**Newspaper article**

**Vitamins and mineral interactions**

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This newspaper information was gathered for future interview with Jeff Crilley’s on the Rundown show. The question was sent ads outline of the talk about best frozen meals. Most of the questions about vitamins interaction. The interview will be poster later in September I will provide the link when possible.

* **Vitamin D and calcium** One of vitamin D’s many roles is to increase the absorption of calcium. The body only absorbs about 10-15% of the calcium consumed. However, with the addition of Vitamin D, around 30-40% of the calcium can be absorbed. Certain supplements can be purchased that contain both Vitamin D and Calcium for convenience. [**https://www.nof.org/patients/treatment/calciumvitamin-d/**](https://www.nof.org/patients/treatment/calciumvitamin-d/)

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2669834/>

<https://www.health.harvard.edu/newsletter_article/Nutritions-dynamic-duos>

* **Turmeric and black pepper** Turmeric is a spice that is known in many countries, especially in India and many Asian countries. Because of its yellow color and its medical properties, it is called the golden spice. It is an anti-inflammatory, antioxidant, antibacterial, and antifungal property.

The key compounds in turmeric are called curcuminoids. A bioactive compound found in black pepper is called piperine. When you combine turmeric and black paper, the curcumin in turmeric is able to more easily pass through the intestinal wall and into your bloodstream. Piperine boosts the absorption of the curcumin. Combining them can fight inflammation, which helps reduce pain (like arthritic pain) by desensitizing the pain receptors.

<https://www.healthline.com/nutrition/turmeric-and-black-pepper>

* **Iron and vitamin C** Vitamin C helps to boost the absorption of iron. In fact, consuming 25-100 mg of Vitamin C alongside iron can increase iron’s absorption by 4 times. (http://www.icppharm.com/News-Resources/Articles/Effects-of-Vitamin-C-on-Iron-Absorption.aspx)

Since iron is more bioavailable in animal products, vegetarians/vegans are at risk for iron-deficiency anemia. They might consider supplementing Vitamin C with their plant sources of iron (spinach, lentils, beans, potatoes) to ensure that more iron is absorbed. If you take an iron supplement, consider pairing it with a vitamin C supplement or maybe grabbing an orange or some strawberries. (https://www.vitacost.com/blog/vitamins-supplements/supplements/nutrient-absoroption-tips.html)

* **Vitamin D and omega 3** Certain vitamins, including Vitamin D, are fat soluble. This means that they are often found in high fat foods, and that they are absorbed much more efficiently when eaten with fat. If you are taking a Vitamin D supplement (which many people do over the winter months), then it is wise to pair it with an Omega-3 fatty acid supplement. This alleviates the need to make sure you eat a fatty meal with your Vitamin D supplement. A natural food pairing of Vitamin D and Omega-3 fatty acids would be a handful of walnuts (omega-3) alongside a few scrambled eggs (vitamin D). Salmon is a great source of both omega-3 fatty acids and Vitamin D.

<https://www.vitacost.com/blog/vitamins-supplements/supplements/nutrient-absoroption-tips.html>

* **Vitamin C and green tea** Green tea contains naturally occurring antioxidants called catechins. These antioxidants protect our cells from damage and work to reduce inflammation. In digestion, many of these catechins don’t survive in the intestines because its a non-acidic environment. With the addition of Vitamin C/citrus juice, five times more catechins survive the digestion process. When drinking green tea, the most effective citrus juices to add include lemon, orange, lime, and grapefruit juices.

<https://www.sciencedaily.com/releases/2007/11/071113163016.htm>

* **Combos to avoid**
	+ Iron and calcium While Vitamin C works to increase the absorption of Iron, Calcium does the opposite. If you are taking an iron supplement, avoid calcium rich foods (dairy, beans, lentils, almonds, leafy greens) for at least an hour. Those who eat meat most likely do not need to worry about avoiding calcium with their iron because they have an abundance. However, for someone who is anemic or vegetarian, it is wise to avoid high doses of calcium and iron in the same meal.

* + Avoid taking your iron supplements at the same time as your coffee and tea. Coffee and tea contain tannins which interfere with iron absorption. https://www.everydayhealth.com/hs/iron-deficiency-anemia/increase-iron-absorption/
	+ Fat-soluble vitamins Certain vitamins and minerals compete in our body to be absorbed. If you supplement more than one fat-soluble vitamin (A,D,E,K), consider spacing out when you take them throughout the day. This will minimize competition and cause greater absorption.

* + Omega-3 Fatty acid supplements should not be taken with any blood thinning herbs such as ginkgo biloba. Furthermore, if you are currently taking blood thinners make sure that your doctor is on board with you taking an omega-3 supplement.
* **Supplement timing**
* Calcium should not be taken with Zinc and iron. It is better absorbed when taken in smaller dosage like 200 to 300 at a time a few times a day with meals.
	+ Iron is best to be taken on an empty stomach but not with coffee or tea because the caffeine can reduce the absorption of iron. Iron supplement is a good idea to be taken with orange juice because vitamin C boosts iron absorption.
	+ Vitamin D is best taken with a big meal because it is a fat soluble vitamin. It is not recommended with the late dinner because it can interfere with the melatonin production which might affect some people's sleep.
	+ A probiotic is best when taken on an empty stomach, because a high concentration of stomach acid can destroy the bacteria in the probiotic. One recommendation is taking the probiotic thirty minutes before a meal, and the other recommendation is taking it with a light meal. Different strains of probiotics can handle different levels of stomach acid, so each probiotic might have it’s own unique recommendations.
	+ Taking an omega-3 supplement can cause nausea and stomach distress. It is best to avoid taking it right before bed or exercise, and to always take it with food.