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Food & Fitness

Drug-Nutrient Interactions

Inside this issue:

Drug-Nutrient Interactions **1-2**

How to Avoid Risks **3**

Most Common Interactions **4**

Fruit—Pears **5-6**

Recipe—Pear and Pomegranate Salad **7**

Brain Exercise **8**

June Monthly Observances **9**

Let's start by talking about what a drug-nutrient interaction is. A drug-nutrient interaction is a reaction between a medicine and one or more nutrients. Nutrients are the vitamins and minerals that are in the foods we eat. These nutrients are important in nourishing our bodies, keeping us healthy, and reducing our risk for chronic diseases. Medicines usually contain active ingredients which have the potential to react with the human metabolism in various ways.

Drug - Food Interaction



When certain elements of a medicine interact with a nutrient, it can keep that medicine from working properly. There is also the possibility that the absorption rate of that nutrient is affected, therefore increasing or decreasing the overall amount of the nutrient in your body. This causes an imbalance and puts us at risk for a nutrient deficiency.

It is important to understand drug-nutrient interactions because if your body can't absorb as much of the medicine as it should, you will not be getting the full effects of that medicine. In addition, if your body absorbs too much of the medicine, it can cause an effect that is too strong. Food and nutrients can also affect the rate at which your body processes or removes a medicine, which can result in decreased efficiency of that medicine.

(Continues on Page 2)

Drug-Nutrient Interactions

(Continued from Page 1)

It is important to also be aware that medicines can interact with dietary supplements as well. A dietary supplement is a vitamin, mineral, or herb you take to improve your health or wellness. Supplements are different than natural vitamins and minerals we eat in food. Supplements can be in the form of pills or powders that we add to our meals. Common examples of supplements include multi-vitamins, iron tablets, probiotics, fish oils, calcium, and vitamin D. When supplements are taken with over-the-counter or prescription medicine, there is the possibility of interaction. Supplements can affect the way a medicine acts, or the way the body absorbs, uses, or gets rid of it.



One of the most common drug-nutrient interactions to be aware of is between vitamin K and Warfarin. Warfarin is a very common blood thinner medication. However, one of vitamin K's main functions in the body is to act as a blood clotting factor. Therefore, high levels of vitamin K in the body can inhibit Warfarin from working properly. Foods high in vitamin K are leafy, green vegetables such as spinach, kale, broccoli, Brussel sprouts, collards, and asparagus. Vitamin K does not need to be completely avoided if you are on a blood thinner, but consistent intake is key. You do not want to have a heavy intake of vitamin K-rich foods one day and then zero intake the next. A possible solution to maintain consistent intake, is to have a vitamin K supplement you take on the days in which dark green vegetables are not served or eaten.

Grapefruit is another food that interacts with a lot of commonly prescribed medicines. Eating grapefruit or drinking grapefruit juice can affect how your body processes certain medications. The chemicals in grapefruit can cause your body to absorb either too much or not enough medicine into your bloodstream. This makes it more likely that you will experience side effects from the medicine, or that your medicine won't be effective. Examples of medicine that interact with grapefruit include high cholesterol, high blood pressure, heart arrhythmia, some depression, and anxiety medications.



How to Avoid Risks

Avoiding drug-nutrient adverse interactions can be accomplished with proper education and knowledge. By talking with your primary doctor, as well as your pharmacists, you can ask the right questions and know how to avoid interactions. Understanding your interactions will allow you to continue eating a balanced diet while allowing your medication to help maintain your health!



Consult with your doctor about the drugs you take to understand your medication

Questions to Ask Your Doctor to Keep You Safe!

- Is there a certain time of day I should take my medicine?
- Should I take my medicine with food or on an empty stomach?
- Do I need to avoid certain foods with my medicine?
- What happens if I eat certain foods with my medicine?
- Are there any other substances I need to avoid?
- Is there another medication I can take if I feel I can't manage the interactions?

