

# NUTRIENT-DEPLETING MEDICATION REFERENCE GUIDE

## WELCOME



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## **MEDICATION CLASS: ACE INHIBITORS**

#### About ACE Inhibitors:

Angiotensin-Converting Enzyme (ACE) Inhibitors are a group of medications primarily used to treat heart-related issues like high blood pressure and congestive heart failure. They work by inhibiting the enzyme responsible for converting angiotensin I to angiotensin II, a strong vasoconstrictor that raises blood pressure by narrowing blood vessels. By blocking this conversion, ACE inhibitors help relax blood vessels, therefore lowering blood pressure and improving blood flow. This reduction in blood pressure also makes it beneficial for protecting the kidneys in patients with diabetes or renal disease and for patients who have previously suffered heart attacks. Taking ACE Inhibitors may potentially deplete specific nutrients in the body.

- Calcium
- CoQ10
- Folic Acid (Folate)
- Iron
- Magnesium
- Potassium
- Sodium
- Vitamin B1
- Vitamin B6
- Vitamin D
- Zinc

## MEDICATION CLASS: ANGIOTENSIN II RECEPTOR BLOCKERS (ARBS)

#### About Angiotensin II Receptor Blockers (ARBs):

Angiotensin II Receptor Blockers (ARBs), also known as sartans, are a class of drugs that block the action of angiotensin II, a chemical in the body that narrows blood vessels. By preventing angiotensin II from binding to its receptors, ARBs cause blood vessels to relax and widen, which lowers blood pressure and improves blood flow. These medications are used to treat high blood pressure, heart failure, and to protect the kidneys in patients with diabetes or chronic kidney disease. ARBs are often prescribed for patients who experience side effects from ACE inhibitors as they provide similar benefits without some of the common adverse effects, such as a persistent cough. Taking ARBs may potentially deplete specific nutrients in the body.

- Calcium
- Magnesium
- Potassium
- Zinc

## **MEDICATION CLASS: ANTACIDS**

#### **About Antacids:**

Antacids are a class of over-the-counter medications designed to neutralize stomach acid and reduce symptoms from indigestion and acid reflux. They work by increasing the pH level of the stomach contents, making it less acidic and decreasing symptoms such as burning sensations in the chest, throat, or stomach. Common ingredients in antacids include magnesium hydroxide, aluminum hydroxide, calcium carbonate, and sodium bicarbonate. Antacids are typically used for temporary relief of symptoms, but they are not intended for long-term use and do not treat the underlying condition causing the symptoms. Taking antacids may potentially deplete specific nutrients in the body.

- Calcium
- Folic Acid (Folate)
- Iron
- Magnesium
- Phosphate
- Vitamin B12 (Cobalamin)
- Vitamin C
- Vitamin D
- Zinc

## **MEDICATION CLASS: ANTIBIOTICS**

#### **About Antibiotics:**

Antibiotics are a broad class of drugs that combat bacterial infections in the body and include many different types like cephalosporins, fluoroquinolones, sulfonamides, tetracyclines, etc. They function by either killing bacteria directly or by inhibiting their growth and reproduction, depending on the type of antibiotic. Different antibiotics target different types of bacteria, making some more suitable than others for treating certain types of infections. Antibiotics also do not differentiate between good and bad bacteria in the body, meaning they disrupt the functioning of good bacteria too. This can alter the gut microbiome, potentially leading to disruptions in the immune system and digestive processes. Taking antibiotics may potentially deplete specific nutrients in the body.

