

Michael Stone, MD, MS
Family Physician

The Stories Your Body Tells About Your Nutritional Status and Your Health



Michael Stone MD, MS is a board certified family physician who practices in Ashland, OR in a thriving functional medicine clinic. He has experience in rural and frontier family medicine and emergency medicine, as well as experience as a hospitalist. Dr. Stone's undergraduate degree and graduate degrees are in human nutrition. He is on faculty with the Institute for Functional Medicine and has been on the adjunct faculty at UCLA and the University of Washington medical schools. His interests and lectures cover a wide range of topics including bezoars, neonatal hypocalcemia, health issues with depleted uranium, exposure to vitamin D and chronic disease and others.

Web site: <http://www.ashlandmd.com/>

Physical Exam Finding	Potential Association with Nutrient Deficiency/Insufficiency or Allergen
Face	
Acne	Zinc Allergy (eliminate refined foods/sugars) Vitamin A Essential fatty acids Selenium
Pale tongue, cheeks, and conjunctivas	Anemia (iron deficient)
Brown, patchy pigmentation of cheeks, parotid enlargement, and "moon face"	Protein-calorie
Reddened facial skin, especially on forehead and cheeks, often with scattered medium to large acne-like lumps (i.e., acne rosacea)	Low stomach acid and pepsin production
Red face (rosacea)	Food allergy, yeast, skin mites allergy
Flushing	Allergy (e.g., red ears)
Yellow face	Vitamin B12
Dermatitis (dry, scaly skin), follicular hyperkeratosis	Essential fatty acids, vitamin A, zinc
Eyes	
Dilated pupils	Allergy (especially milk)
Photophobia; poor twilight vision; loss of shiny, bright, moist appearance of eyes; xerosis of bulbar conjunctivas; loss of light reflex; decreased lacrimation; keratomalacia (corneal softening); corneal ulceration which may lead to extrusion of lens; Bitot's spots (frothy white or yellow spots under bulbar conjunctivas)	Vitamin A, zinc
Pale palpebral conjunctivas	Iron or folate
Circumcorneal capillary injection with penetration of corneal limbus	Riboflavin
Red and moist tissue at external angles of both eyes	Riboflavin
Angular blepharitis (or palpebritis)	Pyridoxine, riboflavin
Optic neuritis	Vitamin B12
Conjunctival xerosis	Vitamin A, riboflavin
Corneal xerosis	Vitamin A
Dark under-eye circles (allergic shiners)	Allergy (food or other)
Retinal field defect	Vitamin E
Reduced visual acuity	Essential fatty acids
Mouth	
Canker sore (aphthous ulcer)	Food allergy(ies) Toothpaste with sodium lauryl sulfate can cause recurrences
Aphthous stomatitis	Folic acid
Cold sores	Selenium
Gums; periodontal problems	Coenzyme Q10, folate "mouthwash," vitamin C, riboflavin, vitamin D
Gingival tenderness	Niacin
Herpes	Lysine, vitamin C, flavonoids
Reddened gumline without margination	Vitamin C
Ecchymotic-like lesions	Vitamins C and K, protein-energy
Angular stomatitis	Riboflavin, niacin, other B vitamins, iron, zinc
Interdental gingival hypertrophy	Vitamin C
Gingivitis	Vitamin A, niacin, riboflavin
Tongue	
Geographic tongue	Folate Vitamin B12 Zinc Genetic and unchangeable
Sore, reddened tongue	Niacin, folate, vitamins B12 and B6, biotin, riboflavin
Filiform papillary atrophy	Niacin, iron, folate, vitamin B12, riboflavin
Glossitis	Riboflavin, folic acid, pyridoxine, niacin, vitamin B12, iron
Hypogeusia (diminished taste acuity)	Zinc
Teeth indentations on tongue	Food allergy(ies)
Tongue fissuring	Niacin
Halitosis	Niacin

