequent and significantly impact our life, a diagnosis of Generalized Anxiety Disorder or Major Depressive Disorder could be the next step. These conditions have strict criteria and are thought to result from a complex mechanism involving the abnormal regulation of neurotransmitters. Many anti-anxiety and antidepressant medications affect the levels of neurotransmitters in hopes of improving a person's symptoms. However, treating a disease with medications does little to address the root cause of an illness. This is again where functional medicine comes in. This is not to say that psychiatric medications or medications in general are not useful, but they should be coupled with an active search for the root cause of disease.

One of the drivers of many psychiatric conditions that is getting more and more attention is a culprit that you may be familiar with: inflammation. Driven by the immune system, inflammation helps to fight off infections, heal injuries and respond to stress. However, when inflammation is chronically in overdrive, it's a recipe for disaster, and the research is showing that anxiety and depression may be a downstream effect. Now you may be wondering how inflammation and psychiatric illness are connected. You guessed it! The gut is a key factor.

The Gut-Brain Axis

The connection between the gut and the brain is

now well-established in the scientific literature, and with hundreds of millions of neurons, the gut has even been called the second brain. A direct link from the gut to the brain exists via the vagus nerve, and our gut bacteria (the microbiome) can have a profound influence on brain health.

A common saying in functional medicine is "fire in the gut, fire in the brain." In other words, inflammation in the gut can lead to inflammation in the brain. Gut inflammation decreases the body's ability to keep harmful bacterial substances out of the circulation that sits right next to the intestinal tract. As these bacterial molecules float through the blood stream they trigger inflammation which can have negative effects on the brain and can potentially cause depressive symptoms (more on this later). It's no surprise then that some antidepressant medications exert some of their effect by suppressing inflammation.

Research tells us that the kinds of bacteria that make up the gut microbiome may also have a significant effect on anxiety and depression. In a study done with rats, the administration of a bacteria called Bifidobacterium infantis led to improvement in depressive behaviors. Furthermore, in a 2011 randomized placebocontrolled study in humans the consumption of probiotics was associated with decreased psychological stress levels and decreased levels of the stress hormone, cortisol.

Beyond inflammation in the gut, which can have many causes from dysbiosis to small intestinal bacterial overgrowth, another source of inflammation is something that we experience every day: stress.

Chronic stress and depression: inflammation as a possible link

It's well known that stress, particularly the stress of significant life events such as losing a loved one, can lead to anxiety and depression. It's also common knowledge that short-term

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stress is a good thing given that it forces our body and mind to grow and adapt. However, when stress becomes chronic, disease may follow. The explanation many have proposed stems from the experience of our ancestors.

During human evolution the stresses of life where profound. If we didn't find food, we'd starve. If we were injured, even with a minor injury, it could be a matter of life and death. Our bodies therefore adapted and developed systems to increase our chances of survival. As our species has rapidly modernized, our minds haven't had the chance to catch up. We're not able to differentiate between the life-and-death threat of a predator lurking in the bushes and the nuisance of rush-hour traffic. Furthermore, the frequency of the stress we experience in today's age is alarming. Our bodies never evolved to function optimally in a state of constant "fight or flight."

Nevertheless, the "fight or flight" state has tremendous advantages. It activates our body's immune system and helps us heal wounds and fight potential infections should they occur.

Interestingly, even social stressors - such as rejection, loneliness, or conflict - can activate the immune system. These social stressors can provide a chronic source of inflammation, increasing our risk of diseases such as asthma, arthritis, diabetes, obesity, atherosclerosis, certain cancers, and Alzheimer's disease. Social stressors and more precisely <u>our perception of</u> <u>our environment has a profound impact on our</u> <u>overall health.</u>

Let's nerd out!

The two main players that convert social or environmental adversity into inflammation are the sympathetic nervous system (SNS) and the hypothalamic-pituitary-adrenal (HPA) axis. The SNS primes the immune system during a perceived threat by increasing pro-inflammatory molecules - remember, in the short term, inflammation can be a good thing!

In a normal state, the HPA axis actually lowers inflammation using a hormone called cortisol as part of a checks-and-balances system. However, in order for the HPA axis to do its job well, it can't be working all the time. When it does, it leads to a problem called glucocorticoid resistance or glucocorticoid insensitivity. This is where immune cells start to ignore the effects of cortisol. Think: the boy who cried "wolf." The end result is increased inflammation.