- Beneficial Gut Bacteria
- Biotin
- Calcium
- Folic Acid (Folate)
- Iron
- Magnesium
- Potassium
- Vitamin A
- Vitamin B1
- Vitamin B2
- Vitamin B3
- Vitamin B5
- Vitamin B6
- Vitamin B12
- Vitamin D
- Vitamin E
- Vitamin K

## **MEDICATION CLASS: ANTICOAGULANTS**

#### **About Anticoagulants:**

Anticoagulants, commonly known as blood thinners, are a group of medications that inhibit blood clot formation. They work by interfering with the clotting process to prevent the formation of blood clots that can block blood vessels and lead to conditions such as stroke, deep vein thrombosis, pulmonary embolism, and heart attacks. Anticoagulants are typically prescribed for people at high risk of clot formation, including those with atrial fibrillation and some other heart conditions, individuals with a history of clotting disorders, individuals with a history of stroke or heart attack, and patients who have undergone certain types of surgery. Some anticoagulants work by reducing the body's ability to use vitamin K which is necessary for the formation of certain blood clotting factors. Taking anticoagulants may potentially deplete specific nutrients in the body.

#### **Possible Nutrient Depletions:**

• Vitamin K

## **MEDICATION CLASS ANTICONVULSANTS:**

#### About Anticonvulsants:

Anticonvulsants, also known as antiepileptic drugs (AEDs), are a group of medications used primarily to prevent or treat seizures associated with epilepsy and other conditions. Seizures are episodes of sudden, uncontrolled electrical activity between brain cells which can cause involuntary movements, an inability to move or speak, and an altered state of consciousness. Anticonvulsants work by stabilizing electrical activity in the brain through several mechanisms such as stabilizing neurons, inhibiting sodium or calcium channels, intensifying the effects of gamma-aminobutyric acid (GABA), raising the levels of GABA, or reducing the activity of glutamate in the brain. They are also prescribed for the management of bipolar disorder, neuropathic pain, and fibromyalgia due to their influence on the brain and neurons. Taking anticonvulsants may potentially deplete specific nutrients in the body.

- Biotin
- Calcium
- Carnitine
- Folic Acid (Folate)
- Magnesium
- Vitamin B1
- Vitamin B12
- Vitamin D
- Vitamin K
- Zinc

## **MEDICATION CLASS: ANTIDEPRESSANTS**

#### **About Antidepressants:**

Antidepressants are a large class of medications designed to treat depression, bipolar disorder, obsessive-compulsive disorder, anxiety, insomnia, and many other mental health conditions. They work by influencing the levels of certain neurotransmitters in the brain like serotonin, dopamine, and norepinephrine to alter a person's mental and emotional state, decrease anxiety, or induce sleep. Antidepressants work through different mechanisms like reducing the body's ability to break down neurotransmitters or increasing the body's production of neurotransmitters so that higher amounts of those neurotransmitters remain in the brain for longer periods of time. Taking antidepressants may potentially deplete specific nutrients in the body.

- Calcium
- CoQ10
- Folic Acid (Folate)
- Magnesium
- Melatonin
- Omega-3 Fatty Acids
- Sodium
- Vitamin B2
- Vitamin B6
- Vitamin B12
- Vitamin D

## MEDICATION CLASS: ANTIDIABETIC AGENTS

#### **About Antidiabetic Agents:**

Antidiabetic agents encompass a broad range of medications designed to manage and control blood sugar levels in individuals with diabetes, including both type 1 and type 2 diabetes. These medications work to lower blood glucose levels in several ways such as stimulating the pancreas to produce more insulin, improving the effectiveness of insulin in the body, decreasing the amount of glucose produced by the liver, or decreasing the absorption of glucose from the gut during digestion. These medications are prescribed to lower blood sugar and reduce the chances of diabetic complications like cardiovascular conditions, vision changes, and impaired kidney function. Taking antidiabetic agents may potentially deplete specific nutrients in the body.

- CoQ10
- Folic Acid (Folate)
- Magnesium
- Vitamin B12

## MEDICATION CLASS: ANTIEMETIC AGENTS

#### **About Antiemetic Agents:**

Antiemetic agents are a class of drugs used to reduce nausea and vomiting and may be prescribed to individuals with various conditions like motion sickness, morning sickness associated with pregnancy, gastrointestinal disorders, and for those undergoing certain treatments like chemotherapy or radiation. These medications work by blocking specific neurotransmitter receptors in the brain and gastrointestinal tract that trigger the vomiting reflex, such as serotonin receptors, dopamine receptors, histamine receptors, and muscarinic receptors. Certain antiemetic medications are available over the counter but are most often prescribed by a medical doctor. Taking antiemetic agents may potentially deplete specific nutrients in the body.

