



DR. HYMAN+

Functional Medicine Deep Dive Companion Recipe Guide: Environmental Toxins: Heavy Metals

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Introduction

From the air we breathe, to the water we drink, the products we put in our skin, the food we eat, the medications we take, the chemicals in our furniture, carpets, paint (you get the picture), toxins are everywhere.

Our bodies are equipped with sophisticated detoxification and cleaning systems. However, the toxic burden in the 21st century is overwhelming our systems with insults from every direction—our bodies can't keep up. This leads to illness, shortens our healthspan, and decreases our lifespan. It's crucial to clean up our cells and keep them protected.

It can feel burdensome to think about the barrage of toxins around us, but there's a lot you can do to lessen the load and support your detoxification system. It's as easy as less in, more out—and no, I'm not talking about calories. What I mean by that is to reduce and avoid toxins when possible (less in) and take steps to help your body rid toxins (more out). Eating food as medicine gives your detoxification organs the fuel they need to do their job well in order to move toxins out of your body.

For this month's Companion Recipe Guide, we focus on targeted foods that support your detoxification organs. These superfoods help your body mobilize, remove, and protect against damage from toxins. Since it's basically impossible to avoid environmental toxins entirely, these types of food as medicine are crucial to keep you healthy and safe. You'll find delicious recipes featuring [Brazil nuts](#), which are high in selenium that can reduce oxidative stress and help increase the excretion of mercury; [spirulina](#), a superfood algae that helps detoxify heavy metals; [broccoli sprouts](#), which are one of the most abundant sources of sulforaphane, which helps protect against air pollution and is cancer-protective; [lemon](#), which helps protect your liver and can reduce inflammation and DNA damage; and [asparagus](#), which is a natural source of your master antioxidant, glutathione.

By taking steps to reduce environmental toxin exposure and increase detoxification-boosting foods, you can help reduce your overall burden. Most people notice the benefits of improved detoxification right away; anything from skin improvements to healthier bowel movements, less frequent headaches, and so much more. Giving your body the tools it needs to function optimally helps protect you from the inside out.

Wishing you health and happiness,
Mark Hyman, MD



A handwritten signature in black ink, appearing to read 'Mark Hyman'.

Grain-Free Brazil-Nut Granola Clusters



Ingredients:

- 1 cup raw Brazil nuts, roughly chopped
- ½ cup raw pecans, chopped
- ⅓ cup raw pumpkin seeds (also called pepitas)
- ½ cup coconut flakes
- ⅓ cup raw buckwheat groats
- 2 large pasture-raised egg whites
- ⅓ cup monk-fruit maple syrup
- 2 tablespoons unsweetened applesauce
- 1 teaspoon vanilla extract
- 3 tablespoons raw cashew butter
- 1 teaspoon ground cinnamon
- ¼ teaspoon Himalayan salt

Makes: 3 cups (serving size ½ cup)

Prep Time: 10 minutes + 20 minutes to cool

Cook Time: 45 minutes

There's just something super satisfying about a crunchy cluster of granola. This delicious recipe is grain-free and free of added sugar; it's sure to become a new favorite. In the photos, I served it with some coconut yogurt I picked up at the store, but it's also excellent with some nut milk or on its own! Brazil nuts are high in selenium, which increases mercury excretion and helps reduce the oxidative stress that can occur from exposure to toxins.

Instructions:



1. Preheat the oven to 285°F and line a small baking sheet with parchment paper.



2. Combine Brazil nuts in a medium bowl with pecans, pumpkin seeds, coconut flakes, and buckwheat groats.



3. In a separate bowl, whisk egg whites until frothy. Add the monk fruit maple syrup, apple sauce, vanilla, cashew butter, cinnamon, and salt to the egg mixture and whisk until combined.



4. Pour wet ingredients into the bowl of nuts and mix well.



5. Spread mixture evenly on the baking sheet and bake for 45 minutes, do not stir.



6. After 45 minutes, turn the oven off and leave the granola in the oven with the oven door cracked. Leave granola in to cool.