Bringing it all back together

Individuals with depression have higher levels of inflammation than non-depressed people. There is even evidence, albeit conflicting, that some anti-inflammatory medications can affect depressive symptoms. Overall, the science suggests that addressing inflammation both with the food we eat, and by reducing our overall level of "life stress" we can have a profound impact on our overall risk for depression and anxiety. Nutrition, exercise, sleep and mindfulness and spiritual activity work are easily accessible tools to combat a majority of chronic disease and anxiety and depression are no exception.

References

Evrensel A, Ceylan ME. The Gut-Brain Axis: The Missing Link in Depression. Clin Psychopharmacol Neurosci. 2015 Dec 31;13(3):239-44.

Slavich GM, Irwin MR. From stress to inflammation and major depressive disorder: a social signal transduction theory of depression. Psychol Bull. 2014 May;140(3):774-815.

Each month, Julie and Dani will bring you curated and credible functional medicine information here in the Functional Rx. You can expect to learn the principles behind functional medicine as well as how they can be applied to health and common disease states.

5 WAYS EXERCISE FIGHTS FEELINGS OF DEPRESSION AND ANXIETY

Julie Foucher, MD, MS

Whether or not you meet criteria for a clinical diagnosis of depression or anxiety, we've all felt down or anxious at certain times in our lives. These are normal human emotions in the face of stress or adversity. However, when these emotions become so frequent or overwhelming that they start to interfere with our day-to-day lives, they can become problematic. The psychological impact of exercise has been well studied, and we know that regular activity can stabilize our mood well as reduce fatigue and stress, and improve alertness, concentration, and overall cognitive function.

If you've ever exercised before, I'm sure you can relate. Remember a time you were feeling terribly overwhelmed, stressed, or down and then just minutes after finishing your workout life didn't seem quite so daunting anymore? Maybe you experienced a newfound sense of mental clarity and were ready to tackle the most challenging project on your to-do list. This is the incredible power of exercise. It works as a quick fix, and regular activity can also help to prevent feelings of depression and anxiety from popping up in the first place.

Even for those with clinical depression or anxiety, exercise has been found to be a successful firstline or adjunct treatment. Several studies have found exercise to be similarly effective as cognitive therapy and the most commonly used medications for depression and anxiety called selective serotonin reuptake inhibitors (SSRIs). While exercise alone may not be sufficient for individuals with severe symptoms, it can certainly still help in combination with other treatments. Exercise is a recommended treatment modality for both anxiety and depression by organizations such as the American Psychiatric Association.

So, why is exercise so great at helping us to regulate our mood and emotions? Below are 5 powerful ways that exercise fights feelings of depression and anxiety:

1. <u>Exercise produces endorphins.</u> Endorphins are chemicals released in the body in response to exercise. They interact with certain pain receptors in the brain resulting in decreased pain perception and often a feeling of euphoria.

2. <u>Exercise requires focus.</u> Often, exercise requires so much of our attention that it distracts us from our worries. In this way, exercise can be a form of mindfulness or present-moment awareness, a practice which has also been shown to reduce feelings of depression and anxiety. The more intense or complex the exercise, the more we are forced to be "in the moment" rather than allowing our minds to wander.

3. <u>Exercise can drive connection</u>. Exercise can be done alone, but it can also provide a great opportunity to connect with other people. Whether you go for a walk with a friend or join a group workout class, sweating and being vulnerable with others can help to forge authentic human connections that themselves are protective against depression and anxiety.

4. <u>Exercise helps us build confidence and self-</u><u>esteem.</u> Making the effort to do something we know is good for ourselves (like exercise!) can help us to build confidence and our sense of self-worth. Taking this one step further, putting in regular, dedicated effort to learn a new skill or improve our athletic performance (i.e. going from running a 10-minute to 9-minute mile) can be a huge confidence-booster!

5. Exercise can improve sleep. Exercise is also known to improve sleep quality, which is often disturbed in individuals who struggle with anxiety

or depression. When we use our bodies during the day, they are better at recovering at night and our minds will thank us, too!

Despite knowing all of the amazing benefits of exercise, it can still be difficult to find the motivation to get started, especially when battling feelings of depression or anxiety. I love the saying, "action before motivation" because oftentimes that motivation doesn't start to build until after you've started to exercise. The key is finding a way to get yourself started in a regular routine – whether it's finding an accountability buddy, a reward system, or a routine such as going to the gym right after work. Once you're a few minutes into your workout, I think you'll surprise yourself by the motivation that starts to build. So, next time you start to feel stressed or down in the dumps, grab a friend, get moving, and say goodbye to your feelings of anxiety and depression!