#### **Possible Nutrient Depletions:**

• Potassium

## **MEDICATION CLASS: ANTIFUNGALS**

#### **About Antifungals:**

Antifungals are a class of medications designed to treat fungal infections by targeting the cellular structure or reproductive mechanisms of fungi, inhibiting their growth or killing them outright. These infections can affect various parts of the body including the skin, nails, mouth, throat, and internal organs. Antifungals work in a couple different ways such as disrupting the fungal cell membrane or interfering with cell wall synthesis, damaging and killing the existing fungi and preventing new fungi from growing. They are available in various forms, including topical creams and ointments for skin and nail infections, as well as oral and IV solutions for internal and more serious fungal infections. Taking antifungals may potentially deplete specific nutrients in the body.

- Calcium
- Magnesium
- Potassium
- Sodium

## **MEDICATION CLASS: ANTIHISTAMINES**

#### **About Antihistamines:**

Antihistamines are medications designed to counteract the effects of histamine. Histamine is a chemical released by the immune system primarily during allergic reactions but is also released during digestion and exercise. By blocking the action of histamine on its receptors in the body, antihistamines can reduce symptoms associated with allergies such as itching, swelling, runny nose, and watery eyes. They are commonly used to treat conditions like hay fever, hives, and conjunctivitis, as well as reactions to insect bites and stings. Antihistamines may provide momentary relief from some allergy symptoms but do not treat the underlying allergic condition. Overuse of antihistamines can also cause the body to develop a dependence and can make it more difficult to stop taking them. Taking antihistamines may potentially deplete specific nutrients in the body.

- Calcium
- Folic Acid (Folate)
- Magnesium
- Potassium
- Vitamin A
- Vitamin C
- Vitamin D
- Vitamin E
- Zinc

## MEDICATION CLASS: ANTIPSYCHOTICS

#### **About Antipsychotics:**

Antipsychotics are a class of medications primarily used to manage symptoms of psychotic disorders such as schizophrenia, bipolar disorder, and certain types of severe depression. They function by altering the effects of neurotransmitters in the brain, particularly dopamine and serotonin, which are believed to play a role in psychotic disorders. Antipsychotics are prescribed to help reduce or eliminate hallucinations, delusions, and disorganized thinking in individuals with these conditions. These medications are divided into two categories: first-generation (typical) antipsychotics which primarily block dopamine receptors, and second-generation (atypical) antipsychotics with a lower risk of certain side effects. Taking antipsychotics may potentially deplete specific nutrients in the body.

- Biotin
- Calcium
- Carnitine
- CoQ10
- Folic Acid (Folate)
- Inositol
- Magnesium
- Melatonin
- Vitamin A
- Vitamin B1
- Vitamin B2
- Vitamin B6
- Vitamin B12
- Vitamin C
- Vitamin D
- Vitamin K

## **MEDICATION CLASS: BENZODIAZEPINES**

#### **About Benzodiazepines:**

Benzodiazepines are a class of psychoactive drugs that function as central nervous system depressants and are widely used for their sedative, anxiolytic (anti-anxiety), anticonvulsant, and muscle relaxant properties. They work by enhancing the effect of the neurotransmitter gamma-aminobutyric acid (GABA) which can have a calming effect on the brain and nerves. Benzodiazepines are commonly prescribed for the treatment of anxiety disorders, insomnia, and seizure disorders such as epilepsy. They are also prescribed to induce relaxation before medical procedures in certain cases, including some dental procedures. Taking benzodiazepines may potentially deplete specific nutrients in the body.

