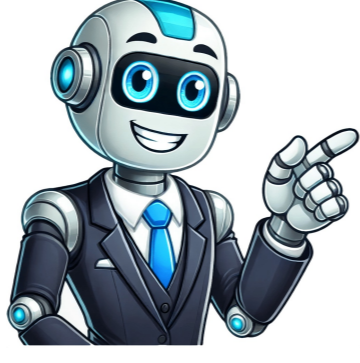


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Vitamin panel lab test

The following is a list of what is included in the item above. Click the test(s) below to view what biomarkers are measured along with an explanation of what the biomarker is measuring. Also known as: CBC, CBC includes Differential and Platelets, CBC/PLT w/DIFF, Complete Blood Count (includes Differential and Platelets) NOTE: Ultra Lab Tests provides CBC test results from Quest Diagnostics as they are reported. Often, different biomarker results are made available at different time intervals. When reporting the results, Ultra Lab Tests denotes those biomarkers not yet reported as 'pending' for every biomarker of this test might report. Only biomarkers Quest Diagnostics observes are incorporated and represented in the final CBC test results provided by Ultra Lab Tests. Also known as: Chem 12, Chemistry Panel, Chemistry Screen, CMP, Complete Metabolic Panel, Comprehensive Metabolic Panel CMP, SMA 12, SMA 20 Also known as: Homocysteine, Homocysteine Cardiovascular Also known as: Iron Total Also known as: Cobalamin, Folic Acid, Vitamin B 12, Vitamin B 12 and Folic Acid, Vitamin B12 Cobalamin and Folate Panel Serum, Vitamin B12/Folic Acid Important information on Lab Test Processing Time: Ultra Lab Tests is committed to informing you about the processing times for your lab tests processed through a national lab. Please note that the estimated processing time for each test, indicated in business days, is based on data from the past 30 days across the 13 laboratories for each test. These estimates are intended to serve as a guide and are not guarantees. Factors such as laboratory workload, weather conditions, holidays, and the need for additional testing or maintenance can influence actual processing times. We aim to offer estimates to help you plan accordingly. Please understand that these times may vary, and processing times are not guaranteed. Thank you for choosing Ultra Lab Tests for your laboratory needs. The Vitamin/Nutrient Panel panel contains 9 tests with 64 biomarkers. The Vitamin/Nutrient Panel is a complete blood count (CBC) with differential and platelets, comprehensive metabolic panel (CMP), ferritin, homocysteine, iron, total magnesium, methylmalonic acid (MMA), vitamin B12 and folate, and QuestAssureD vitamin D 25-hydroxyvitamin-D (D2 D3). This panel is right for those who want to make sure they are getting these essential vitamins and minerals their body needs. It's also great for people who are interested in preventive health and want to catch deficiencies early. With this complete picture of your nutrient status, you can work to make sure you are on track for optimal health. This information is essential in maintaining your health and preventing disease. Order the Vitamin/Nutrient Panel today for peace of mind about your health. The Vitamin/Nutrient Panel contains the following tests: Complete Blood Count (CBC) with Differential and Platelets Comprehensive Metabolic Panel (CMP) Ferritin Homocysteine Iron, Total Magnesium Methylmalonic Acid (MMA) Vitamin B12 and Folate QuestAssureD Vitamin D 25-Hydroxyvitamin-D (D2 D3) What's Tested Labcorp's vitamin D test included in this panel measures the level of 25-hydroxy vitamin D in your blood. Vitamin D helps your body regulate calcium metabolism which in turn helps maintain healthy bones, control infections, reduce inflammation and more. Your skin produces vitamin D through sunlight exposure. Vitamin D is also found in foods such as fatty fish, mushrooms, egg yolks and fortified milks. When you're deficient in vitamin D, you may experience symptoms like fatigue, muscle weakness and depression. Additionally, you could become more prone to having fractures from falls if you have a vitamin D deficiency. Vitamin B12 plays an essential role in red blood cell formation, cell metabolism, nerve function and more. It's found in foods such as nutritional yeast, plant-based milks and certain cereals. When you're deficient in vitamin B12, you may experience symptoms like fatigue, weight loss and loss of appetite. A natural form of vitamin B9, folate helps your body make new red blood cells and DNA, and it plays an important role in a fetus's development. It's found in foods such as leafy greens, beans, seafood, eggs and more. When you're deficient in folate, you may experience symptoms like fatigue and weight loss. Magnesium is a type of electrolyte—an electrically charged mineral—that helps your muscles, nerves and heart work properly. It's found in foods such as legumes, nuts, seeds, greens and whole grains. When you're deficient in magnesium, you may experience symptoms like fatigue, muscle cramps, numbness and/or tingling, an irregular heartbeat and more. Magnesium can impact the balance of other electrolytes, including potassium. It is recommended to consult with your healthcare provider to discuss your test results and next steps. This trace mineral supports your thyroid function by helping to produce thyroid hormones. It's found in foods such as iodized salt, milk, yogurt, cheese, shrimp, cod and tuna. When you're deficient in iodine, you may experience symptoms like fatigue, weight gain, dry skin, confusion and more. This important mineral helps support your immune system and metabolism. It's found in foods such as red meat, chicken, oysters, beans, lentils, nuts and chickpeas. When you're deficient in zinc, you may experience symptoms like weight loss, loss of appetite, decreased immunity and hair loss. These are our most popular vitamin and mineral