Most Common Interactions

Drug Interactions with Vitamins and Minerals

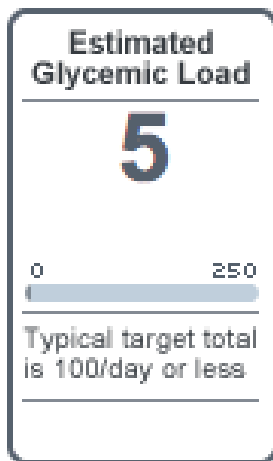
Vitamin/ Mineral Supplement	Affected Medication	Effect of Interaction	Management of Interaction
Vitamin A	Retinoids (isotretinoin and acitretin)	Risk of toxicity; nausea, vomiting, dizziness, blurred vision, poor muscle coordination	Avoid concomitant use
Pyridoxine (Vitamin B ₆)	Levodopa	Decreased efficacy leading to parkinsonian symptoms	Recommend carbidopa/levodopa combination
	Phenytoin	Risk of seizure	Discontinue pyridoxine or increase phenytoin dose
Vitamin E	Warfarin	Risk of bleeding	Avoid doses ≥ 800 IU/day of vitamin E
Vitamin K	Warfarin	Decreased efficacy; risk of thromboembolism	Maintain consistent intake of vitamin K
Niacin	HMG-CoA reductase inhibitors	Risk of myopathy or rhabdomyolysis	Avoid self-treatment with niacin
Folic acid	Methotrexate	Prevents adverse events or toxicities from methotrexate	Recommend supplementation in patients taking methotrexate for rheumatoid arthritis or psoriasis
Calcium	Fluoroquinolones and tetracyclines	Decreased efficacy; risk of antibiotic failure	Avoid concomitant calcium supplementation
	Levothyroxine and bisphosphonates	Decreased efficacy; risk of hypothyroidism	Separate doses by at least four hours
Aluminum and magnesium	Fluoroquinolones, tetracyclines, bisphosphonates, and levothyroxine	Decreased efficacy of affected medication	Separate doses by at least two hours
Iron	Fluoroquinolones, tetracyclines, digoxin, and levothyroxine	Decreased efficacy of affected medication	Separate doses by at least two hours
	Methyldopa	Worsening of hypertension	Avoid concomitant use
Potassium (including salt substitutes)	ACE inhibitors, angiotensin receptor blockers, digoxin, indomethacin, prescription potassium supplements, and potassium-sparing diuretics	Hyperkalemia	Avoid concomitant supplementation without physician supervision

Fruit—Pears



The pear can sometimes be an overlooked fruit. It might not be everyone's first thought when they think about nutrient dense fruits. However, pears are a sweet, tasty fruit that is full of fiber, low in calories, and loaded with antioxidants. Pears are native to Europe and West Asia and have been used in anti-inflammatory, diuretic, and anti-hyperglycemic remedies in China for over 2,000 years. Research also supports health benefits linked to pears, such as protection from stroke and some cancers.

Most pears grown in the United States are grown in Washington state and Oregon. There are many varieties that differ in size, shape, skin color, and texture. Pears are best when harvested in the fall and winter. When selecting fresh pears, look for fruits that feel heavy and firm with a little give right around the stem.



Pears are noted as a great source of vitamin C, with one pear containing about 13% of your daily value. Vitamin C is important in cell growth, supporting immune function, aiding in healing cuts and bruises, and protecting against infectious disease. The skin of a pear is where a large portion of its fiber and antioxidants resides, so it's best to eat pears with the skin on to get anti-inflammatory properties.

Pears are also an excellent source of the minerals copper and potassium. Copper is important for the formation of connective tissue in the body, as well as, healthy brain and nervous system function. Potassium supports muscle function and nervous system communication.

Caloric Ratio Pyramid

Caloric Ratio Pyramid for Pears, raw
[Includes USDA commodity food A435]

This feature requires Flash player to be installed in your browser. [Download the player here.](#)

96%	2%	2%
Carbs	Fats	Protein

NutritionData's Opinion

Weight loss: ★★★★★

Optimum health: ★★★★★

Weight gain: ★★★★★

The good: This food is very low in Saturated Fat, Cholesterol and Sodium. It is also a good source of Vitamin C, and a very good source of Dietary Fiber.

Fruit—Pears:

NUTRITION INFORMATION

Amounts per 1 small (148g)

Calorie Information

Amounts Per Selected Serving	%DV
Calories	85.8 (359 kJ) 4%
From Carbohydrate	82.5 (345 kJ)
From Fat	1.5 (6.3 kJ)
From Protein	1.9 (8.0 kJ)
From Alcohol	0.0 (0.0 kJ)

Carbohydrates

Amounts Per Selected Serving	%DV
Total Carbohydrate	22.9 g 8%
Dietary Fiber	4.6 g 18%
Starch	~
Sugars	14.5 g

Fats & Fatty Acids

Amounts Per Selected Serving	%DV
Total Fat	0.2 g 0%
Saturated Fat	0.0 g 0%
Monounsaturated Fat	0.0 g
Polyunsaturated Fat	0.0 g
Total trans fatty acids	~
Total trans-monoenoic fatty acids	~
Total trans-polyenoic fatty acids	~
Total Omega-3 fatty acids	~
Total Omega-6 fatty acids	42.9 mg

Learn more about these fatty acids
and their equivalent names

Other

Amounts Per Selected Serving	%DV
Alcohol	0.0 g
Water	124 g
Ash	0.5 g
Caffeine	0.0 mg
Theobromine	0.0 mg

