

NTRN 201: FINAL EXAM STUDY GUIDE

Your final exam will be predominately taken from the content we covered after the midterm. About 20% will be from before the midterm, covering foundational concepts. The remainder will be on the material covered after the midterm, including the fad diet presentations. Questions are derived from the lectures, external content, and textbook readings. The exam will be multiple-choice, true/false and matching.

- There are 75 questions on the final exam. You will have 75 minutes unless you have an accommodation.
- Exams are closed book. You may use one 3 x 5 notecard as with the midterm exam.
- Exam 2 is taken during the last class period, NOT THE FINAL EXAM TIME SLOT.
- Any exam questions where >40% of the class missed the question will be reviewed and adjusted if necessary.
- Exam grades and correct answers will be provided the week following the exam once all make-ups have been completed

STUDY GUIDE QUESTIONS:

1. What type of improvements can be made in the typical American diet?
2. MyPlate: basic messages, including foods to increase and reduce
3. What is the storage form of glucose? What is its function?
4. What is dietary fiber?
5. What are the different ways the body can produce glucose?
6. What are the functions of protein in the body?
7. What are complementary proteins?
8. What do trans fatty acids do to cholesterol? Raise or lower? Which type of cholesterol?
9. What are the functions of cholesterol in the body?
10. What are the benefits and risks associated with alcohol consumption?
11. What are the recommendations for at-risk sub groups related to alcohol consumption?
12. What are the signs and symptoms of alcohol abuse?
13. What is metabolism?
14. What is ATP?
15. How are amino acids metabolized to produce energy?
16. What are the physiological effects of fasting at short, intermediate, and long time periods?
17. Describe the different types of energy production in the body and under what conditions they occur.
18. What conditions lead to ketosis?
19. How is metabolism regulated?
20. What is energy balance? Positive energy balance? Negative energy balance?
21. What contributes to total energy expenditure?
22. What is BMR?
23. What effects BMR?
24. What is TEF?
25. Define Body Mass Index (BMI)
26. What are the different BMI categories?
27. When is BMI not an accurate predictor of obesity and overweight?
28. What can be used instead of BMI to determine body fatness?
29. How does body fat distribution indicate health risk?
30. What the principles of a sound weight loss plan?
31. How is weight loss success defined?
32. What are the characteristics of an appropriate weight-loss program?
33. What are the classifications of vitamins?
34. What are the differences between fat-soluble and water-soluble vitamins?
35. How are fat soluble vitamins absorbed in the body?
36. What are the classifications of minerals?
37. Where are minerals absorbed in the body?
38. What are some the issues with mineral absorption? Interactions? Competition?

39. What vitamins are synthesized in the body?
40. Dietary supplement labels – what does USP mean on the label?
41. What is enrichment? Bread and cereals are enriched with what vitamins?
42. What types of foods contain Vitamin C?
43. Why are refined grains less healthy than whole grains?
44. What are the functions of water in the body?
45. How does water regulate body temperature?
46. What hormones participate in fluid conservation in the body? What role do they play?
47. Is thirst a good indicator of hydration status? Why or why not?
48. What are symptoms of dehydration/heat exhaustion/stroke?
49. Can a person consume too much water?
50. What is the difference between intracellular and extracellular fluid?
51. What are the functions of sodium?
52. What are high sodium food sources?
53. What are examples of low sodium foods?
54. What are the functions of potassium?
55. List three sources of dietary potassium?
56. Who is at risk for potassium deficiency?
57. Who is at risk for high blood potassium levels?
58. What are strategies to reduce the risk of developing hypertension?
59. Which foods have the highest water content.
60. What do vitamins A, C, and E function as?
61. How does antioxidant work in the body?
62. What is oxidative stress?
63. What is a free radical and why are free radicals thought to be harmful to the body?
64. What environmental factors promote oxidative stress from free radicals?
65. DNA damage by free radicals sets the stage for what chronic diseases?
66. Why are cell membranes susceptible to free radical damage?
67. What are the best dietary choices to improve the body's defense against free radicals?
68. What fat-soluble vitamin serves as an antioxidant in cell membranes?
69. What are phytochemicals?
70. Three functions of phytochemicals?
71. List three function of zinc?
72. List three food sources of zinc?
73. What are the consequences of zinc deficiency?
74. What are the functions of vitamin A?
75. What are the consequences and causes of vitamin A deficiency? Toxicity?
76. List two rich food sources of carotenoids?
77. List three functions of vitamin C?
78. What are the consequences of Vitamin C deficiency?
79. List two rich food sources of vitamin C?
80. What are the primary functions of vitamin E?
81. What is the primary source of vitamin E?
82. What minerals are involved in bone health?
83. What is hydroxyapatite?
84. What biological factors impact bone health?
85. What lifestyle factors impact bone health (i.e. high protein intake)?
86. What are the functions of calcium?
87. What interferes with calcium absorption?
88. What are the key functions of phosphorus beyond bone health?
89. What are the primary food sources of phosphorus?
90. What is the biologically active form of vitamin D?
91. What are three functions of vitamin D?
92. How do parathyroid hormone (PTH) and calcitonin work together to maintain balanced calcium levels in the bloodstream? What is calcitonin's role?

93. List the risk factors that impair vitamin D status?
94. How is vitamin D converted to its active form? What organs are involved?
95. Food sources of vitamin D?
96. What is vitamin D deficiency called in children and in adults?
97. What are the key functions of magnesium other than bone health?
98. What plant sources are rich in magnesium?
99. How is thiamin involved in energy metabolism?
100. What is the thiamin-deficiency disease called?
101. What are the major sources of thiamin?
102. How is riboflavin involved in energy metabolism?
103. What are the symptoms associated with riboflavin deficiency?
104. How is niacin involved in energy metabolism?
105. The niacin-deficiency disease is known as?
106. What two B vitamins are critical to red blood cell synthesis?
107. What is anemia? What are the different types, their causes, and their symptoms?
108. What is hemostasis?
109. What are the functions of vitamin K?
110. What are the major food sources of vitamin K?
111. List two functions of folate (vitamin B9)?
112. How can maternal folate deficiency impact a fetus?
113. List three food sources of folate?
114. What are the functions of vitamin B12?
115. What compounds or factors can interfere with the absorption of vitamin B12?
116. What are the food sources of vitamin B12?
117. How can a strict vegan find reliable sources of vitamin B12?
118. What special compound is required for B12 absorption?
119. List three functions of iron?
120. What are heme and nonheme iron?
121. What can you do to enhance your absorption of nonheme iron?
122. What is hemoglobin? Why is iron important in this part of the red blood cell?
123. Which micronutrient deficiencies and toxicities can cause fetal malformations?
124. Characterize fetal development during each trimester – don't drive yourself crazy, think of one or two big things that happen in each trimester.
125. What conditions affect pregnancy outcomes negatively?
126. What dietary practices can be harmful to a fetus? What are the consequences?
127. What nutrition-related conditions do pregnant women experience and what are the treatments?
128. Are there important nutrients for pregnancy and lactation? If so, what are they?
129. What are the benefits of breastfeeding for mothers?
130. What is the growth and body mass trajectory for infants?
131. How is failure to thrive defined?
132. Describe infant nutrient needs over time.
133. What special vitamin and mineral needs do infants have?
134. How does breastfeeding benefit an infant?
135. How do you compress morbidity?
136. When does physical decline begin in adults?
137. What are the risk factors for dehydration in older adults?
138. What are the benefits of physical activity for older adults?
139. What are risk factors for loss of bone mass?
140. What are the nutritional conditions related to aging and how do you prevent them?