

## KUMC Clinical Nutrition Seminar

### Integrative Approach to Nutrition-focused Physical Exam and Labs

*"The art of the practice of medicine is to be learned only by experience, tis not an inheritance; it cannot be revealed. Learn to see, learn to hear, learn to feel, learn to smell and know that by practice alone can you become expert." Osler (1919)*

#### NUTRITION-FOCUSED EXAM CHECKLIST:

Explanation.....

BODY AREA	LOCATION	MOST COMMON ABNORMAL EXAM FINDINGS	OTHER ABNORMAL FINDINGS	COMMON ABNORMAL LABS ASSOCIATED	OTHER ABNORMAL LABS TO CONSIDER
GENERAL	FACIAL EXPRESSION	↓ Affect	Depression	TSH, T3-free, TPO & TG Antibodies	
APPEARANCE	GAIT	Speed and Continuity	Stroke, Polio, Weakness, Arthritis	Mitochondrial functional test: Organic Acids, RBC Fatty Acid, Lipids	Toxicity testing
	CLOTHING	Unkempt; Unclean	Dementia, Poor living conditions		
	STATURE	Dwarfism	Genetics		
	POSTURE/MUSCLE TONE	Dowager's Hump	Bone status	DEXA, Ca Metabolism: Vit D25OH, Ca (serum & ionized), RBC Mg, Osteocalcin, Vitamin A-retinol	Connective Tissue Testing
	ODOR/BREATH & BODY	Sweet/ketone/putrid	High blood sugar, GI tract overgrowth	Comprehensive Digestive Stool Analysis, FBS, Fasting Insulin, HgbA1C,	Nutritional testing, Intestinal Permeability Breath test
	BODY SHAPE/SIZE	Obese Emaciated ↑ Waist:Hip Ratio  BMI	Intakes>Needs Needs>Intakes Overweight, Genetics Over/underweight	BIA: PA, Body Fat%, Hydration; Lipids, Tot Protein/Alb/ Glob; Vit D25OH;	
	CENTRAL ABDOMEN	↑ Waist:Hip Ratio Apple (Android)	Genetics/Obesity/ Overweight/Insulin	BIA: PA, Body Fat%, Hydration; Lipids, Tot	Liver enzymes

			resistance/↑Inflam mation	Protein/Alb/ Glob; Vit D25OH;	
	LARGE HIPS/SMALL WAIST	Pear (Gynoid)	Genetics	Gonadal Hormone Panel;	
<b>HEAD</b>	EYE	Corneal Arcus  Xanthoma Inverted Lid Pallor Lid edema	Dyslipidemia mid aged men Type IV LDL-C Hi Iron Deficiency Allergies	Lipids, RBC Fatty Acid; Hgb/Hct/MCV/MCH; Ferritin; Sed Rate	RBC Fatty Acid; Carotenoid testing
	FACE/SKIN	↓Affect Acne/cysts Pallor Edematous Keratosis Moles Rash Rosacea Wrinkles	Depression ↓ Vitamin D Iron deficiency CHF ↓ Fatty Acid/ Vit A Cancer Allergies Inflammation Antioxidants	Zinc, serum; Alk Phos; Electrolytes; Vit D25OH; Ferritin; Allergy Test; Organic Acid; RBC Fatty Acid	Hormonal testing;
	MOUTH/LIPS	Angular stomatitis Chelosis Undifferentiated mucocutaneous border (no lip prints) Pallor	B Vitamin defic B Vitamin defic B Vitamin defic  Iron deficiency	CBC;Vit D25OH;Ferritin; Lipids;	Nutritional testing: B2, MMA, FIGLU (urine)/Folate (serum);
	MOUTH/ORAL CAVITY/ TONGUE/TEETH	Inflammation Ulcerations Tora Abnormal tongue: Color Surface Papillae presence Odor Hygiene Poor teeth condition Hydration Ability to taste	Vitamin C and Antioxidants Genetics  Iron, Folate, B12 Various nutrients Burns, taste, Hygiene, infection Habits Little dental care Poor fluid intake Zn nutriture	Organic Acids; Vit D25OH; Osteocalcin; CoQ10; CBC;zinc, serum; Alk Phos;	Nutritional testing: B2, MMA, FIGLU (urine)/Folate (serum);
	HAIR/TOP OF /SCALP	Dry Dandruff Easily pluckable hair	Omega 3:6 ratio, Vitamin A Protein, Perm	Lipids; RBC fatty acids; zinc, copper (serum); Sed Rate;	RF; Organic Acids;