tests. Vitamin lab tests measure blood or urine levels of various vitamins, and are helpful in diagnosing vitamin deficiencies or an excess or overabundance of particular vitamins. The Comprehensive Vitamin Panel includes testing the blood for 13 vitamins and is used to detect deficiencies across the vitamin spectrum. View Details The Comprehensive Mineral Panel includes testing the blood for 5 minerals and is used to detect deficiencies across the mineral spectrum. View Details This blood test can provide information about the levels of Omega 3 and Omega 6 fatty acids in the body View Details The Comprehensive Vitamin Panel includes testing the blood for 13 vitamins and is used to detect deficiencies across the vitamin spectrum. View Details Vitamins (such as A, C, D, E, and K) and minerals (such as calcium, phosphorus, potassium, sodium, and iron) are considered essential nutrients. These nutrients are the raw materials that the body needs to perform important functions like healing wounds, supporting the immune system, and even converting food into energy. If the body has too many or too little vitamins and minerals, it can severely throw off daily functions and create health issues. Symptoms of a Nutrient Deficiency Symptoms that you may be experiencing a vitamin or mineral nutrient deficiency can be: Burning sensation in the feet or tongueWhite growths on the eyesScaly patches of skinRed or white bumps on the skinWounds that are slow to healChaching joints and musclesLemur brittle hair and nailsBleeding gumsPoor night visionMuscle crampsDandruffHair lossFatigueNauseaWeakness Benefits of Vitamins and Minerals There are many benefits to getting enough vitamins and minerals: They maintain healthy bones, prevent congenital disabilities (birth defects), and promote healthy teeth. However, routinely getting too many vitamins and nutrients can also cause issues such as nausea, diarrhea, and stomach cramps. Keeping track of your vitamin and mineral intake can be challenging, so testing your levels to see if you're deficient is highly beneficial. Once you know your results, you can modify your diet to make sure you're getting a good variety of vitamins and minerals. Collection method: venous blood drawResults in: 1 to 2 daysTests for: vitamin B12, folate, and vitamin D\$169.00 AT LABCOR**Price may vary. Why we chose itIf you prefer to have your blood sample taken by a professional, the Labcorp Vitamin Deficiency Test could be a good option. This test also measures blood levels of three key vitamins — folate (vitamin B9), vitamin B12, and vitamin D — to determine whether you're meeting your needs.This is also a good test if you know that you're at risk of vitamin B12 deficiency or vitamin D deficiency. But it's always a good idea to discuss these risk factors with a healthcare professional first.For this test, a technician will collect a blood sample at one of Labcorp's 2,000+ locations. Results are typically available within 1 to 2 days.The company recommends fasting for at least 12 hours and discontinuing the use of any supplements that contain biotin for at least 72 hours before testing.Once the company has processed your test, you can access your results through your Labcorp OnDemand account. Sometimes, a healthcare professional may follow up via phone or email about your results.Learn more about LabCorp in our comprehensive brand review.samples collected by a trained technicianes Clinical Laboratory Improvement Amendments (CLIA) certified labshsa health savings account (HSA) and flexible spending account (FSA) cards acceptedAccepts insurance: HSA/FSA onlyFollow-up guidance: free access to physician services from PWNHealthReturns: no returns or refundsShipping: shipping calculated at checkoutCollection method: venous blood drawResults in: 1 to 2 daysTests for: ferritinLevelsUse code *HEALTHLINE20* for 20% off!\$59.00 AT LABCOR**Price may vary. Why we chose itIf you're concerned about possible iron deficiency symptoms, you may consider getting a test that checks your levels of ferritin (a protein in your blood that helps with iron storage), such as this one from Labcorp. Your body stores iron in ferritin proteins. Thus, low levels of ferritin can mean your body doesn't have enough iron to store, which could indicate a deficiency.However, keep in mind that some other methods of checking your iron levels are potentially more accurate than a ferritin test.The Labcorp Ferritin Blood Test is processed in a CLIA certified lab. A trained technician must collect the samples at one of Labcorp's 2,000+ locations.Your results are posted on your Labcorp OnDemand account. If your results require immediate attention, a healthcare professional will contact you by phone or email.uses CLIA certified labresults in 1 to 2 daysHSA and FSA cards acceptedrequires a visit to a Labcorp locationAccepts insurance: HSA/FSAFollow-up guidance: free access to physician services from PWNHealthReturns: no returns or refundsShipping: shipping calculated at checkout 4.8 (223+) from EverlywellCollection method: finger prickResults in: a few daysTests for: vitamin D and ironCRP levelsUse code *HEALTHLINE25* for 25% off \$99.00 AT EVERLYWELL*Price may vary. Why we chose itWhile there are other quality at-home vitamin D tests on the market, we like that this test from Everlywell provides results within days and includes educational resources to help you learn more about your test results.The Everlywell At-Home Vitamin D Test uses a blood sample obtained with a finger-pricking device, which is included in the kit. This kit is also CLIA certified and independently