7. Once cooled, break into clusters and serve with your choice of dairy-free yogurt, non-dairy milk, or store in an airtight container for future use.

Nutritional analysis (per serving):

Calories: 369, Total Fat: 31 g, Saturated Fat: 9 g, Cholesterol: 0 mg, Fiber: 8 g, Protein: 9 g, Carbohydrates: 21 g, Sodium: 87 mg, Sugars: 3 g

Superfood Spirulina Salad



Ingredients:

Roasted Chickpeas

- 1 (15-ounce) can low-sodium chickpeas (garbanzo beans)
- 1 tablespoon avocado oil
- ½ teaspoon sea salt
- ½ teaspoon garlic powder

Spirulina Vinaigrette

- 1 large shallot, finely minced
- 3 tablespoons apple cider vinegar
- ½ teaspoon kosher salt
- Freshly ground pepper
- 2 teaspoons spirulina
- ¼ cup extra-virgin olive oil
- 1 tablespoon black sesame seeds

Salad

- 4 small heads Little Gem lettuce, cored, leaves left whole
- 3 large radishes, very thinly sliced
- 1 large watermelon radish, very thinly sliced
- 1 large ripe avocado, peeled and sliced
- 2 blood oranges, cut into segments (See step 6)

Makes: 4

Prep Time: 20 minutes

Cook Time: 30 minutes

Every healthy eater needs some favorite go-to salad recipes. This one is extra refreshing, colorful, and even a little sweet thanks to watermelon radishes, avocado, and orange slices. The dressing is made with spirulina, a blue-green algae rich in antioxidants and particularly helpful with reducing heavy metal toxicity.

Instructions:

1. Start with making the chickpeas. Drain beans into a strainer and rinse with cold water. Shake and tap the strainer making sure to get rid of excess water. Evenly spread onto a clean kitchen towel or paper towel and rub the garbanzo beans dry. Let sit for at least 15 minutes, the longer the better (you can even dry them overnight).



2. Preheat the oven to 400°F. Place garbanzo beans into a small mixing bowl with avocado oil, salt, and garlic powder. Evenly spread onto a cookie sheet.



3. Transfer cookie sheet into the oven and bake for 30 minutes, shaking cookie sheet halfway through. After 40 minutes remove from the oven and set aside while making the dressing.



4. While chickpeas are cooking, make dressing by combining the shallot with apple cider vinegar for 5 minutes to pickle. Then add the rest of the ingredients (except sesame seeds) and stir well until emulsified.



5. Add all the salad ingredients to a large bowl and top with sesame seeds.

6. For the blood oranges, segment by cutting off the top and bottom of the orange, just until the pulp is exposed. Stand the orange on one of the ends and cut away the peel and pith following the curve of the fruit. Slice out each orange segment by cutting in towards the center of the fruit along the connective membranes. The segment should fall out on its own.



7. To assemble, add orange segments to salad, pour dressing over top, and top with roasted chickpeas.

Nutritional Analysis (per serving):

Calories: 407, Total Fat: 29 g, Saturated Fat: 4 g, Cholesterol: 0 mg, Fiber: 11 g, Protein: 9 g, Carbohydrates: 33 g, Sodium: 594 mg, Sugars: 13 g

Asparagus Galette

With Tarragon "Ricotta"



Ingredients:

Crust

- 1 ½ cups blanched almond flour
- ½ cup tapioca flour
- ½ teaspoon salt
- ½ teaspoon chili flakes (optional for heat)
- 1 large pasture-raised egg
- 4 tablespoons ghee

Asparagus Filling

- 1 pound asparagus
- 1 small shallot
- ½ teaspoon salt
- 1 lemon, zest only
- Chili flakes (optional)
- 1 egg, whisked (optional, for shine)

Almond Ricotta

- 1 cup almonds, blanched
- 2 tablespoons nutritional yeast
- 1 lemon, zested and juiced
- 2 garlic cloves, peeled
- 1 tablespoon tarragon leaves
- ¼ teaspoon pink peppercorns (or freshly ground black pepper)
- ⅓ - ½ cup cold water, as needed

Makes: 8 slices

Prep Time: 25 minutes + 1 hour to chill

Cook Time: 40 to 45 minutes

Asparagus is the highest food source of glutathione, our master antioxidant that is responsible for neutralizing free radicals and making toxins water-soluble for excretion through kidneys. This incredible gluten-free, dairy-free galette is the perfect way to enjoy asparagus, combined with a crispy crust and creamy almond-based "ricotta."