- Biotin
- Calcium
- Folic Acid (Folate)
- Melatonin
- Vitamin B1
- Vitamin B6
- Vitamin B12
- Vitamin D
- Vitamin K

## **MEDICATION CLASS: BETA BLOCKERS**

#### **About Beta Blockers:**

Beta blockers, also known as beta-adrenergic blocking agents, are a class of medications that can reduce blood pressure by reducing the effects of adrenaline (epinephrine), a key component of the body's "fight or flight" response. Because adrenaline can increase heart rate and blood pressure, inhibiting the action of adrenaline on receptors in the heart and blood vessels can decrease heart rate, reduce the force of heart contractions, and dilate blood vessels, leading to lower blood pressure and reduced heart workload. This is why beta blockers are prescribed to manage cardiovascular conditions including hypertension, chest pain, heart failure, arrhythmias, and to prevent secondary heart attacks. They are also sometimes prescribed for other uses like treating glaucoma, migraine prevention, and certain types of tremors. Taking beta blockers may potentially deplete specific nutrients in the body.

- CoQ10
- Magnesium
- Melatonin
- Potassium
- Sodium
- Zinc

## **MEDICATION CLASS: BRONCHODILATORS**

#### **About Bronchodilators:**

Bronchodilators are a category of medications that help relax and widen the bronchial tubes (airways) in the lungs which can improve airflow and make breathing easier for individuals with certain respiratory conditions. Bronchodilators work by targeting the smooth muscle lining in the airways and can relax these muscles directly or reduce the inflammation in the muscles and tissue that narrows the airways. Bronchodilators are most commonly used in individuals with asthma, chronic obstructive pulmonary disease (COPD), and other obstructive airway diseases. Bronchodilators are classified into short-acting bronchodilators for quick relief in those with sudden episodes of difficulty breathing, and long-acting bronchodilators for control of persistent symptoms in individuals with chronic conditions. Taking bronchodilators may potentially deplete specific nutrients in the body.

- Calcium
- Magnesium
- Phosphate
- Potassium

## MEDICATION CLASS: CALCIUM CHANNEL BLOCKERS (CCBS)

#### About Calcium Channel Blockers (CCBs):

Calcium channel blockers (CCBs) are a diverse group of medications that lower blood pressure by inhibiting the entry of calcium into cells in the heart and blood vessel walls. This helps to relax the vascular smooth muscle and widen the blood vessels, improving blood flow and reducing blood pressure. By preventing calcium from entering the cells of the heart and arteries, these medications decrease the force of the heart's contractions and widen the arteries, thus improving the blood and oxygen supply to the heart while reducing its workload. Calcium channel blockers are primarily used to treat high blood pressure, chest pain, and certain types of arrhythmias. Taking CCBs may potentially deplete specific nutrients in the body.

- Calcium
- CoQ10
- Potassium
- Vitamin D

## MEDICATION CLASS: CONTRACEPTIVES BIRTH CONTROL

#### **About Contraceptives Birth Control:**

Pharmaceutical contraceptives, commonly known as birth control, are a method of preventing pregnancy through the administration of hormones. They are available in pills/tablets, injections, implants, and patches. These medications contain synthetic forms of estrogen and progesterone, or progesterone alone, which work by inhibiting ovulation, thickening cervical mucus to block sperm entry, and altering the uterine lining to prevent implantation of a fertilized egg. Birth control pills are effective at preventing pregnancy, but they are also prescribed for some hormonal symptoms like severe menstrual cramping, excessive menstrual bleeding, endometriosis, and pelvic pain. While birth control may reduce these symptoms, it does not treat the underlying cause of these symptoms. Taking contraceptive birth control may potentially deplete specific nutrients in the body.

- Folic Acid (Folate)
- Magnesium
- Selenium
- Tyrosine
- Vitamin B2
- Vitamin B6
- Vitamin B12
- Vitamin C
- Vitamin E
- Zinc

## **MEDICATION CLASS: CORTICOSTEROIDS**

#### **About Corticosteroids:**

Corticosteroids are a class of steroid hormones that are produced naturally in the adrenal glands but can also be synthesized for pharmaceutical use. They are potent anti-inflammatory and immunosuppressive agents and are used in the treatment of a wide range of conditions including asthma, allergic reactions, rheumatoid arthritis, lupus, inflammatory bowel disease (IBD), and skin disorders. They work by reducing the immune system's response to inflammation and reducing symptoms such as swelling, pain, and allergic reactions. Corticosteroids are often used to manage autoimmune conditions due to their ability to manage symptoms by inhibiting immune system function. Taking corticosteroids may potentially deplete specific nutrients in the body.