verified by a doctor in your state.After receiving your results, you may choose to view a recorded educational session, which provides more details about your results and what your next steps should be going forward.Overall, this vitamin test has mostly positive reviews from customers, who mention its accuracy and ease of results for the price. A few users note that the results were slower than expected.Learn more about Everlywell in our brand review.includes access to recorded educational sessionsCLIA certified labresults reviewed by doctorsHSA and FSA cards accepteddoesnt offer a personal consultation with a medical professionalso reports of delays in receiving resultsAccepts insurance: HSA/FSA onlyFollow-up guidance: a recorded educational sessionReturns: no returns or refundsShipping: free shippingWomen-FoundedCollection method: in-person blood sampleResults in: up to 8 business daysTests for: vitamin B1 (thiamine), vitamin B6 (pyridoxine), vitamin B12 (cobalamin), vitamin D, vitamin E, calcium, folate, iodine, iron, magnesium, potassium, zincSHOP NOW AT QUEST DIAGNOSTICSWhy we chose itWhile it's one of the most expensive options on the list, this test provides a thorough look into your nutrition and possible vitamin deficiencies. It's one of the most extensive tests on our lists and may suit a range of people. This test looks at 13 nutrients including:Quest states that this test may suit anyone who is worried about a vitamin deficiency or is showing symptoms of a deficiency. They state that it may specially suit those who consume a low carb diet.For example, this vitamin deficiency test may work well for you if you don't consume whole grains like wheat, rice, or oatstod consume or limit your amount of starchy vegetables, such as potatoesand consume simple carbohydrates (processed foods)For the best results, Quest suggest fasting for 10 to 12 hours before taking the test. They also suggest avoiding supplements that contain the nutrients that you're testing for 25 hours prior. The company also recommend checking with a doctor to see whether you should avoid certain other supplements or medications before testing,tailored to people who are on a low carb meal planTests for 13 different nutrientsmay accept HSA and FSA paymentsexpensiveTesting not available in Alaska, Arizona, or Hawaiiin-person testing may not suit everyoneInsurance coverage: accepts FSA/HSA debit/credit cardsFollow-up guidance: free access to physician services from PWNHealthReturns: partial refunds may be availableShipping: freeCollection method: in-person blood sampleResults in: up to 8 daysTests for: vitamin B1 (thiamine), vitamin B6 (pyridoxine), vitamin B12 (cobalamin), vitamin D, calcium, iodine, iron, omega-3, omega-6, zincSHOP NOW AT QUEST DIAGNOSTICSWhy we chose itThis is a comprehensive test that indicates if someone following a vegetarian or vegan diet is getting all the nutrients they need. Despite it being more expensive, it looks for 11 different vitamin deficiencies.According to 2021 research, people following a vegetarian or vegan diet may be at a higher risk for vitamin deficiencies, such as vitamin B12, vitamin D, iron, zinc, and calcium. This is because these nutrients are mostly present in animal foods and may have a lower bioavailability in plant foods. This means the body may not absorb these nutrients as efficiently in plants.This Quest test looks for:vitamin B1, B6, and B12vitamin Dcalciumiodineironomega-3 and omega-6zincThe company recommends fasting for 10 to 12 hours and avoiding any supplements that include the vitamins the test is searching for. Quest states that this test would also suit people considering transitioning to a plant-based diet.After receiving your results, the company states that independent physicians are available to discuss your results,tailored to people who are on a vegetarian or vegan dietTests 11 different nutrientsmay accept HSA and FSA paymentsexpensiveTesting not available in Alaska, Arizona, or Hawaiiin-person testing may not suit everyoneInsurance coverage: accepts FSA/HSA debit/credit cardsFollow-up guidance: free access to physician services from PWNHealthReturns: partial refunds availableShipping: free shippingCollection method: finger prickResults in: 2 to 5 daysTests for: vitamins D, E, and B12, copper, and ironCRP levelsUse code *HEALTHLINE25* for 25% off \$99.00 AT EVERLYWELL*Price may vary. Why we chose itWhile there are other quality at-home vitamin D tests on the market, we like that this test from Everlywell provides results within days and includes educational resources to help you learn more about your test results.The Everlywell At-Home Vitamin D Test uses a blood sample obtained with a finger-pricking device, which is included in the kit. This kit is also CLIA certified and independently verified by a doctor in your state.After receiving your results, you may choose to view a recorded educational session, which provides more details about your results and what your next steps should be going forward.Overall, this vitamin test has mostly positive reviews from customers, who mention its accuracy and ease of results for the price. A few users note that the results were slower than expected.Learn more about Everlywell in our brand review.includes access to recorded educational sessionsCLIA certified labresults reviewed by doctorsHSA and FSA cards accepteddoesnt offer a personal consultation with a medical professionalso reports of delays in receiving resultsAccepts insurance: HSA/FSA onlyFollow-up guidance: a recorded educational sessionReturns: no returns or refundsShipping: free shippingWomen-FoundedCollection method: in-person blood sampleResults in: up to 8 business daysTests for: vitamin B1 (thiamine), vitamin B6 (pyridoxine), vitamin B12 (cobalamin), vitamin D, vitamin E, calcium, folate, iodine, iron, magnesium, potassium, zincSHOP NOW AT QUEST DIAGNOSTICSWhy we chose itWhile it's one of the most expensive options on the list, this test provides a thorough look into your nutrition and possible vitamin deficiencies. It's one of the most extensive tests on our lists and may suit a range of people. 