Instructions:



1. Start by making the crust. Using a food processor, combine almond flour, tapioca flour, salt, and chili flakes. Pulse to combine and add the egg and ghee. Pulse until the texture is a coarse meal.



2. Remove from the food processor and use your hands to turn dough into a ball. Wrap and refrigerate for at least 1 hour.
3. Make the asparagus filling by cutting off tough ends. Then thinly slice asparagus spears at an angle.



4. Peel shallot and thinly slice. Add asparagus and shallot slices to a bowl with $\frac{1}{2}$ teaspoon salt and set aside for 30 minutes, while making the ricotta.



5. In a high-speed blender, add all of the almond ricotta ingredients. Start with $\frac{1}{3}$ cup cold water and add more if needed. Blend until smooth and creamy scraping down sides as needed. The texture should be a well-puréed mixture with only very small bites of almonds. Set aside.



6. After an hour in the refrigerator, remove dough and place on top of parchment paper. Preheat the oven to 375°F. Roll dough into a circle, about 10 inches across. Dough will be very fragile. Use your fingers to attach any pieces.



7. Gently transfer parchment onto a large baking sheet. Spread ricotta filling in the middle of the circle, leaving 2 inches around the edges bare.



8. Drain asparagus and shallot in a colander and pat dry using a paper towel. Return to bowl and mix with lemon zest and chili flakes (if using). Spoon asparagus over the ricotta layer.
9. Gently fold the sides up, using parchment to help support the dough and holding together with your fingers as you go. Option is to brush the dough for shine using the egg.

10. Transfer the baking sheet to the oven and bake for 40-45 minutes until the crust is golden brown.
11. Remove from the oven and let cool for 10 minutes before slicing and serving.

Nutritional analysis (per slice): Calories: 330, Total Fat: 26 g, Saturated Fat: 6 g, Cholesterol: 40 mg, Fiber: 6 g, Protein: 11 g, Carbohydrates: 18 g, Sodium: 308 mg, Sugars: 3 g

Asparagus Soup with Broccoli Sprouts and Pickled Chilis



Ingredients:

Pickled Chiles

- 1 Fresno chile, stemmed, seeds removed, thinly sliced crosswise
- ¼ teaspoon kosher salt
- ¼ teaspoon granulated monk fruit (optional)
- 2 tablespoons red wine vinegar
- ½ tablespoon olive oil

Soup

- 2 tablespoons ghee
- 1 medium leek, white parts only, cut lengthwise and thinly sliced
- 1 small celery root, peeled and diced into small pieces
- 2 large shallots, peeled and roughly chopped
- 4 garlic cloves, peeled and roughly chopped
- 32 ounces of chicken bone broth (or any other choice of liquid)
- 1 bunch asparagus, trimmed of woody ends, roughly chopped
- ½ cup canned coconut cream
- 10 medium basil leaves
- ½ teaspoon kosher salt
- ½ teaspoon freshly ground black pepper
- 1 cup broccoli sprouts

Serving Suggestion

- Maldon salt (optional)

Makes: 4

Prep Time: 15 minutes + 20 minutes to cool

Cook Time: 25 minutes

Asparagus blends into a surprisingly creamy base for this nutrient-powerhouse of a soup. Broccoli sprouts are a great ingredient to know about when it comes to detoxification, as they contain a phytonutrient called sulforaphane that has been linked to protection against air pollution. They also contain enzymes that protect against cancer-causing chemicals.

