

# Nutrition Focused Physical Exam

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## Questions to Consider Asking:

Hair {

- Has the patient noticed any changes in their hair or more hair loss?
- Is the hair lighter in color than normal?
- Has the client washed or brushed their hair recently?

Eyes {

- Has the client had any changes in their vision or eyes?
- Is the client having a hard time seeing at night?
- Do they report that their eyes feel dry?

Lips {

- Has the client noticed any changes in their lips?

Mouth {

- Has the client had any changes in their sense of taste?
- Do they have a burning sensation in their mouth or any pain with chewing or swallowing?
- If discoloration of the tongue is noted, has the client recently had a colored medication, food or beverage?

Skin {

- Has the client noticed any changes in their skin?
- Is the skin warm or cold? Rough or smooth?
- Does the skin look dry or oily?
- Are there rashes or areas of irritation?

Nails {

- Has the client noticed any changes in their nails?
- If discoloration is noted, does the client use tobacco, or have contact with other chemicals?
- Has the client had any recent injuries to their fingers or nail beds?

## Other questions to consider:

Has the patient taken deworming medication recently?

Has the patient had a change in access to food or water recently?

Is the patient taking acid blocking medication? (PPI's/Omeprazole, etc...)

Has the patient felt more tired, weak, or lethargic recently?

## Physical Assessment Findings & Nutrients <sup>1-8</sup>

Area	Physical Signs	Possible Nutrition Abnormality
Hair	Thin, sparse, lackluster	Iron, zinc, biotin
Eyes	Pallor of lower conjunctivae Angular palpebritis	Folate, B12, iron, B6 Riboflavin, niacin, B6, iron
Tongue	Glossitis (sore, red, swollen, smooth) Angular stomatitis Pallor of the tongue	Riboflavin, niacin, B6, B12, folate, iron Riboflavin, niacin, B6, iron Folate, B12, iron
Lips	Cheilosis (dry, swollen, ulcerated lips) Pallor of lips, decreased vermilion border	Riboflavin, niacin, B6, iron Folate, B12, iron
Skin	Pallor, general Seborrheic dermatitis	Folate, B12, iron Riboflavin, biotin, B6, zinc
Nails	Koilonychia Central ridge (significant) Pallor of nail bed	Iron Folate, iron Folate, B12, iron

Lab Assay	Significance
Methylmalonic Acid	Methylmalonic acid is a metabolite of B12. High levels may indicate vitamin B12 deficiency.
Homocysteine	High levels may indicate folate deficiency or B12 deficiency (if coupled with high methylmalonic acid).
Thiamin	Thiamin diphosphate (TDP) is the most sensitive, specific, and precise method of determining nutritional status and is a reliable indicator of total body thiamin stores.
Soluble Transferrin Receptor	Soluble transferrin receptor concentration is directly proportional to erythropoietic rate and inversely proportional to iron availability. Low levels may be due to hemolysis or administration of erythropoiesis-stimulating agents. High levels may indicate iron deficiency.
Transferrin Saturation	Transferrin saturation is the value of serum iron divided by the total iron-binding capacity. Low levels indicate iron deficiency. High levels indicate iron overload or hemochromatosis.
Ferritin	Ferritin is the storage form of iron. Low levels indicate iron deficiency. High levels may indicate hemochromatosis, inflammation, or iron overload.
Zinc	Zinc levels are dependent on albumin and have diurnal variations. Low levels may indicate zinc deficiency, malnutrition, infection, inflammation, stress, use of oral contraceptives or pregnancy. High levels may indicate zinc supplementation or fasting.
Niacin	Low levels of N-methylnicotinamide may indicate niacin deficiency.
Riboflavin	Erythrocyte glutathione reductase assay is a functional index of riboflavin deficiency. Low levels may indicate riboflavin deficiency

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