



Stress & Nutrition

Presented by Rhonda Haller, RD, LDN

May 16, 2023

Be Safe

Every Employee ... Safely Home ... Every Day

be present

SEEK + SHARE + LISTEN + CHAMPION

Win the Right Way

VALUES + ETHICS + COMPLIANCE

– Our reputation is built not only on what we achieve, but how we achieve it

Be Cyber Safe

Cybersecurity is a shared responsibility



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When You're Feeling Stressed...

Do you find yourself reaching for food to help calm you down?

Food can be comforting—especially those loaded with dopamine-releasing qualities that are often found in “junk” food. Eating foods high in fat, sugar, and salt trigger our brains to release “happy hormones” that give us fast—but fleeting—relief.

However, the poor food choices we make when stressed can also cause an inflammatory and damaging response in our bodies, negatively influencing our gut bacteria, long-term stress levels, and overall health.

Learn how changing the way we eat can increase our immunity and decrease our risk for stress-related diseases!

What Is Stress?



- An emotional or physical reaction to any demand placed on us
- Natural response that prompts us to address challenges in our lives
- Universal experience – EVERYONE has stress
- Can be acute or chronic

Effects of Chronic Stress

Burnout

Exhaustion
Overwhelm
Loss of identity
Impaired work-life balance

Physical Signs

Digestive issues
Headaches
Muscle tension
Heart disease
High blood pressure
Stroke
Sleep problems
Emotional eating
Weight gain

Emotional Signs

Anxiety
Depression
Memory impairment
Concentration impairment



STRESS-RELATED HABITS & HEALTH CONDITIONS

Emotional Eating



Cause

Stress produces a hormone called cortisol, which increases appetite.

Effect

Cravings for foods high in fat, sugar, and salt occur. These foods temporarily soothe feelings of stress, but can have long-lasting effects.

Obesity



Cause

Stress may encourage emotional eating, less sleep, less exercise, and increased alcohol consumption.

Effect

Between a shift in stress-related hormones and an increase in calories, these factors may lead to weight gain and obesity over time.

Hypertension & Heart Disease



Cause

Stress-related hormones cause the heart to beat faster and the blood vessels to narrow.

Effect

Over time, this may damage blood vessels, resulting in high blood pressure, which increases the risk of heart disease.

Migraines



Cause

Stress may cause changes in brain chemistry, anxiety, preferences for certain foods and drinks, excessive caffeine consumption, and changes in sleep patterns

Effect

These factors may trigger migraines or make them more frequent.

Irritable Bowel Syndrome



Cause

Stress induces hormones that affect the digestive system.

Effect

This may cause gas, diarrhea, bloating, constipation, or flare-ups in gastrointestinal conditions such as Irritable Bowel Syndrome (IBS).

Type 2 Diabetes



Cause

Stress hormones can promote high blood sugar levels and reduced insulin sensitivity.

Effect

Over time, this can increase one's risk of developing type 2 diabetes.



NUTRITION

A healthy, balanced diet can be a great defense against stress-related diseases, while increasing immunity and boosting mood!

Understanding Nutrition's Impact on Stress

- Stress can cause damage to cells in the body over time. Certain nutrients, like **Vitamin C**, found in bell peppers, broccoli, and citrus fruits, can help to repair cells and strengthen the immune system!
- Stress encourages cortisol production. Vegetables and foods rich in **omega-3 fatty acids**, like salmon, tuna, and walnuts, may help to regulate this hormone.
- Stress can increase appetite and cravings. Eating protein and fiber-rich meals and snacks may help one feel fuller longer and curb strong cravings. For **protein**, enjoy lean meats, plant proteins like tofu and beans, and for **fiber**, enjoy whole grain pasta, bread, and crackers.
- Stress can impact mood. Eating nutritious foods may help one feel more calm and less irritable.

Research Says...