Instructions:



1. In a small bowl, combine chile with salt and monk fruit (if using). Set aside for 30 minutes. After 30 minutes, add the vinegar and oil. This could be done the night before making the soup.
4. Add chicken broth and turn heat to high. Cover and cook for about 10 minutes until celery root is tender.



2. In a saucepan over medium-high heat, combine ghee with leek and celery root and cook, stirring occasionally, until ghee is melted. Turn heat to low, cover, and continue to cook until leeks are soft, about 5 minutes.



3. Uncover and add the shallots and garlic. Cook for 1 minute, until fragrant.



5. Add the asparagus and cook for 5 minutes, uncovered. Remove from heat and set aside for 20 minutes to cool slightly.



6. Transfer asparagus to a Vitamix (or any high-speed blender) and add coconut cream, basil leaves, salt, and pepper. Blend on high speed until completely smooth. Do this in two batches if necessary. Return to the saucepan, reheat on low and add 1 cup of broccoli sprouts. Stir and keep warm over low heat until serving.



7. Ladle soup into individual bowls, topping each bowl with slices of pickled chile and a sprinkle of Maldon salt (if using).

Nutritional Analysis (per serving):

Calories: 275, Total Fat: 19 g, Saturated Fat: 14 g, Cholesterol: 21 mg, Fiber: 4 g, Protein: 14 g, Carbohydrates: 15 g, Sodium: 560 mg, Sugars: 5 g

Tangy Almond Lemon Tart



Ingredients:

Crust

- 1 ½ cups blanched almond flour
- 2 tablespoons tapioca flour
- ¼ cup granulated monk fruit for baking
- ¼ teaspoon Himalayan salt
- 1 teaspoon vanilla extract
- 1 large pasture-raised egg, yolk only
- 5 tablespoons ghee, unsalted

Lemon Filling

- 4 medium lemons
- 2 large pasture-raised egg
- 2 large pasture-raised egg, yolk only
- ⅓ cup powdered monk fruit for baking
- 2 tablespoons coconut flour

For serving

- Powdered monk fruit

Makes: 8 slices

Prep Time: 20 minutes + 20 minutes to cool

Cook Time: 45 minutes

I've always loved the tart tanginess of lemon. This recipe is a healthier alternative to old-fashioned lemon bars that you can feel better about indulging in. The citric acid found in citrus fruits like lemons protects the liver and reduces inflammation and DNA damage—all important for supporting detoxification.

Instructions:



1. Preheat the oven to 325°F.



2. Prepare the crust by adding all of the ingredients into a medium bowl and working them together using a rubber spatula or wooden spoon. Once combined, transfer the crust to a non-stick 9-inch tart pan, flattening and spreading to the edges.



3. Place the tart pan on top of a baking sheet, in case oil leaks. Bake until golden brown, about 25 minutes.



4. In the meantime, peel 2 lemons and remove large seeds, then transfer to a high-speed blender (do not worry if there are remaining small seeds). Blend for 20 seconds.



5. Into a medium bowl, add lemon purée, zest, and juice of the 2 remaining lemons (there should be 6 tablespoons of juice, use an extra lemon if necessary), whole eggs, egg yolks, powdered monk fruit, and coconut flour, and whisk until smooth.



6. When the crust is ready, remove from the oven and let it cool for at least 20 minutes. Then, carefully pour the filling over the crust and bake until the filling is set, about 25 minutes.

7. Remove from the oven and allow to cool completely on a cooling rack.



8. Dust with powdered monk fruit and serve. Store in the fridge for up to 5 days.

Nutritional Analysis (per serving):
Calories: 254, Total Fat: 22 g, Saturated Fat: 7 g, Cholesterol: 135 mg, Fiber: 4 g, Protein: 8 g, Carbohydrates: 11 g, Sodium: 92 mg, Sugars: 2 g

Disclaimer

The Functional Medicine Deep Dive Companion Recipe Guide is not intended to diagnose or treat any disease. If you have an existing medical condition, are taking medication, are pregnant and/or nursing, or are under the age of 18, it is recommended to work closely with your doctor before making any changes to your diet or supplements.

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