References

Herring MP, O'Connor PJ, Dishman RK. The effect of exercise training on anxiety symptoms among patients: a systematic review. Arch Intern Med. 2010 Feb 22;170(4):321-31.

Schuch FB, Vancampfort D, Richards J, Rosenbaum S, Ward PB, Stubbs B. Exercise as a treatment for depression: A meta-analysis adjusting for publication bias. J Psychiatr Res. 2016 Jun;77:42-51.

Cooney GM, Dwan K, Greig CA, Lawlor DA, Rimer J, Waugh FR, McMurdo M, Mead GE. Exercise for depression. Cochrane Database Syst Rev. 2013 Sep 12;(9)

Here's a fun workout you can try with a partner, or on your own!

For Time: 10 Rounds, alternating partners each round: 5 Push Ups* 10 Situps** 15 Burpees

If you don't have a partner, complete 5 rounds for time.

*Substitute kneeling push ups or wall push ups if needed **Substitute crunches if needed

Instructional Videos:

Push-Up Sit-up Burpees

Functional Movement is where Dani and Julie bring you information about how movement can impact your overall health and longevity, and be used to prevent and treat disease.

FUNCTIONAL NOURISHMENT

MENTAL & EMOTIONAL

Brigid Titgemeier, MS, RDN, LD

I CHOOSE TO NOURISH MY MIND, BODY & SOUL WITH WHOLE FOODS, LOVING THOUGHTS, MEDITATION & MOVEMENT.

THE OPPOSITE OF CONTROL IS FAITH. I LET GO OF MY AGENDA AND HAVE FAITH THAT THERE IS A GREATER

> I FIND WISDOM IN ACCEPTING MY THOUGHTS WITHOUT JUDGMENT.

I AM NOT SUPERIOR OR INFERIOR TO OTHERS. I CHOOSE SELF-ACCEPTANCE OVER OTHER'S APPROVAL.

MAY LOVE HELP ME, GUIDE ME, HEAL ME & SET ME FREE.

THE FUNCTIONAL FEED

NOVEMBER 2017

NOVEMBER MEAL PLAN

Brigid Titgemeier, MS, RDN, LD

	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY	SUNDAY
BREAKFAST	Chocolate Cashew Avocado Mousse	Very Berry Shake	Chocolate Cashew Avocado Mousse	Very Berry Shake	Chocolate Cashew Avocado Mousse	Very Berry Shake	Chocolate Cashew Avocado Mousse
SNACK	2 hard boiled eggs	Pear with 2 tbsp almond butter	2 hard boiled eggs	Flavored pumpkin seeds	2 hard boiled eggs	Pear with 2 tbsp almond butter	2 hard boiled eggs
LUNCH	Grass-fed Sloppy Joes with Non- Breaded Zucchini Bites	Chicken and Wild Rice Soup	Hearty Butternut Squash Kale Salad	Hearty Butternut Squash Kale Salad	Chicken and Wild Rice Soup	Hearty Butternut Squash Kale Salad with Non- Breaded Zucchini Bites	Chicken and Wild Rice Soup
SNACK	GF Crackers with Hummus	Flavored Pumpkin Seeds	GF Crackers with Hummus	Celery with Almond Butter	GF Crackers with Hummus	Flavored Pumpkin Seeds	Celery with Hummus
DINNER	Hearty Butternut Squash Kale Salad	Grass-fed Sloppy Joes with Non- Breaded Zucchini Bites	Chicken and Wild Rice Soup	Grass-fed Sloppy Joes with Non- Breaded Zucchini Bites	Hearty Butternut Squash Kale Salad	Chicken and Wild Rice Soup	Night out!