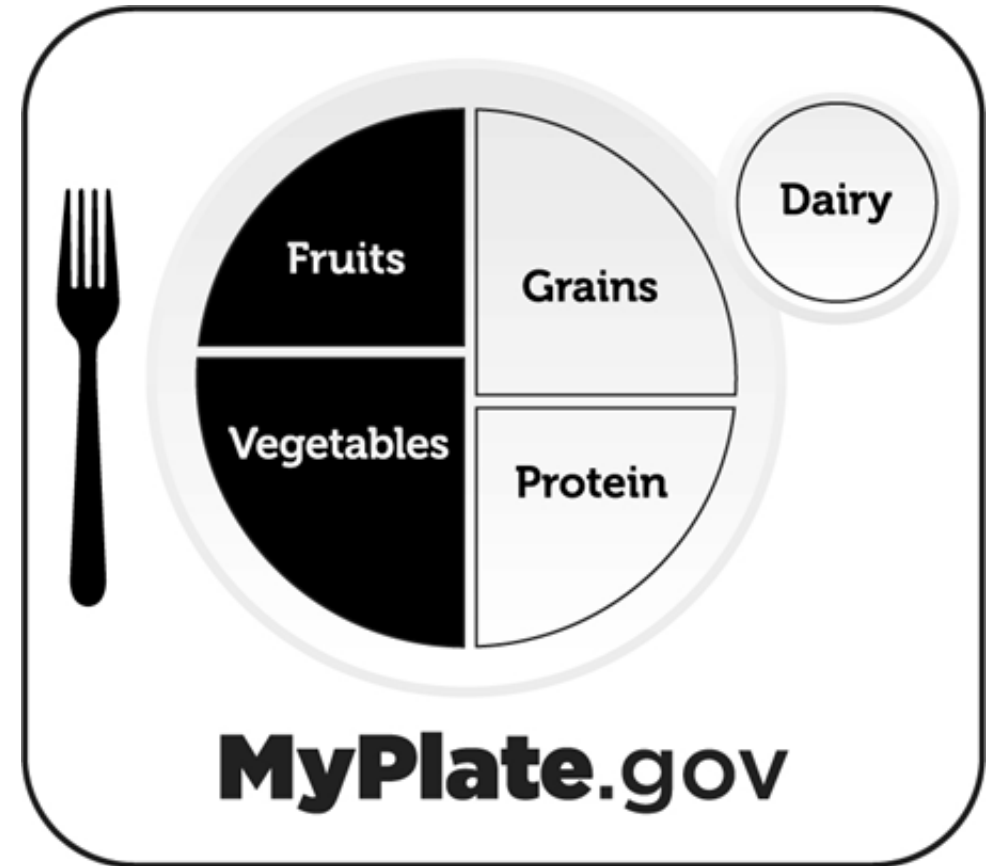
“Nutrition can be used as a means of supporting the body during times of stress, increasing resilience, building strength and re-equipping the body with nutrients that may become depleted during periods of chronic stress. “ (Food for the Brain Foundation)

- Simple dietary changes can help reduce the stress response. (Naidoo, 2021)
- Diet and nutrition may influence mood and mental health via the gut microbiome, which research has found to be closely linked to the brain. (Bremner et al, 2020)
- Adherence to a Mediterranean-style dietary pattern is associated with improvement in health status and reduced incidence of chronic disease. (Dominguez et al, 2021)

Build a Balanced Plate

Including all or most food groups in each meal can help one consume nutrients for stress management.

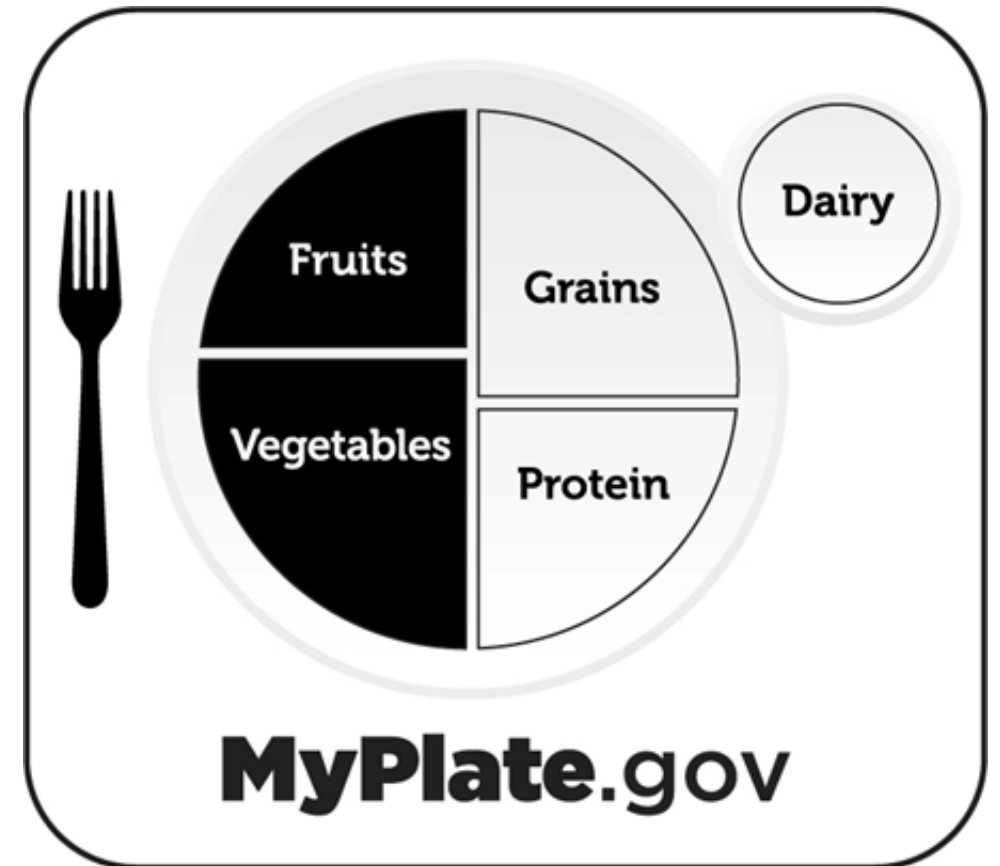
- Fill half of your plate with fruits and veggies
- Vary your proteins between lean animal and plant sources
- Choose whole grains and opt for low-fat dairy products or fortified soy alternatives