		Sores Psoriasis	Vit C, Zn, Cu Omega 3:6 ratio; Sulfur	ANA Antibody Titer;	
	HEAD/FACE/NOSE	Hirsutism/facial hair Beard Impaired smell	POCS, Hormones  Allergies, sinus infection, cold, Zn	Gonadal Hormone Panel; TSH, T3-free, TPO & TG AB; FBS, F- Insulin, HgbA1C; Zn;	
	EARS	Rash Drainage Earlobe crease	Allergies Infection ↑ Cardiac risk	Sed Rate; IgA; IgG & IgE Total; Differential; CRP-us; Lipids	Toxicity testing; Cranial Sacral Exam; Biological Dental exam/TMJ;
<b>NECK</b>	THYROID	Enlarged/Goiter Nodules Palpated	Iodine or Endocrine system abnormalities	TSH, T3-free, TPO & TG AB; Iodine Urine;	Toxicity testing; Adrenal-HPA testing;
	GLANDS/NODES	Parotid Neck Nodes-bilateral	Inadequate intakes, inflammation	Biological Dental Exam; Zn, CRP-us; Sed Rate;	
	BACK	Dowager's Hump  Loss of subcutaneous fat and/or muscle	Calcium, Vit D, Mg, Vit K Inadequate calorie &/or protein intake; inactivity; inflammation	BIA: Body Fat%, PA, Impedance, Hydration: Vit D25OH; RBC Mg; Ca (serum & ionized); Osteocalcin; Tot Prot/Alb/Glob; Differential; CRP-us; Lipids	DEXA
<b>SKIN</b>	EXTREMITIES	Color Xanthoma  Edema	Fe, B12, Folate, B6 Dyslipidemia,  Cell membrane health, Omega 3, Extracellular Na <sup>++</sup> , Fluid overload	CBC;CMP; Lipids; BIA: Body Fat%, PA, Impedance, Hydration; RBC Fatty Acids;	Musculo-skeletal exam;
	HANDS/FEET	Open Areas/Pressure Sores	Inadequate calorie &/or protein, Vit C, Zn, inactivity	Tot Prot/Alb/Glob; Organic Acids (r/o Vit C def, etc); Zinc, serum; Differential;	
	HYDRATION	Edema	Fluid or Na <sup>++</sup> , CHF	BIA: Body Fat%, PA,	

		Dehydration Oozing	Inadequate fluids or Na++ Infection, Fluid overload	Impedance, Hydration; Electrolytes; Urinalysis; CBC;	
	TRUNK	Moles Open Areas/Pressure Sores  Rash	Cancer Inadequate Protein/Calorie intake Allergies, intolerances	Vit D25OH; Tot Prot/Alb/Glob; Organic Acids (r/o Vit C def, etc); Zinc, serum; Differential; CRP-us; Sed Rate	
<b>NAILS</b>	NAILS/HANDS	Ridges/split nails  White spots Loose cuticles Koilonychia Fungal growth	Accident, protein  Zn defic, stressor  Fe deficiency Microbial growth	Electrolytes; RBC Mg; Vit D25OH; Differential; Ferritin; Zinc, serum; Tot Prot/Alb/Glob; Organic Acids (r/o Vit C def, etc); Zinc, serum; Differential;	Selenium, serum; Candida Antibody;
	NAILS/FEET	Fungal growth Ingrown nails Split nails/ridges	Microbial growth Poor pedicure Injuries, nutr insult	Electrolytes; RBC Mg; Vit D25OH; Differential; Ferritin; Zinc, serum; Tot Prot/Alb/Glob; Organic Acids (r/o Vit C def, etc); Zinc, serum; Differential;	
<b>BODY TEMP</b>	HANDS/OVERALL BODY	Low body temps Fever	Hypothyroidism Infection, virus	TSH, T3-free, TPO & TG AB; Iodine Urine;	