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Why we chose itWhile there are other quality at-home vitamin D tests on the market, we like that this test from Everlywell provides results within days and includes educational resources to help you learn more about your test results.The Everlywell At-Home Vitamin D Test uses a blood sample obtained with a finger-pricking device, which is included in the kit. This kit is also CLIA certified and independently verified by a doctor in your state.After receiving your results, you may choose to view a recorded educational session, which provides more details about your results and what your next steps should be going forward.Overall, this vitamin test has mostly positive reviews from customers, who mention its accuracy and ease of results for the price. A few users note that the results were slower than expected.Learn more about Everlywell in our brand review.includes access to recorded educational sessionsCLIA certified labresults reviewed by doctorsHSA and FSA cards accepteddoesnt offer a personal consultation with a medical professionalso reports of delays in receiving resultsAccepts insurance: HSA/FSA onlyFollow-up guidance: a recorded educational sessionReturns: no returns or refundsShipping: free shippingMicro nutrient testing is often considered for individuals with signs and symptoms that may suggest vitamin/mineral deficiency, digestive conditions that affect absorption, and a history of restrictive eating patterns. Conventional labs don't typically offer panels that assess multiple micronutrient levels, and often these markers aren't covered by insurance. Piecing together a standard lab order with many nutrient markers can become costly and may not accurately reflect long-term nutritional status and cellular functionality.Labs utilize various testing methods to assess nutritional status; specially lab panels vary in their assessment practices. Determining what information you are looking for will help determine which lab to order. This article will discuss four popular specialty micronutrient tests available to order through Rupa Health.Sign Up to Order Our Most Popular Micronutrient Lab Tests [signup]What is Micronutrient Testing?Micronutrient testing is a specialty lab panel designed to assess a person's nutritional status by measuring levels of vitamins, minerals, and other essential nutrients. These panels usually combine direct and indirect markers of various nutrients to screen for deficiencies, evaluate for optimal nutrient status, and assess how micronutrients work in the body at a cellular level. Micronutrient test results can help tailor dietary suggestions to the person's biochemical and cellular needs and identify when nutritional supplements might be appropriate to support diet and lifestyle habits. Micronutrient testing can help optimize the nutritional platform on which a person's health stands and reduce the use of unnecessary supplements.Which Individuals is Micronutrient Testing Best Used For?Functional doctors typically follow a therapeutic order in their treatment decisions, intending to use the least force necessary to stimulate change toward health and well-being. The first principle within this order is establishing and strengthening the foundations of health, including clean water, physical activity, adequate sleep, socialization, and nutrition. Our diets should provide our bodies with the nutrients required for optimal living. Dietary choices impact our health on the cellular level. The Standard American Diet (SAD) consists of over-processed foods lacking in the micronutrients and phytochemicals needed by the body to maintain optimal health. Even with adopting healthy lifestyle practices, environmental factors can impact how the body digests food and absorbs micronutrients on a gross and cellular level - meaning, you can live a healthy lifestyle and still have a suboptimal nutrient status.That being said, micronutrient testing can be ordered for anyone wanting to be proactive in their health, screen for nutritional deficiencies, optimize performance, and support healthy aging.Micronutrient testing also plays a role in managing certain health conditions. These may include, but are not limited to:Micro nutrient levels can affect metabolism and influence weight management, so those seeking weight management support may also want micronutrient testing beneficial.Rupa Health's Top Popular Micronutrient Test OverviewSign Up to Order Our Most Popular Micronutrient Lab Tests Cellular Micronutrient Assay from Cell Science SystemsThe Cellular Micronutrient Assay is Cell Science Systems' micronutrient panel for younger individuals that assesses the long-term micronutrient status of vitamins, minerals, antioxidants, amino acids, and fatty acids.What Does The Cellular Micronutrient Assay from Cell Science Systems Measure?This assay measures the cellular need for 55 tested analytes by assessing the direct response of the white blood cells when micronutrients are added to them. Tested analytes are reported as follows:Vitamins: Biotin, Delta