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Lips	
Cheilosis, inflammation of the mucus membranes of the lips, loss of clear differentiation between mucocutaneous border	Riboflavin, vitamin B6, niacin
Teeth	
Caries	Fluoride, phosphorus
Mottled enamel, fluorosis	Fluoride (excessive), calcium
Malposition, hypoplastic line across upper primary incisors, becomes filled with yellow-brown pigment, caries then occurs and tooth may break off	Protein-calorie
Nose	
Polyps in the nose	Allergy (very likely salicylate sensitive)
Nasolabial dyssebacea (exfoliation, inflammation, excessive oil production, fissuring of sebaceous glands, which are moist and red)	Riboflavin
Nasolabial seborrhea	Pyridoxine, essential fatty acids
Throat	
Enlarged tonsils in a child	Food allergy(ies) Vitamin A Vitamin C Zinc
Swollen lymph nodes in neck	Food allergy(ies)
Parotid enlargement	Thiamin
Neck mass (goiter)	Iodine
Skin	
Acne (back, chest, face, shoulders)	High-dose vitamin A, zinc, omega-3 oils
Dry skin (xerosis)	Essential fatty acids, vitamin A, biotin, linolenic acid, zinc
Skin surface slightly yellow	Beta-carotene (excessive)
Rough, bumpy skin on back of arm	Vitamin A Essential fatty acids B vitamins Pancreatic enzymes to aid absorption of essential fatty acids, vitamin A, carotene
Psoriasis	Nickel, bromide, vitamin A, zinc
Perifollicular petechiae that produce a "pink-halo" effect around coiled hair follicles, intradermal petechiae (purpura, ecchymoses due to capillary fragility), hemarthroses (cortical hemorrhages of bone visualizable on X-ray)	Vitamin C, vitamin K
Decreased skin-hair-nail turgor	Riboflavin
Dermatitis	Niacin, essential fatty acids
Seborrheic-like dermatitis	Riboflavin, vitamin B6, biotin, zinc, linoleic acid
Skin deterioration	Vitamin B6
Hyperpigmentation	Folate, vitamin B12, niacin
Intracutaneous hemorrhages, GI hemorrhage	Vitamin K
Pallor, icterus	Iron, folic acid, vitamin B12
Erythema early, vascularization, crusting, desquamation; increased pigmentation (even in black people), thickened, inelastic, fissured, especially in skin exposed to sun; becoming scaly, dry, atrophic in intertriginous areas, maceration and abrasion may occur; "necklace of casals" in neckline exposed to sun; malar and supraorbital pigmentation	Niacin, vitamin A, zinc
Scrotum dermatitis, erythema, hyperpigmentation	Niacin
Eczema	Allergy Fatty acids
Itching: anus, arms, ear canals, eyes, feet, hands, legs, nipples, nose, penis, roof of mouth, scalp, skin in general, throat	Allergy
Lackluster skin	Omega-3 oils
Thick calluses	Omega-3 oils
Bumps on back of upper arms	Omega-3 oils; could also be vitamin A responsive; sometimes a weird expression of eczema
Pellagrous dermatosis	Niacin
Impaired wound healing	Vitamin C, vitamin A, zinc, protein, omega-6 essential fatty acids
Oily skin (also what TV used to call combination skin)	Omega-3 oils