SHOPPING LIST

Perishable (mostly)		Non-Perishable (mostly)		
Vegetables Carrots, diced Garlic Romaine lettuce Zucchini Leeks Celery Curly kale Yellow onion Tomato sauce Butternut squash Yellow bell pepper Red cabbage, shredded	4 medium 1 head 6 leaves 2 medium 2 medium 1 stalk 1 head 1/2 medium 1 16 oz jar 1 cup 1 medium 3 cups	Misc. Vanilla extract Medjool dates Tomato paste Dijon mustard Garlic powder Onion powder Dry sherry Chives Dried basil Tamari soy sauce Sea salt or himalayan salt Black pepper Cacao powder	1 4 fl oz bottle 5 medium size 1 4 oz can 1 4 oz jar	
Fruit Mixed berries, frozen Pomegranate seeds Lemon Pear	3 cups 1 cup ½ lemon 2 medium	Healthy Jats & Oils Avocado Grass-fed ghee Full-fat coconut cream/milk Extra virgin olive oil	3 medium 8 oz jar 1 14 fl oz can 1 16.9 fl oz	
Dairy Alternatives Nut milk (any kind), unsweetened	Half gallon	Sluten-free Srains Wild rice Gluten-free crackers	1 12 oz bag 1 8 oz bag	
Meats, Fish & Eggs Grass-fed beef* Chicken breast, bone less & skinless* Low sodium chicken broth* Eggs* Grass-fed collagen protein powder *Best to buy organic meats & eggs.	1 lb 2 ½ lb 16 fl oz 1 dozen 10 oz	Nuts, Seeds & Beans Almond butter Cashew butter Shredded coconut, unsweetened Almond flour Chia seeds Flavored pumpkin seeds Hummus	1 16 oz jar 1 8 oz jar 1 8 oz box 1 8 oz bag 1 8 oz bag 1 8 oz bag 1 8 oz bag 1 8 oz container	

CHOCOLATE AVOCADO MOUSSE

Ingredients 2 avocado 1/2 cup cacao powder 4 tbsp collagen protein powder 1/2 cup almond butter 3/4 cup shredded coconut 1/4 cup almond milk 3/4 tsp himalayan salt 1 tsp vanilla extract 2 medjool dates



Meal Prep Tip: Pre-portion the avocado mousse in individual size mason jars that you can pack for breakfast throughout the week!

Instructions

- 1. Place all of the ingredients in the food processor and process until creamy and smooth.
- 2. Scoop the avocado mousse into a glass bowl and chill in the refrigerator for a few hours before serving.
- 3. Top with shredded coconut flakes, pomegranate seeds and/or cacao nibs (optional).

Nutrition Information: Total Servings: 6; Calories: 307; Total Fat: 22g; Sodium: 310mg; Carbs: 23g; Fiber: 9g; Total Sugar: 7g; Added Sugar: 0g; Protein: 12g

VERY BERRY SHAKE

Ingredients

- 1 cup nut milk, unsweetened
 1⁄4 cup full-fat coconut cream/milk
 1 tbsp chia seeds
 1 tsp cacao powder
 1 tbsp cashew butter
 2 tbsp collagen protein
- 1 cup frozen mixed berries



Meal Prep Tip: Prep the smoothie one to two days in advance or the morning that you will drink it.

Instructions

- 1. Combine all ingredients in a high-powered blender.
- 2. Blend ingredients for about 45 seconds or until smooth.
- 3. Optional toppings: cacao nibs or shredded coconut

Nutrition Information: Total Servings: 1; Calories: 383; Total Fat: 26g; Sodium: 223mg; Carbs: 24g; Fiber: 9g; Total Sugar: 10g; Added Sugar: 0g; Protein: 21g

GRASS-FED SLOPPY JOES

Ingredients

tbsp extra virgin olive oil
 lb grass-fed ground beef
 cup yellow onion, diced
 cup carrots, diced
 cup tomato sauce (no added sugar)
 medjool dates
 tbsp tomato paste
 tsp dijon mustard
 garlic clove, minced
 tsp himalayan salt
 tsp black pepper
 lettuce wraps

Meal Prep Tip: Make sloppy joe recipe during your meal prep and pre-portion all sloppy joe lettuce wraps into leftover containers.

- Instructions
- 1. In a medium skillet over medium heat, add 1 tbsp extra virgin olive oil, onions and carrots. Cook for 1-2 minutes.
- 2. Add grass-fed beef and cook until brown, draining any excess liquid.
- 3. In a food processor, combine dates with tomato sauce and pulse until smooth.
- 4. Stir the tomato sauce mixture, mustard, garlic, salt and pepper into the skillet; mix thoroughly.
- 5. Reduce heat and simmer for 30 minutes.

Nutrition Information: Total Servings: 3 Calories: 352; Total Fat: 20g; Sodium: 550mg; Carbs: 30g; Fiber: 5g; Total Sugar: 23g; Added Sugars: 0g; Protein: 16g

NON-BREADED ZUCCHINI BITES

Ingredients

2 zucchini, sliced into 1 cm rounds 3 eggs 2/3 cup almond flour 5 tbsp grass-fed ghee, melted 1 tsp garlic powder 1 tsp onion powder 3/4 tsp himalayan salt



Meal Prep Tip: Make zucchini bites as part of meal prep and store leftovers in containers.