tocotrienol, MK4, MK7, Panthothenic acid, Vitamin A, Vitamin B1, Vitamin B2, Vitamin B3, Vitamin B6, Vitamin B9, Vitamin B12, Vitamin C, Vitamin D, Vitamin K1Minerals: Boron, Calcium, Chromium, Copper, Iodine, Iron, Lithium, Magnesium, Manganese, Molybdenum, Selenium, Strontium, Vanadium, ZincAmino Acids: Arginine, Asparagine, Cysteine, Glycine, Histidine, Isoleucine, Leucine, L-Glutamine, L-Serine, L-Tyrosine, Lysine, Methionine, Phenylalanine, Taurine, Threonine, Tryptophan, ValineOther Nutrients: Carnitine, Choline, Coenzyme Q10, Glutathione, Inositol, Lipic Acid, Omega 3 DHA, Omega 3 EPA, Omega 9What Makes This Test Popular? It is designed for the pediatric and early-adolescent populations.Easy-to-interpret test reports nutrients as "sufficient," "borderline," and "insufficient." Borderline and insufficient nutrients are accompanied by educational commentary.When Should You Consider This Test?You suspect nutrient deficiencies in individuals 9-14 years old.Cost is an inhibiting factor for your patient.Sign Up to Order The Cellular Micronutrient Assay Metabolomix+ Test from GenovaMetabolomix+ Test from GenovaMetabolomix+ Test from Genova is a two-in-one organic acid and micronutrient panel that evaluates metabolic function and nutritional status extensively. Metabolomix+ requires non-invasive sample collections from the patient, and the test panel is customizable with optional fatty acid, toxic and nutritional elements, and genetic testing options.What Does The Metabolomix+ Test from Genova Measure?The basic Metabolomix+ is broken down into three main categories:Organic acids assess digestive function, intestinal dysbiosis, mitochondrial function, neurotransmitter status, oxalate production, detoxification, and vitamin levels.Oxidative stress markers quantify cellular inflammation and damage to identify the need for antioxidant support.Urinary amino acids reflect recent protein intake, assess for protein malabsorption, and identify nutritional insufficiencies that can impair protein metabolism.Optional test add-ons include:Blood spot finger prick to measure red blood cell omega-3, omega-6, omega-9, saturated, and monounsaturated fatty acid levels. Includes ratios and the Omega-3 Index to quantify cardiovascular risk.An additional 20 toxic and 15 mineral urinary elementsPatient-collected cheek swab to identify up to four genetic SNPs (MTHFR, COMT, TNF-α, and APOE)What Makes This Test Popular?The user-friendly report is easily interpreted and contains educational resources, graphics, and a functional scoring system to help analyze and prioritize testing suggestions.This test combines organic acid and micronutrient testing into one.Genova offers optional test add-ons to customize the panel to your patient's needs.Test collection is non-invasive and does not require a phlebotomist to perform a blood draw. When Should You Consider This Test?Your patient is over two years old.You would like to order a functional nutritional assessment that incorporates the measurement of organic acids and micronutrients.Your patient is averse to blood draws.Sign Up to Order The Metabolomix+ Test Micronutrient Test from SpectraCellThe Micronutrient Test from SpectraCell utilizes intracellular white blood cell nutrient measurements to assess cellular function. Intracellular micronutrient levels reflect the long-term nutritional status of the cells to identify nutritional imbalances that may contribute to chronic health issues and suboptimal function.What Does The Micronutrient Test from SpectraCell Measure?This Micronutrient Test measures 31 vitamins, minerals, amino acids, fatty acids, antioxidants, and metabolites. Analytes by category include:Vitamins: Vitamin A, Vitamin B1, Vitamin B2, Vitamin B3, Vitamin B6, Vitamin B12, Folate, Pantothenate, Biotin, Vitamin C, Vitamin D, Vitamin KMinerals: Calcium, Magnesium, Manganese, Zinc, CopperAmino Acids and Metabolites: Serine, Glutamine, Asparagine, Choline, Inositol, CarnitineAntioxidants: Alpha Lipic Acid, Coenzyme Q10, Glutathione, Cysteine, Selenium, Vitamin ECarbohydrate Metabolites: Fructose Sensitivity, Glucose-Insulin Interaction, ChromiumSpectroX is SpectraCell's measurement of the lymphocyte's ability to resist oxidative stress and quantifies the total antioxidant function.Immunitex is SpectraCell's measured indicator of how well a person's immune system responds to stressors.What Makes This Test Popular? SpectraCell is one of the original specialty labs to offer comprehensive intracellular micronutrient testing.SpectraCell's unique SpectroX and Immunitex scores provide additional information regarding how well cells manage oxidative stress and launch immune responses.When Should You Consider This Test?You want a functional intracellular nutritional assessment to guide personalized dietary and supplemental suggestions for supporting health and wellness.Sign Up to Order The Micronutrient Test [signup]SummaryMicronutrient levels are important for overall health and can influence various aspects of well-being. Micronutrient imbalances can exist and affect cellular function even in individuals without noticeable symptoms. Specialty nutrient testing offers an assessment of nutritional status and metabolism for individuals wishing to address imbalances before they lead to health concerns. Rupa Health offers easy ordering access to many micronutrient panels. Click here to view a comparison guide of all four tests discussed in this article.The information in this article is designed for educational purposes only and is not intended to be a substitute for informed medical advice or care. This information