Serving Sizes

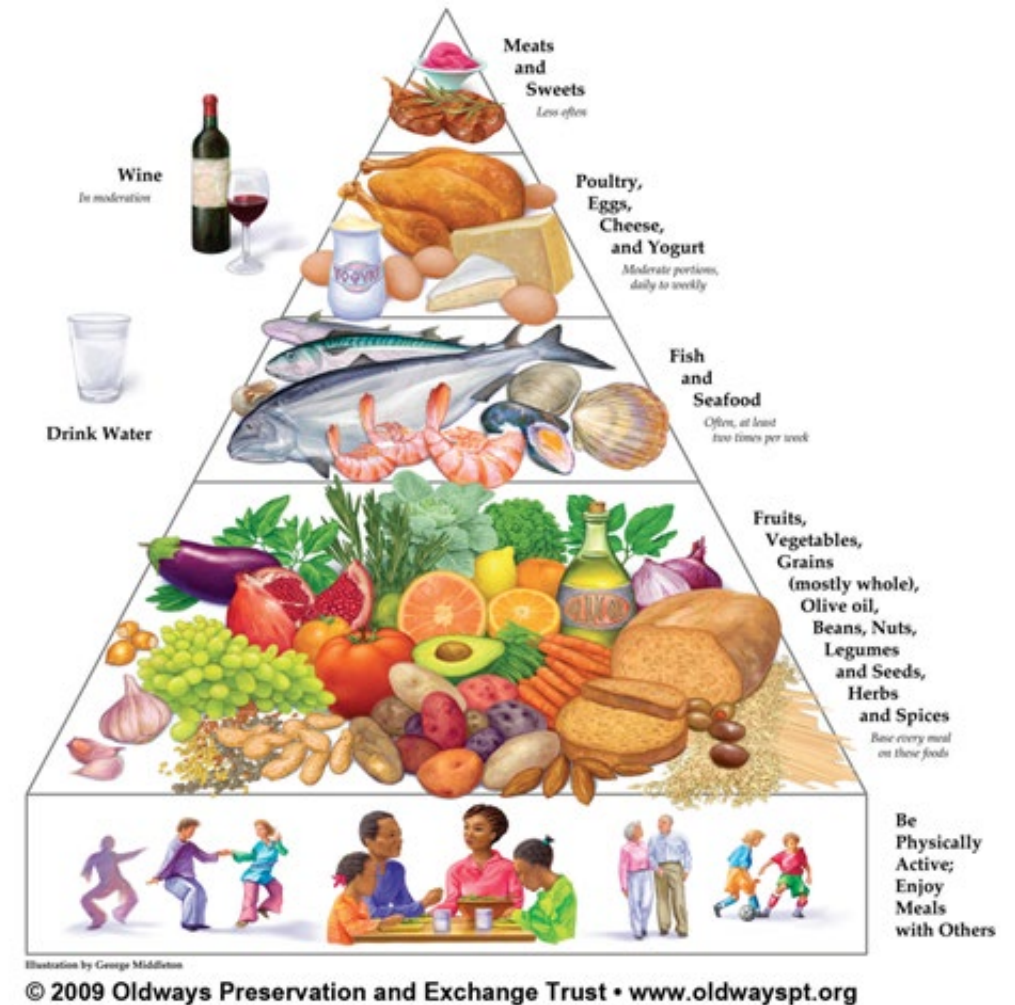
- Fill half of your plate with fruits and veggies
 - ½ cup or about 1 cupped palm
- Vary your proteins between lean animal and plant sources
 - 3 oz or about a deck of cards
- Choose whole grains and opt for low-fat dairy products or fortified soy alternatives
 - Grains: 1 oz, or 1 slice bread, ½ cup pasta, 1 small flour or corn tortilla
 - Dairy: 1 cup of milk or yogurt, 1.5 oz of cheese

