

Vitamins Minerals Chapter 12

	Role	RDA	Source	Deficiency	Toxicity	Clinical Use
Water soluble						
B ₁ Thiamin	intermediary metabolism	1.2mg ♂ 1.1mg ♀	meat grains legumes	beriberi	not toxic	tx: alcoholism peripheral neuritis
B ₂ Riboflavin	coenzymes redox rxns	1.2mg ♂ 1.1mg ♀	dairy meat	angular cheilosis	not toxic	deficiency seen in alcoholics
B ₃ Niacin	metabolism redox rxns	16mg ♂ 14mg ♀	meat legumes grains	pellagra (rough skin) "3-D's" (diarrhea, dermatitis, dementia)	GI distress pruitis flushing	tx: hyperlipidemia
B ₆ Pyridoxine	metabolism	1- 1.7 mg	meat eggs legumes grains	angular cheilosis stomatitis glossitis	not toxic (neuropathy with IV OD)	drug interactions can create B ₆ deficiency
folic acid	metabolism	400µg	meats fruits veggies	megaloblastic anemia (most common deficiency in USA)	not toxic, possible allergy	can create B ₁₂ deficiency
B ₁₂ Cyanocobalimin	metabolism fats, carbs	2.4 µg	micro- organisms	megaloblastic anemia (deficiency can result from pernicious anemia)	not toxic, possible allergy	vegans, gastrectomy =B ₁₂ deficiency
Pantothenic acid	make acetyl-Co-A metabolism gluconeogenesis hormones	5-7 mg	egg yolks bran yeast liver	rare in humans (deficiency can develop with liver disease or alcoholism)	not toxic	↑ GI motility
Biotin	metabolism	25-35µg	milk egg yolks liver GI microbes	rare antiinfectives can create deficiency	not toxic	Tx: infant dermatitis
Vitamin C (ascorbic acid)	redox rxns CT synthesis	90mg ♂ 70mg ♀	citrus fruits	scurvy	stones in urinary tract	used with Fe supplement (cold? cancer?)
Lipid soluble						
Vitamin A	vision	700-1300 RE	carotenes	night blindness	hypervitaminosis A hyperostosis gingivitis	Pregnancy Cat X Tx: acne
Vitamin D	bone formation	5-15 µg	sunlight / skin	abnormal Ca ⁺⁺ metabolism, rickets	abnormal Ca ⁺⁺ metabolism	tx: rickets
Vitamin E	antioxidant	10-20 mg	vegetable oils fish oil	anemia	not toxic ?	Tx: hemolytic anemia (newborn) much use with no clinical evidence
Vitamin K	synthesis of clotting factors	60-120µg	green veggies egg yolks liver	hypoprothrombinemia → hemorrhage	rare, hemolytic anemia, hemolysis	tx :hypothrombinemia from coumadin, ↓ clot factors in hepatic disease
Selected Minerals						
Iron (Fe)	hemoglobin - O ₂	8mg ♂ 8-27mg ♀	red meats organ meats yeast egg yolks	anemia	GI distress bleeding hemochromatosis	tx: deficiency
Zinc (Zn)	transport of CO ₂ elimination of lactic acid	11mg ♂ 8mg ♀	seafood meat	slow growth slow healing	impaired lymphocyte and PMN function	↓duration of cold wound healing
Calcium (Ca)	proper function of: • nervous system • muscular system • skeletal system	1000 - 1300 mg	dairy products	osteoporosis tetany paresthesias cramps convulsions	not toxic	tx: deficiency

INFECTIOUS LESIONS

1. ANUG (**A**cute **N**ecrotizing **U**lcerative **G**ingivitis)

Description:

Tx:

2. Herpes Infections

Description:

Primary infection:

Recurrent infection:

Tx:

3. Candidiasis

Description:

Tx:

Topical:

Systemic:

4. Angular Chelitis / Chelosis

Description:

Tx:

5. Alveolar Osteitis

Description:

Tx:

IMMUNE REACTIONS

1. Recurrent Aphthous Stomatitis

Description:

Tx:

2. Lichen Planus

Description:

Tx:

MISCELLANEOUS ORAL CONDITIONS

1. Geographic Tongue (Benign Migratory Glossitis)

Description:

Tx:

2. Burning Mouth or Tongue

Description:

Tx:

INFLAMMATION

1. Pericoronitis:

Description:

Tx:

2. Postirradiation Caries

3. Root Sensitivity
Description:

Tx:

4. Actinic Lip Changes
Description:

Tx:

DRUG-INDUCED ORAL SIDE EFFECTS

1. Xerostomia
Description:

Tx:

2. Lichenoid-Like Lesions

3. Lupus-Like Lesions

4. Erythema Multiforme - Like

5. Stains

6. Gingival Enlargement (Gingival Hyperplasia)
Drugs:

DRUGS USED TO TREAT ORAL LESIONS

Corticosteroids

Antiinfectives

Antibiotics

Antifungals

Antivirals

Palliative Tx

Topical local anesthetics

Systemic analgesics

DH 250

Hygiene-Related Oral Disorders Chapter 14

Dental Caries

Gingivitis

Tooth Hypersensitivity

Periodontal Disease ???!!!