should not be used to diagnose or treat any health problems or illnesses without consulting a doctor. Consult with a health care practitioner before relying on any information in this article or on this website.The Cellular Micronutrient Assay measures the effect of micronutrients on a patient's immune function to identify nutrient insufficiencies. This test cannot be ordered for patients under 9 years of age.The Metabolomix+ combines a variety of tests to analyze key nutritional biomarkers, including organic acids, amino acids, and oxidative stress markers. This test cannot be ordered for patients under two years of age.The SpectraCell Micronutrient Test analyzes over 30 vitamins, minerals, and other nutrients to determine nutritional deficiencies. It also analyzes the performance and functional deficiencies of these micronutrients. This test is not recommended for patients under 12 years of age.NeuroPathic Physician based in the greater Seattle areaOrder from 30+ labs in 20 seconds (DUTCH, Mosaic, Genova & More)We make ordering quick and painless — and best of all, it's free for practitioners.View more on Running Your BusinessOops! Something went wrong while submitting the form.Oops! Something went wrong while submitting the form. Vitamins are essential micronutrients that our bodies need in small amounts to function correctly. They play crucial roles in everything from energy production and immune function to bone health and blood clotting. When we don't get enough of specific vitamins, deficiencies can develop, leading to a range of health problems. Fortunately, vitamin deficiencies can often be identified through specific blood tests. This article will explore the most accurate blood tests used to detect vitamin deficiencies, helping you understand how to monitor your vitamin levels and maintain optimal health, and importantly, what steps to take if a deficiency is found. Understanding Vitamin Deficiencies Before diving into specific blood tests, it's important to understand what a vitamin deficiency is and why it matters. A deficiency occurs when the body doesn't receive or absorb enough of a particular vitamin to meet its needs. This can happen for various reasons, including: Inadequate Dietary Intake: Not consuming enough vitamin-rich foods. Malabsorption Issues: Conditions like celiac disease, Crohn's disease, or cystic fibrosis can interfere with the absorption of vitamins. Increased Needs: Certain life stages, like pregnancy or breastfeeding, increase the body's demand for specific vitamins. Medications: Some medications can interfere with vitamin absorption or utilization. Age factor: Some vitamins absorption become less with the age. Genetic: Body may not be designed to absorb some vitamins. Vitamin deficiencies can manifest in various ways, from subtle symptoms like fatigue and weakness to more severe health problems. Identifying these deficiencies early is crucial for preventing long-term complications. Understanding Key Factors Influencing Vitamin Absorption in the Body Several vitamin deficiencies are relatively common, each with its own set of symptoms. Here are a few examples: Vitamin Deficiencies Vitamin D is crucial for calcium absorption and bone health. It also plays a role in immune function and cell growth. Deficiency in Vitamin D is very common. Symptoms: Fatigue, bone pain, muscle weakness, mood changes (depression), frequent infections. Risk group: Mostly all age groups is at risk. Symptoms and Risk Group Vitamin B12 is essential for nerve function, red blood cell production, and DNA synthesis. Symptoms: Fatigue, weakness, tingling or numbness in hands and feet, memory problems, difficulty walking, anemia. Risk factors: Vegans and vegetarians, older adults, individuals with gastrointestinal disorders. Symptoms and Risk Factors Folate is vital for cell growth and division, particularly during pregnancy. Symptoms: Fatigue, weakness, shortness of breath, sore skin, mouth sores, irritability. Risk factor: All age groups are at risk. Understanding Folate Deficiency Vitamin C is an antioxidant that supports immune function, wound healing, and collagen production. Symptoms: Fatigue, weakness, easy bruising, bleeding gums, slow wound healing, dry skin, and hair. Risk Group: Mostly Children, Pregnant women, and old age people. Understanding Vitamin C Deficiency Vitamin A is crucial for vision, immune function, and cell growth. Symptoms: Night blindness, dry eyes, frequent infections, dry skin, and impaired wound healing. Risk group: Children and Pregnant Women. Understanding Vitamin A Deficiency Vitamin E protect body from oxidative damage. Symptoms Muscle weakness, vision Problem, and weak immune system. Risk group: All age group people. Understanding Vitamin E Deficiency Vitamin K is very important for blood clotting and bone health. Symptoms: Easy bruising and excessive bleeding. Risk group: New born babies, and people who has malabsorption issues. These are just a few examples, and the specific symptoms can vary depending on the severity of the deficiency. Symptoms and Risk Groups Several blood tests can accurately measure vitamin levels in the body. The specific test used will depend on the vitamin being assessed. Below are some of the most common and reliable tests: Blood Tests for Vitamins This is the most accurate way to measure vitamin D levels in your blood. It measures the level of 25-hydroxyvitamin D, which is the main storage form of vitamin D in the body. The test is also known as a 25(OH)D test. Results are typically reported in nanograms per milliliter (ng/mL) or nanomoles per liter (nmol/L). Optimal Levels: Generally, levels between 30-50 ng/mL (75-125 nmol/L) are considered sufficient. However, optimal levels can vary depending on individual needs and health conditions. Some experts recommend even higher levels (50-80 ng/mL) for optimal health. Low level: Level below 20 ng/mL can indicate deficiency. Vitamin D Level Assessment This measures the total amount of vitamin B12 in the blood. While it's a common test, it's not always the most accurate indicator of B12 status, especially in borderline cases. Normal Ranges: Typically, 200-900 picograms per milliliter (pg/mL) is considered normal. However, some labs may use slightly different ranges. Low level: Vitamin B12 below 200 pg/mL is consider low. Determine the reliability of the Vitamin B12 test for accurate status assessment This test is often used in conjunction with the serum vitamin B12 test, especially if B12 levels are borderline. MMA is a substance that builds up in the blood when vitamin B12 levels are low. Therefore, a high MMA level is a more sensitive indicator of B12 deficiency than a low serum B12 level alone. High MMA Levels: Indicate a likely B12 deficiency. Understanding the Methylmalonic Acid Test Homocysteine is an amino acid that is elevated in both vitamin B12 and folate deficiencies. While not specific to B12, it can be a helpful additional marker, especially when combined with MMA and serum B12 tests. High Homocysteine Levels: Can suggest a B12 or folate deficiency, but further testing is needed to determine the specific cause. What does high homocysteine level indicate This test measures the amount of folate stored within red blood cells. It's considered a more accurate reflection of long-term folate status than serum folate levels, which can fluctuate more with recent dietary intake. Normal Ranges: Vary depending on the lab, but generally, higher levels indicate better folate status. Determine the most reliable test for assessing long-term folate status This test measures the amount of folate in the liquid portion of the blood (serum). While it can be helpful, it's more susceptible to short-term dietary changes than the RBC folate test. Compare folate tests for dietary impact and assessment duration This test measures the level of vitamin C (ascorbic acid) in the blood. Normal Ranges: Vary, but generally, levels above 0.6 mg/dL are considered adequate. Low Level: Vitamin C levels Below 0.2 mg/dL can indicate deficiency. Determine vitamin C status based on blood levels This test measures the level of vitamin A (retinol) in the blood. However, serum retinol levels may not accurately reflect vitamin A status until the deficiency is severe, as the liver maintains retinol levels until stores are significantly depleted. Normal Ranges: Vary, but generally, levels above 20 mcg/dL are considered adequate. Low Level: Less than 10mcg/dL suggest severe deficiency. Vitamin A Levels Assessment This test measures Vitamin E level. Normal Ranges: 5.5-17 mg/dL, Low Level: Below 5.5 mg/dL suggest deficiency. Vitamin E Level Assessment This test measure how quickly blood clot. Normal: 11 to 13.5 seconds High level: Higher level indicate it taking time in clotting. Determine blood clotting efficiency Several factors can influence the results of vitamin blood tests, making it essential to interpret them in the context of individual circumstances: Recent Dietary Intake: For some vitamins, like serum folate and vitamin C, recent dietary intake can significantly impact blood levels. Medications: Certain medications can interfere with vitamin absorption or metabolism, affecting test results. Underlying Health Conditions: Conditions like malabsorption disorders, liver disease, and kidney disease can affect vitamin levels. Time of Day: Some vitamin levels, like vitamin D, can fluctuate throughout the day. Laboratory Variations: Different laboratories may use slightly different testing methods or reference ranges. It's always best to discuss your test results with a healthcare professional who can consider these factors and provide personalized guidance. Factors Influencing Vitamin Blood Test Results Preparation for a vitamin blood test is usually straightforward, but it's essential to follow any specific instructions provided by your doctor or the lab. Here are some general guidelines: Fasting: Some tests, like the homocysteine test, may require fasting for 8-12 hours before the blood draw. Others, like the 25-hydroxy vitamin D test, typically do not require fasting. Always confirm with your doctor. Medications: Inform your doctor about any medications, supplements, or herbal remedies you are taking, as they may affect test results. Hydration: Drink plenty of water before the test to make it easier to draw blood. Timing: If you are testing for vitamin D, it's generally recommended to avoid testing immediately after prolonged sun exposure, as this can temporarily elevate levels. How to prepare for a vitamin blood test Interpreting vitamin blood test results requires careful consideration of the specific test, the reference ranges provided by the lab, and your individual health status. It's crucial to discuss your results with a healthcare professional, such as a doctor or registered dietitian, who can help you understand their meaning and develop an appropriate plan. Reference Ranges: Labs provide reference ranges for each test, indicating the typical range of values found in healthy individuals. However, these ranges can vary slightly between labs. Optimal vs. Deficient: It's important to distinguish between being "within the reference range" and having