

WATER SOLUBLE VITAMINS

1. B1, Sulfur
2. Thiamine pyrophosphate
3. Carbs especially in the Krebs Cycle and Pentose Phosphate Pathway
4. Oxidative decarboxylation, transketolase
5. Unrefined cereals and meats
6. Beriberi (peripheral neuropathy, exhaustion, anorexia, degeneration)
7. Diets high in refined carbohydrates, alcoholics
8. FAD-FADH-FMN, Riboflavin
9. Vitamin B1, 2, 3, 5 and Manganese
10. Oxidative/Reduction reactions (flavoproteins)
11. Yeast, liver, kidney
12. Cheilosis, angular stomatitis, glossitis, seborrhea, and photophobia
13. Niacin | NAD, NADPH
14. Cracked mouth corner, swollen tongue
15. Dehydrogenase of Krebs
16. Reductase of fats
17. Most food sources, made from tryptophan
18. High corn diet (lacks tryptophan)
19. Dermatitis, digestive disorders, dementia, depression, and weight loss
20. Nictotinic acid, Lowers plasma cholesterol by limiting FFA flux
21. Liver damage (exhibits niacin flush)
22. Aka Pyridoxine, Pyridoxal phosphate
23. Transamination and decarboxylation
24. Amino acid metabolism and muscle phosphorylase ($G > G-1P$)
25. Liver, mackerel, avocados, meat, banana, vegetables, and eggs
26. Alcoholics, Tuberculosis-isoniazid, and those taking oral contraceptives
27. Carpal Tunnel relief, diuretic
28. Methyl-Tetra-hydro-folate (H_4 folate) w/ ADH, 9
29. Yeast, liver, leafy vegetables
30. Macrocytic anemia (Too large RBC's), neural tube defects (spina bifida)
31. Pregnant and lactating women, 400ug
32. B_{12}
33. Cobalamin
34. Homocysteine to Methionine



KRS STUDY GUIDES : Practice Quiz Answers : Dr. Balliett : "I am only cranky around my husband."

35. DNA synthesis (dUMP → dTMP)
36. Synthesized my microorganisms, so may be found in liver and yeast
37. Intrinsic factor
38. Distal ileum and liver
39. Parietal cells of stomach
40. Pernicious anemia
41. Recycle Folic Acid (folate trap)
42. Coenzyme A, Acyl Carrier Protein (ACP)
43. Animal tissue, whole grain cereals, and legumes
44. Rare, Burning foot syndrome
45. Carboxybiotin
46. Multienzyme Carboxylase
47. Bicarbonate, ATP, Mg, and Ach
48. Gluconeogenesis, Fatty acid synthesis
49. Most natural foods and produced by bacteria
50. Avidin, raw eggs
51. Depression, hallucinations, muscle pain, dermatitis
52. Ascorbic acid
53. Keep metal ions in reduced forms (donor of reducing equivalents)
54. Bioflavinoids
55. Fruits (especially citrus) and fresh vegetables
56. Sugar
57. Produce collagen, epinephrine from dopamine, degradation of tyrosine, absorption of iron, bile acid formation, and water soluble antioxidant
58. Adrenal cortex
59. Scurvy (bruising, muscle weakness, swollen gums, and loose teeth)
60. Diarrhea

LIPID SOLUBLE VITAMINS

61. A,D,E, K
62. Retinol, retinal, retinoic acid
63. Liver
64. Beta-carotene, yellow/orange pigment fruits and veggies
65. Beta-carotene dioxygenase, retinaldehyde reductase
66. Intestinal mucosa



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67. Aporetinol-binding protein
68. Cellular retinol-binding protein (CRBP)
69. Unbound
70. Retinol
71. Hypervitaminosis A
72. Surfactant synthesis, gene expression
73. Vision, Glycoprotein synthesis
74. Steroid prohormone
75. Rhodopsin, rods of retina
76. 11 cis-retinal , 11 trans-retinal
77. Night blindness, kernatinization of epithelia, xerophthamia, more infections
78. Deterioration of eye tissue leading to blindness
79. Poor diets without yellow/orange veggies/fruits, alcoholics
80. Cancer
81. Anti-oxidant
82. Calcium/phosphate absorption in intestines
83. Calcitriol (1,25 dihydroxy-cholecalciferol)
84. Skin, liver, kidney
85. Vitamin E
86. 7 dehydrocholesterol and sunlight
87. 25 hydroxycholecalciferol (needs 25 hydroxylase w/ MG, NADPH, and O₂)
88. 1 alpha hydroxylase
89. 1,25 dihydrocholecalciferol
90. Ergosterol converted to ergocalciferol D₂
91. Rickets (children), osteromalacia (adults)
92. Fortified milk, oily fish, egg yolk, and liver
93. Hypervitaminosis D (high blood calcium, calcification of soft tissues)
94. D-alpha-tocopherol
95. Areas of high oxygen concentration (RBC membrane, mitochondria, and retina)
96. Peroxidation of polyunsaturated fatty acids (PUFA)
97. ACESe : Vitamin E, Se, Vitamin C, and Beta-Carotene
98. Vitamin E
99. Anemia of newborn, cardiovascular disease
100. Disease and aging
101. 400 units



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102. Oxidized LDLs
103. Pregnant/lactating women, high oxygen exposure, impaired lipid absorption individuals
104. K1 Phylloquinone (plants), K2 Menaquinones (animal tissue, bacteria), K3 Menadione (none)
105. K3 Menadione
106. Normal blood levels of blood clotting factors
107. Osteocalcin
108. Liver
109. Protein carboxylase, glutamate (glu), gammacarboxyglutamate (Gla)
110. ER of liver
111. Reductases (NADPH)
112. Hydroquinone, Oxygen, and Carbon dioxide
113. Dicumarol or Warfin/Coumadin
114. Recycling of Vitamin K by inhibiting 2,3 epoxide reductase
115. Hemorrhagic disease of newborn
116. Plant and animal food produced by intestinal microflora
117. Floating fat stool
118. Deficiency of all fat soluble vitamins