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Hair	
Thinning hair on arms, legs, pubic area of older females	DHEA
Thin, sparse distribution	Protein-energy, biotin, zinc
Corkscrew, "swan neck" deformity	Vitamin C
Dry, dull, sparse, depigmented	Protein, manganese
Hair becomes fine, dull, dry, brittle, stiff, straight; becomes red in black people, then lighter in color; may be "bleached" in white people ("flag sign"); can be plucked easily and painlessly	Protein-calorie, zinc, biotin
Menke's Steely Hair	Copper
Dry hair, dandruff	Essential fatty acids
Hands/Fingers/Fingernails	
Cracks and splitting of skin on fingertips	Zinc, essential fatty acids
Slightly swollen and painful PIP joints (osteoarthritis)	Glucosamine sulfate and chondroitin Niacinamide "Nightshade" vegetable allergies
Painful, swollen MCP joints, as well as wrists and other joints (rheumatoid arthritis)	Food allergy(ies) Niacinamide Eicosatetraenoic acids Cetyl myristoleic acid
Tender lumps on finger end joints	Niacinamide, vitamin B6
Fingernails that are weak, thin, bend easily, frequently crack and chip	Underfunctioning stomach (low acid, low pepsin) Essential fatty acids Calcium Zinc
Transverse depigmentation	Protein
White pitting (leukonychia)	Zinc
Psoriatic nails	Vitamin D
Fingernails that are ridging, brittle, easily broken, flattened, spoon-shaped, thin, lusterless, Beau's lines, Meuhreke's lines	Iron, copper, zinc, protein
Onycholysis	Iron, niacin
Chronic paronychia	Zinc
Splinter hemorrhages	Vitamin C
Pale nail beds	Iron
White spots on fingernails	Zinc
Skeletal	
Epiphyseal enlargement (painless), beading of ribs ("rachitic rosary"), delayed fusion of fontanelles, craniotabes (abnormal softening of the skull bones), bowed legs, frontal or parietal bossing of skull, deformities of thorax (Harrison's sulcus, pigeon breast), osteomalacia, osteoporosis, rickets	Vitamin D, calcium
Bone/joint pain	Vitamin A, vitamin D, vitamin C
Bone tenderness	Vitamin D
Subperiosteal hematoma, epiphyseal enlargement (painful)	Vitamin C
Respiratory	
Reactive airways	Magnesium
Circulation	
Anemia, hemolytic	Vitamin E
Anemia, microcytic hypochromic	Copper, iron
Anemia, megaloblastic	Folate, vitamin B12
Prolonged clotting time	Vitamin K
Intermittent claudication	Thiamin
Gastrointestinal Tract	
Ascites	Protein
Hepatomegaly	Protein, fat

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Diarrhea	Zinc, niacin, dysbiosis
Ileus	Potassium
Plummer Vinson syndrome	Iron
Muscular	
Hypotonia	Vitamin D
Muscle pain	Thiamin
Intramuscular hematoma	Vitamin C
Calf muscle tenderness, weakness	Thiamin
Atrophic muscles	Protein
Myofascial back pain	Vitamin D
Decreased grip strength	Protein, vitamin D
Spasm	Magnesium
Cardiovascular	
Tachycardia, cardiac enlargement, congestive heart failure (high-output type)	Thiamine, coenzyme Q10
Hypertension	Calcium, potassium, magnesium, vitamin D
Palpitations, arrhythmia	Thiamine, magnesium, coenzyme Q10, vitamin K, calcium
Cardiomegaly	Selenium, thiamin
Nervous System	
Ataxia, with loss of ankle knee reflexes	Thiamin, vitamin E, vitamin B12
Peripheral neuropathy	Thiamin, vitamin B6, vitamin E, vitamin B12
Peripheral neuropathy, symmetrical sensory and motor deficits, especially in lower extremities; drug-resistant convulsions (infants); dementia, forgetfulness	Pyridoxine
Paresthesia	Thiamin, vitamin B12, omega-3 essential fatty acids
Loss of proprioception	Thiamin
Hyporeflexia, foot and wrist drop, hypesthesia, paresthesia	Thiamin, iodine
Areflexia, extensor plantar responses, loss of position and vibratory sense, ataxia, paresthesia	Vitamin B12
Paresthesias about the lips, tongue, fingers	Calcium
Tremor, convulsions, behavioral disturbances	Magnesium, vitamin B6
Psychotic behavior (dementia)	Niacin, thiamin, vitamin B12, folate
Acute disorientation	Phosphorus, niacin
Nystagmus	Thiamin
Ophthalmoplegia	Thiamin
Wide-based gait	Thiamin, vitamin B12
Weakness, inability to walk	Omega-3 fatty acids
Carpopedal spasm	Calcium, magnesium
Circumoral and extremity paresthesias	Phosphorus
Slow mentation, mental depression	Biotin, vitamin B6
Neuropathy	Essential fatty acids
General	
Peripheral edema	Protein, thiamin
Muscle wasting	Protein, calorie
Somatic wasting	Thiamin, zinc
Reduced subcutaneous fat as evidenced by well-demarcated bony prominences and veins, loss of gluteal and perianal fat	Fat
Decreased memory and mental abilities, psychological disturbances	Essential fatty acids
Thirst, polydipsia, polyuria	Essential fatty acids
Tetany and muscle cramps	Vitamin D, magnesium, calcium, potassium
Red ears	Allergy (food or other)
Easy bruising	Allergy (food or other), often yeast, vitamin K, vitamin C
Swollen ankles and feet	Allergy vs. the obvious cardiac/renal problems