optimal levels. For some vitamins, like vitamin D, many experts recommend aiming for levels in the upper part of the reference range for optimal health. Individualized Interpretation: Your doctor will consider your symptoms, medical history, diet, and lifestyle factors when interpreting your results. Interpreting Vitamin Blood Test Results Once a vitamin deficiency is identified, the next step is to address it. The approach will depend on the specific vitamin, the severity of the deficiency, and the underlying cause. Common strategies include: Dietary Changes: Increasing your intake of foods rich in the deficient vitamin is often the first step. Supplementation: Vitamin supplements can be used to correct deficiencies, especially in cases of malabsorption or increased needs. The dosage and form of supplementation should be determined by a healthcare professional. Addressing Underlying Causes: If the deficiency is due to a malabsorption issue or other underlying health condition, addressing that condition is crucial. Monitoring: Regular follow-up blood tests are often recommended to monitor progress and ensure that vitamin levels are returning to normal. Addressing Vitamin Deficiency VitaminBlood Test(s)NotesVitamin D25-Hydroxy Vitamin D Test (25(OH)D)Most accurate measure of vitamin D status.Vitamin B12Serum Vitamin B12, Methylmalonic Acid (MMA), HomocysteineMMA and homocysteine are more sensitive markers of B12 deficiency than serum B12 alone, especially in borderline cases.Folate (B9)Red Blood Cell (RBC) Folate, Serum FolateRBC folate reflects long-term folate status; serum folate is more susceptible to short-term dietary changes.Vitamin CSerum Vitamin C (Ascorbic Acid)Reflects recent vitamin C intake.Vitamin ASerum RetinolMay not accurately reflect vitamin A status until deficiency is severe.Vitamin ESerum alpha-tocopherolReflects vitamin E status.Vitamin KProthrombin Time (PT)May indicate Vitamin K deficiency Vitamins and Their Status Assessment Understanding which blood tests accurately detect vitamin deficiencies is the first step towards proactive health management. By being aware of the common deficiencies, their symptoms, and the available testing options, you can work with your healthcare provider to monitor your vitamin levels and identify any potential problems early. Remember that interpreting blood test results requires a holistic approach, considering individual factors, lifestyle, and medical history. If a vitamin deficiency is detected, don't panic. There are effective strategies, including dietary changes, supplementation, and addressing underlying health conditions, to restore optimal vitamin levels and support your overall well-being. Regular communication with your doctor or a registered dietitian is crucial throughout this process. They can provide personalized guidance, monitor your progress, and adjust your treatment plan as needed. Ultimately, taking control of your vitamin health empowers you to live a healthier and more vibrant life. By prioritizing regular check-ups and addressing any identified deficiencies, you're investing in your long-term well-being and preventing potential health complications down the road. The power to optimize your vitamin intake, guided by accurate blood test results, is a key component of proactive health management. How often should I get my vitamin levels checked?The frequency of vitamin blood tests depends on individual risk factors, health conditions, and previous test results. Your doctor can recommend an appropriate testing schedule. People with known deficiencies, malabsorption issues, or certain medical conditions may need more frequent testing. Can I test my vitamin levels at home?There are some at-home vitamin testing kits available, but their accuracy and reliability can vary. It's generally recommended to have vitamin blood tests performed by a qualified healthcare professional in a certified laboratory. Are vitamin blood tests covered by insurance?Coverage for vitamin blood tests varies depending on your insurance plan and the reason for testing. If the tests are ordered by a doctor to diagnose or monitor a medical condition, they are more likely to be covered. What is the best time of year to test for vitamin D?Vitamin D levels tend to be lowest in the winter months due to reduced sun exposure. Testing at the end of winter or early spring can provide a good indication of your lowest vitamin D levels. However, testing can be done at any time of year. Can taking too many vitamins be harmful?Yes, taking excessive amounts of certain vitamins, especially fat-soluble vitamins (A, D, E, and K), can be harmful and lead to toxicity. It's important to follow recommended dosages and consult with a healthcare professional before taking high-dose supplements. Which is the best blood test for all vitamin deficiencies?There is no single blood test to measure all vitamin deficiencies. Need to do different test to detect different Vitamins. Should everyone take a multivitamin?Not everyone needs a multivitamin. A balanced diet can often provide sufficient vitamins and minerals. However, certain individuals, such as pregnant women, older adults, and people with specific dietary restrictions or medical conditions, may benefit from a multivitamin or specific vitamin supplements. It's best to discuss your individual needs with a healthcare professional. Can I get all the vitamin by having balance diet?Yes, most of the vitamins, body can get by having right balanced diet. How accurate Vitamin blood test is?Yes, vitamin blood tests are accurate, if other parameters are in control.