Instructions

- 1. Preheat oven to 400 degrees F.
- 2. Arrange three medium size bowls on the counter and add whisked eggs to the first bowl, almond flour and spices to the second and melted ghee to the third bowl.
- 3. Dip the zucchini in the eggs, followed by the almond flour mixture and finally the ghee.
- 4. Place zucchini on a baking sheet. Bake for 20-25 minutes or until crispy.

Nutrition Information: Total Servings: 6 Calories: 229; Total Fat: 21g; Sodium: 332mg; Carbs: 5g; Fiber: 2g; Total Sugar: 2g; Added Sugars: 0g; Protein: 6g

CHICKEN & WILD RICE SOUP

Ingredients

3 tbsp grass-fed ghee
3 carrots, finely diced
2 leeks, white and light green parts, finely diced
2 celery ribs, finely diced
2 quarts low sodium chicken broth
1 ½ lb chicken breast, skinless
3/4 cup wild rice, uncooked
Dash himalayan salt
3 tbsp dry sherry
1/4 cup minced chives
3/4 cup full-fat coconut milk



Meal Prep Tip: Make a pot of this soup during your meal prep and heat it up as the week goes on. If you have a lot of leftovers you can also always freeze in order to preserve.

Instructions

- 1. Heat ghee in a soup pot over medium heat.
- 2. Add the chicken, carrots, leeks and celery. Cook for about 5 minutes until vegetables are soft.
- 3. Reduce the heat to low and add the chicken broth, wild rice, and salt.
- 4. Reduce heat to simmer for about 45 minutes, until the rice is tender and the chicken is cooked.
- 5. Stir the coconut milk and dry sherry into the soup.
- 6. Season with salt.
- 7. Serve soup garnished with chives.

Nutrition Information:

Total Servings: 6; Calories: 318; Total Fat: 16g; Sodium: 332mg; Carbs: 22g; Fiber: 3g; Total Sugar: 4g; Added sugar: 0g; Protein: 18g

HEARTY BUTTERNUT KALE SALAD

Ingredients Salad 1 head curly kale 1/2 avocado 1 cup butternut squash 1 cup pomegranate seeds 1 yellow bell pepper 3 cups red cabbage 1 lb chicken breast or tenders 1/4 cup extra virgin olive oil 1 tsp basil Dressing 1/2 cup nut milk 1/2 cup extra virgin olive oil 2 cloves of garlic, minced 1/4 cup almond butter Juice from 1/2 lemon 1 tbsp tamari gluten-free soy sauce Dash of himalayan salt Dash of black pepper



Meal Prep Tip:

Prepare the kale salad during meal prep, mixing all ingredients together in one bowl. Store dressing in a mason jar container and pour on top of the salad prior to each meal.

Instructions

- 1. Preheat oven to 400 F.
- 2. Cut butternut squash in half, length wise and remove seeds.
- 3. Place butternut squash on baking sheet so that the inside is facing up and top both sides with salt and pepper.
- 4. Bake squash in the oven for 50-60 minutes.
- 5. Add kale leaves to a medium size salad bowl.
- 6. Add avocado to the bowl and massage avocado into the kale using your hands.
- 7. Top the kale with red cabbage, pomegranate seeds, and yellow bell pepper.
- 8. Make the dressing in a food processor, adding nut milk, extra virgin olive oil, garlic, almond butter, lemon, salt and pepper and pulsing until smooth.
- 9. When the butternut squash is done baking, remove from the oven and allow to cool.
- 10. Reduce oven temperature to 350 F for the chicken.
- 11. Place the chicken in the oven and bake for 25 minutes, flipping the chicken halfway through.
- 12. Cut the butternut squash into small cubes and add to the kale salad.
- 13. Once the chicken is done baking, cut into small pieces and add to the salad bowl.
- 14. Store dressing in a mason jar and pour on salad before serving.

Nutrition Information for Salad: Total Servings: 6; Calories: 216; Total Fat: 13g; Sodium: 47mg; Carbs: 13g; Fiber: 4; Total Sugar: 6g; Added Sugar: 0g; Protein: 13g

Nutrition Information for Dressing: Total Servings: 8; Calories: 177; Total Fat: 18g; Sodium: 134mg; Carbs: 2g; Fiber: 1; Total Sugar: 1g; Added Sugar: 0g; Protein: 2g

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