Protein & Amino Acids

Amounts Per Selected Serving	%DV
Protein	0.6 g 1%

Vitamins

Amounts Per Selected Serving	%DV
Vitamin A	34.0 IU 1%
Vitamin C	6.2 mg 10%
Vitamin D	~ ~
Vitamin E (Alpha Tocopherol)	0.2 mg 1%
Vitamin K	6.7 mcg 8%
Thiamin	0.0 mg 1%
Riboflavin	0.0 mg 2%
Niacin	0.2 mg 1%
Vitamin B6	0.0 mg 2%
Folate	10.4 mcg 3%
Vitamin B12	0.0 mcg 0%
Pantothenic Acid	0.1 mg 1%
Choline	7.5 mg
Betaine	0.3 mg

Minerals

Amounts Per Selected Serving	%DV
Calcium	13.3 mg 1%
Iron	0.3 mg 1%
Magnesium	10.4 mg 3%
Phosphorus	16.3 mg 2%
Potassium	176 mg 5%
Sodium	1.5 mg 0%
Zinc	0.1 mg 1%
Copper	0.1 mg 6%
Manganese	0.1 mg 4%
Selenium	0.1 mcg 0%
Fluoride	3.3 mcg

Sterols

Amounts Per Selected Serving	%DV
Cholesterol	0.0 mg 0%
Phytosterols	11.8 mg

Recipe—Pear and Pomegranate Salad

Ingredients

- 3 cups green lettuce
- 1 -2 Pears
- 1/3 cup pomegranate seeds
- 1 tablespoon vegetable oil
- 2 tablespoons pomegranate juice
- 1 tablespoon lemon juice
- 1 teaspoon Dijon mustard
- Ground pepper to taste
- Feta cheese to taste



Directions

1. Divide the lettuce between two bowls. Halve and core the pear, then cut each half in slices. Divide the pear slices and pomegranate seeds among the two bowls and mix gently.
2. Combine the vegetable oil, pomegranate juice, lemon juice, mustard, honey, and pepper in a saucepan. Bring to a boil over high heat; reduce heat and simmer, stirring frequently, until the dressing thickens slightly, about 2 minutes. Pour the warm dressing over the salads, top with feta, and serve.

Nutrition

Calories: 153kcal | Carbohydrates: 24g | Protein: 2g | Fat: 7.1g | Saturated Fat: 1.1g | Sodium: 88mg | Potassium: 280mg | Fiber: 4g | Sugar: 16g | Vitamin A: 624IU | Vitamin C: 22mg | Calcium: 41mg | Iron: 1mg

Brain Exercise



SUMMER

Word Scramble



Unscramble the ten summer themed words below.

1. SLCOPEIP _____

2. NCAOE _____

3. NUNYS _____

4. SWRRBAITSREE _____

5. SNSLSSAGUE _____

6. GRNSUIF _____

7. TWMISUSI _____

8. CMNAPGI _____

9. OTORODSU _____

10. ASELBBAL _____



June 2022

June Observances

- Alzheimer's & Brain Awareness Month
- Dairy Month
- Effective Communication Month
- National Family Month
- Mango Month
- Great Outdoors Month
- National Fresh Fruit and Vegetable Month
- PTSD Awareness Month
- Zoo and Aquarium Month
- Audio Book Month

Sun	Mon	Tue	Wed	Thu	Fri	Sat
			1 National Running Day	2 Rotisserie Chicken Day	3 National Donut Day	4 National Hug Your Cat Day
5 Cancer Survivor Day	6 Gardening Exercise Day	7 Chocolate Ice Cream Day	8 National Best Friends Day	9 Strawberry Pie Day	10 National Ice Tea Day	11 National Corn on the Cob Day
12 National Red Rose Day	13 Sewing Machine Day	14 Flag Day	15 Nature Photography Day	16 Fudge Day	17 Eat Your Vegetables Day	18 National Go Fishing Day
19 Father's Day	20 American Eagle Day	21 Summer Begins!	22 National Kissing Day	23 National Hydration Day	24 Take Your Dog to Work Day	25 Strawberry Parfait Day
26 National Coconut Day	27 Ice Cream Cake Day	28 Paul Bunyan Day	29 National Camera Day	30 National Handshake Day		

Kathrine J. Clark, MS, RD, LD

Nutrition Consultant

1 John Marshall Drive

Huntington, WV 25575

Kathrine.Clark@marshall.edu



Brain Exercise Answers

1. Popsicle

2. Canoe

3. Sunny

4. Strawberries

5. Sunglasses

6. Surfing

7. Swimming

8. Camping

9. Outdoors

10. Baseball

Happy Father's Day!

This newsletter was created by partnering with Marshall University's Dietetics Internship Program and overseen by Kathrine J. Clark, MS, RD, LD, Nutrition Consultant to the

West Virginia Bureau of Senior Services.