- Calcium
- Magnesium
- Potassium
- Protein
- Selenium
- Sodium
- Vitamin B6
- Vitamin C
- Vitamin D
- Vitamin K
- Zinc

## **MEDICATION CLASS: DIURETICS**

#### **About Diuretics:**

Diuretics, commonly referred to as water pills, are a class of medications designed to increase the rate of urine excretion to help the body eliminate excess salt and water. They work by acting on the kidneys to promote the flushing out of sodium which is followed by water because water flows towards sodium due to a process called osmosis. This reduction in water and sodium reduces blood volume and, consequently, blood pressure. Diuretics are primarily used in the treatment of high blood pressure, heart failure, and certain types of kidney or liver disease in which excess fluid is a concern. Improper or long-term diuretic use can lead to potentially dangerous electrolyte imbalances and dehydration. Taking diuretics may potentially deplete specific nutrients in the body.

- Calcium
- CoQ10
- Magnesium
- Phosphorus
- Potassium
- Sodium
- Vitamin B1
- Vitamin B6
- Vitamin C
- Zinc

## **MEDICATION CLASS: GLUCOCORTICOIDS**

#### **About Glucocorticoids:**

Glucocorticoids are a class of corticosteroids which are steroid hormones that play a crucial role in regulating many essential functions in the body including the immune response, metabolism, and stress response. They are synthetic versions of the natural hormones produced by the adrenal glands and work by suppressing the immune system's activity. Glucocorticoids are used in the treatment of conditions like asthma, allergies, rheumatoid arthritis, lupus, and other autoimmune diseases. By inhibiting the production of inflammatory mediators and inducing the death of certain immune cells, glucocorticoids can reduce symptoms associated with inflammation and an overactive immune system. Taking glucocorticoids may potentially deplete specific nutrients in the body.

- Calcium
- Chromium
- Magnesium
- Potassium
- Selenium
- Vitamin D
- Vitamin K
- Zinc

## MEDICATION CLASS: MONOAMINE OXIDASE INHIBITORS (MAOIS)

#### About Monoamine Oxidase Inhibitors (MAOIs):

Monoamine Oxidase Inhibitors (MAOIs) are a class of antidepressant medications that work by reducing the activity of monoamine oxidase, an enzyme responsible for breaking down neurotransmitters like serotonin, norepinephrine, and dopamine in the brain. By preventing the breakdown of these chemicals, MAOIs increase their levels and allow the levels of these neurotransmitters to stay elevated for an extended amount of time, potentially reducing symptoms of depression and other mood disorders. MAOIs are typically used as a treatment option for depression that has not responded to other antidepressants, due to their potential for serious interactions with certain foods and other medications. Patients taking MAOIs need to follow a strict diet avoiding tyraminerich foods (such as aged cheeses and cured meats) to prevent a dangerous spike in blood pressure. Taking MAOIs may potentially deplete specific nutrients in the body.

#### **Possible Nutrient Depletions:**

• Vitamin B6

## MEDICATION CLASS: NARCOTIC ANALGESICS (OPIOIDS)

#### **About Narcotic Analgesics (Opioids):**

Narcotic analgesics, commonly known as opioids, are a class of medications that are used to treat moderate to severe pain by binding to opioid receptors in the brain and spinal cord. This action not only blocks the transmission of pain signals to the brain but also triggers the release of dopamine, inducing a sense of euphoria and reducing an individual's perception of pain. Opioids are typically prescribed for acute pain, such as that following surgery or injury, and for chronic pain when other pain relievers are ineffective. However, due to their high potential for dependence and addiction, their use is typically reserved for cases where alternative pain-relieving options have failed. Taking opioids may potentially deplete specific nutrients in the body.