Typical Plate Size: 9 inches



The Mediterranean Diet

- Based on eating habits of long-living individuals in the Mediterranean.
- Follows general food pyramid and encourages active lifestyle and communal eating.
- Associated with reduced risk of chronic diseases like stroke and diabetes as well as memory problems and dementia.
- Emphasizes: fruits, veggies, whole grains, legumes/beans, nuts and seeds.



Sample 1-Day Meal Plan

Snack

- 1 medium apple, sliced
- 2 tablespoons peanut butter

Snack

- 1 cup grapes
- 1 oz unsalted pistachios
- 1 serving wheat crackers



Breakfast

- $\frac{3}{4}$ cup low-fat Greek yogurt
- $\frac{1}{2}$ cup rolled oats
- $\frac{1}{4}$ cup sliced strawberries

Lunch

- Grilled chicken sandwich on wheat bun
- 2 cups iceberg lettuce
- $\frac{1}{2}$ cup chopped tomatoes, red onion, bell pepper
- 1 oz cheddar cheese, shredded
- 1 tablespoon lite ranch dressing

Dinner

- 4 oz baked salmon
- $\frac{1}{2}$ cup wild rice
- 1 cup asparagus
- $\frac{1}{2}$ cup fresh raspberries
- 1 cup low-fat cow's milk or fortified soy milk

Sample 1-Day Meal Plan Disclaimer

This sample meal plan demonstrates a balance between all food groups and emphasizes foods that a Mediterranean-style diet pattern includes, such as low-fat dairy, lean meats, plenty of veggies, fruits and grains.

Everyone's nutritional needs are different—especially when it comes to any stress-related conditions mentioned earlier. Working with a dietitian can help you identify your exact needs. This meal plan is balanced and nutritious, so in general, it may be health-promoting and stress-reducing. However, it is not a one-size-fits-all solution to the diseases mentioned today.

Healthy Tips & Tricks

Listen to hunger and fullness cues

- “How full do I feel?”
- Still hungry: Try another serving of a food group.
- Comfortably full: Sit with this feeling; aim to stay here.
- Stuffed: Leave any remaining food on the plate and reflect on what you enjoyed about the meal.



Healthy Tips & Tricks

Meal prep

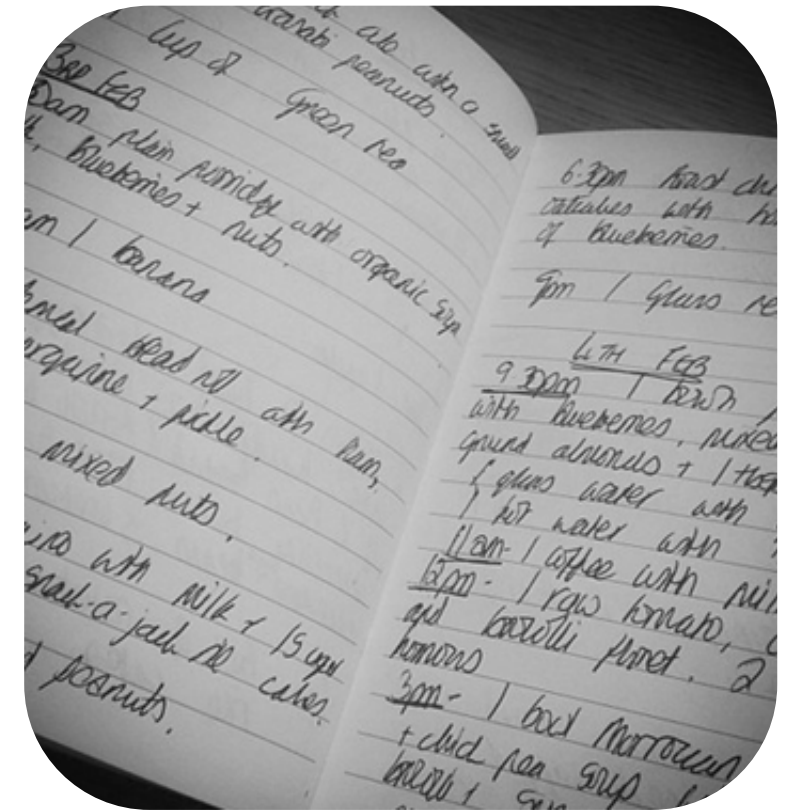
- Ensures healthy meals are more accessible during the busy workweek.
- Choose a day during the week or weekend to cook veggies, chop fruits, prep proteins, or compile grains.
- Assemble into a meal, or compartmentalize food groups for easy snacking or meal-building on the go.