- Acetylcholine
- B-Complex
- Vitamin C
- Vitamin D

## MEDICATION CLASS: NSAIDS (NONSTEROIDAL ANTI-INFLAMMATORY DRUGS)

#### About NSAIDs (Nonsteroidal Anti-Inflammatory Drugs):

Nonsteroidal Anti-Inflammatory Drugs (NSAIDs) are a class of medications widely used to relieve pain, reduce inflammation, and lower fever. They work by inhibiting enzymes known as COX-1 and COX-2, which are involved in the production of prostaglandins which are substances in the body that play a key role in the inflammation process. NSAIDs are commonly used to treat a variety of conditions including headaches, muscle aches, arthritis, menstrual cramps, and minor injuries. While NSAIDs are generally safe for short-term use, long-term use or overuse can lead to gastrointestinal issues such as ulcers and bleeding, as well as an increased risk of heart attack and stroke, especially in individuals with existing cardiovascular conditions. Taking NSAIDs may potentially deplete specific nutrients in the body.

- Calcium
- Folic Acid (Folate)
- Iron
- Melatonin
- Potassium
- Sodium
- Vitamin B5
- Vitamin C

## MEDICATION CLASS: PROTON PUMP INHIBITORS (PPIS)

#### About Proton Pump Inhibitors (PPIs):

Proton Pump Inhibitors (PPIs) are a class of medications that reduce the production of stomach acid by blocking the enzyme in the stomach lining responsible for acid secretion. By blocking this enzyme, known as the gastric proton pump, PPIs decrease the level of acid in the stomach and are used to reduce symptoms associated with an overproduction of stomach acid. They are commonly used to treat gastroesophageal reflux disease (GERD) and peptic ulcers. Long-term use has been associated with potential risks including nutrient malabsorption, impaired digestion, kidney issues, and an increased risk of certain infections and osteoporosis. PPIs do not treat the underlying cause of acid-related symptoms and conditions. Taking PPIs may potentially deplete specific nutrients in the body.

- Calcium
- Iron
- Magnesium
- Vitamin B12
- Vitamin C
- Vitamin D
- Zinc

## MEDICATION CLASS: SALICYLATE MEDICATIONS

#### **About Salicylate Medications:**

Salicylate medications, with aspirin being the most well-known example, are nonsteroidal anti-inflammatory drugs (NSAIDs) known for their pain-relieving, feverreducing, and anti-inflammatory properties. These medications work by inhibiting the production of prostaglandins in the body which play a crucial role in the inflammation process and can cause pain and fever. Salicylate medications are commonly used to treat a variety of symptoms including headaches, muscle aches, joint pain, and fever. They also have an antiplatelet effect that can reduce blood clotting, with some individuals taking it daily for this purpose. However, the use of salicylate medications is not without risks as it can cause gastrointestinal upset, ulcers, and increased bleeding tendency in some individuals. Taking salicylates may potentially deplete specific nutrients in the body.

- Folic Acid (Folate)
- Iron
- Potassium
- Sodium
- Vitamin B12
- Vitamin C

## **MEDICATION CLASS: STATINS**

#### **About Statins:**

Statins are a class of lipid-lowering medications that inhibit the enzyme HMG-CoA reductase, which plays a central role in the production of cholesterol in the liver. By blocking this enzyme, statins reduce the level of low-density lipoprotein (LDL) cholesterol, often referred to as "bad" cholesterol, in the bloodstream. Statins may also make existing arterial plaque deposits less likely to rupture and cause a clot. They are widely prescribed for individuals with high cholesterol, those who have had cardiovascular events, and for certain individuals at high risk of these diseases. Statins are one of the most commonly prescribed medications, but while they may reduce cholesterol, they can also deplete CoQ10 in the body which is a powerful antioxidant that affects energy and the immune system. Taking statins may potentially deplete specific nutrients in the body.

- CoQ10
- Iron
- Magnesium
- Potassium
- Vitamin D
- Vitamin E
- Zinc