Healthy Tips & Tricks

Practice mindfulness

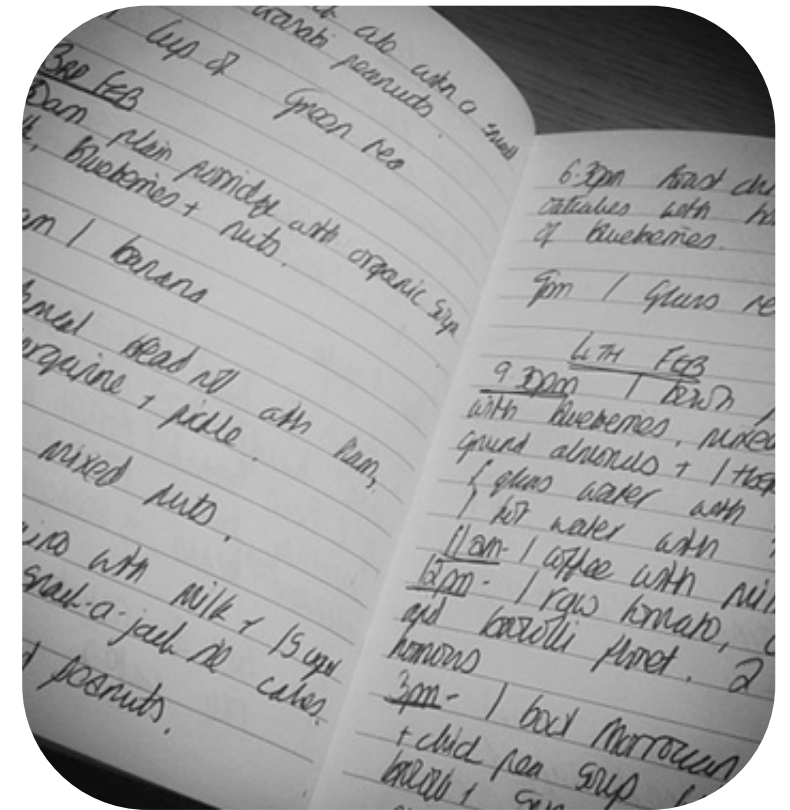
- Focus on feelings during meals and snacks.
- Am I stressed? Bored?
- Identify your emotions and keep a journal if needed.



Healthy Tips & Tricks

Get support

- Caterpillar has a Total Health Dietitian! Program services include comprehensive nutrition assessment; nutrition consulting and planning; health, well-being, and disease prevention strategies; nutrition presentations and events; and Post-Restore Health consulting. Contact [Haller Rhonda M@cat.com](mailto:Haller.Rhonda.M@cat.com) for more information.
- A licensed therapist or counselor can help people learn to cope with stressors in healthy ways. Caterpillar's global Employee Assistance Program (EAP) is a free, voluntary, and completely confidential service provided to employees and their eligible family members to help meet many challenges at home and work. To access, call 1-866-228-0565 or visit CaterpillarEAP.com.



Summary

Stress

A state of mental tension that can negatively impact the body and promote diseases such as hypertension, obesity, migraines, and IBS.

Nutrition

Eating a healthy, balanced diet can be a great defense against stress-related diseases, while promoting immunity and boosting mood.

Emphasize fruits and vegetables, whole grains, lean or plant proteins, and low-fat dairy or fortified soy products.

Support

Speaking with a registered dietitian and therapist can help one learn to cope with stress in healthy ways and build sustainable, health-promoting habits.

Let's Brainstorm!

Think to yourself ways to incorporate more nutritious foods into your meals and snacks. Fruits? Veggies? Whole grains? Dairy? Protein? Some foods may fit into more than one category, like yogurt for example!





THANK YOU!

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