



Gut & Psychology Syndrome (2010 revised edition)
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CLASS: G110

This is your test but... do not try to fill in the blanks! We created a Test Answer Sheet which is easy to download, fill in the answer, and email.

Part One: Chapter 1

1. GAPS children and adults have _____ problems, sometimes quite severe. Colic, bloating, flatulence, diarrhea, constipation, feeding difficulties and malnourishment, all to various degrees, are a _____ part of autism, schizophrenia and other GAPS conditions.
2. The main issue is: autistic children have enlarged and inflamed lymph nodes in their _____ wall, which is a clear sign of a fight with some _____ going on there.

Part One: Chapter 2

3. Symbiotic relationships are ones where neither party can live without the other. We humans, cannot _____ without these tiny micro-organisms, which we carry on and in our bodies everywhere.
4. Gut micro-flora can be divided into three groups:
 1. _____
 2. _____
 3. _____
5. Without protection the gut wall is open to invasion by anything that comes along: a virus from vaccination or the _____, a ubiquitous fungus such as *Candida albicans*, various bacteria and _____ and toxic substances, all of which are very capable of damaging our digestive system and causing a chronic inflammation in its walls.
6. It is the _____ action on the dietary fiber that allows it to fulfill all those good functions in the body.

Note: Several types of *E. coli* exist as part of the normal flora of the human gut and have many beneficial functions, such as the production of vitamin K2. They also prevent harmful (pathogenic) bacteria, from establishing themselves in the intestine. Most *E. coli* strains pose no harm to human health but, serotype O157:H7, which is normal flora in bovine intestines, causes bloody diarrhea and can sometimes cause kidney failure and even death. *E. coli* O157:H7 is called a Shiga toxin-producing *E. coli* (STEC). There are other types of STEC that can make you just as sick as *E. coli* O157:H7.

7. Apart from digesting _____, physiological strains of *E. coli* produce vitamin K2, vitamins B1, B2, B6, B12, produce antibiotic-like substances, called _____, and control other members of their own family which can cause disease.
8. People with abnormal gut flora have multiple _____ deficiencies due to all the factors described above.

Part One: Chapter 3

9. In GAPS people, due to the abnormalities in their gut flora, viruses from the vaccines or the environment have a good chance to _____ and _____. A good example is the measles virus found in the gut wall and spinal fluid of autistic children.
10. It has been estimated that around 80-85% of our _____ is located in the gut wall.

Part One: Chapter 4

11. Farm animals and poultry are routinely given _____ so all the products we get from them (meat, milk, eggs) will provide us with a constant supply of antibiotics and antibiotic-resistant bacteria, which these animals develop in their bodies as well as all the toxins which these bacteria produce.
12. TRUE or FALSE: Antibiotics change bacteria, viruses, and fungi from benign to pathogenic, giving them the ability to invade tissues and cause disease.
13. Which particular group of antibiotics allow bacteria normally found only in the bowel to move up to the intestines, which predisposes the person to development of IBS (Irritable Bowel Syndrome) and other digestive disorders? _____

14. Tetracyclines are routinely prescribed to teenagers for _____. It starts an _____ reaction in the body against its own gut.
15. Aminoglycosides (the -mycins like Erythromycin) have a particular devastating effect on colonies of beneficial bacteria in the gut such as physiological *E. coli* and _____.
16. Nystatin is an _____ antibiotic which leads to selective stimulation of growth of the *Proteus* family and lactose-negative *E. coli* species, capable of causing _____ disease.
17. Processed and sugary carbohydrates (white bread, cakes, biscuits, pastries and pasta) also promote population of the gut with _____ and other _____.

Part One: Chapter 5

18. There are around _____ different species of opportunistic flora in the human gut.
19. TRUE or FALSE: *Candida* can cause “leaky” guts, food allergies, and food intolerances?
20. Opportunistic flora constantly produces _____, which are the by-products of their metabolism.
21. An excess of histamine in the body is called _____.
22. *Clostridium difficile* causes a potentially _____ pseudo-membranous colitis.
23. Sulphates are needed in the body for many functions, some of which are _____ and normal metabolism of brain _____.

Part One: Chapter 6

One only sees what one looks for, one only looks for what one knows. - Goethe

24. Alcohol and acetaldehyde render a lot of essential nutrients useless in the body. For example, binding to proteins, acetaldehyde causes functional deficiency of vitamin _____, which is a co-factor in production of neurotransmitters, fatty acid metabolism and many other functions in the body.

25. The thyroid gland may be producing plenty of _____, but their working sites are occupied by acetaldehyde and other toxins.
26. _____ is a protein present in grains, mainly wheat, rye, oats and barley.
27. _____ is a milk protein, present in cow, goat, sheep, human and all other milk and milk products.
28. _____ is essential for protein digestion, as it provides normal conditions for pepsin to do its work of breaking down proteins into shorter peptide chains.
29. The important point is that GAPS children and adults are very toxic people. This toxicity comes from their _____ system. So it is the person's digestive system we have to concentrate on _____ and foremost in order to treat the condition.

Part One: Chapter 7

30. The _____ pill has the same damaging influence on vaginal flora as antibiotics. _____ in the pill have an ability to suppress the immune system and change the composition of bodily flora.

“The emerging links between our gut microbiome and the central nervous system (CNS) are regarded as a paradigm shift in neuroscience with possible implications for not only understanding the pathophysiology of stress-related psychiatric disorders, but also their treatment. Thus the gut microbiome and its influence on host barrier function is positioned to be a critical node within the brain-gut axis. Mounting preclinical evidence broadly suggests that the gut microbiota can modulate brain development, function and behavior by immune, endocrine and neural pathways of the brain-gut-microbiota axis. Detailed mechanistic insights explaining these specific interactions are currently underdeveloped. However, the concept that a “leaky gut” may facilitate communication between the microbiota and these key signaling pathways has gained traction. Deficits in intestinal permeability may underpin the chronic low-grade inflammation observed in disorders such as depression and the gut microbiome plays a critical role in regulating intestinal permeability.”

Kelly JR, Kennedy PJ, Cryan JF, Dinan TG, Clarke G, Hyland NP. Breaking down the barriers: the gut microbiome, intestinal permeability and stress-related psychiatric disorders. *Frontiers in Cellular Neuroscience*. 2015;9:392. doi:10.3389/fncel.2015.00392.

31. In our modern society we have _____ of women, whose health has been compromised by our modern life styles.
32. For years we believed that the _____ in a pregnant woman protects the fetus from any toxins which the woman might have in her body. Recent studies show that we were wrong. The _____ accumulates most toxins which the mother is exposed to.
33. On the whole, having met many families with GAPS children, I usually find that the whole _____ needs treatment.

Part One: Chapter 8

34. However, if the child's immune system is severely compromised, then the child will get ill even if _____ are completely avoided.
35. Concerning our current standard vaccination protocol there is a strong argument to administer single vaccines only rather than combined vaccines, like MMR and DPT. In a natural situation a child would never be exposed to _____, _____, and _____ at the same time.

Part One: Chapter 9

36. The only treatment modern psychiatry can offer schizophrenic patients is _____ drugs.
37. There is a certain group of schizophrenics who may not be schizophrenic at all but _____. Pellagra is a deficiency of vitamin B3 (niacin or niacinamide).

Part One: Chapter 10

38. Define idiopathic: _____
39. How do the diets work? In my opinion, what unites all these diets is the low _____ content.
40. According to the author, the majority of epileptic seizures are the result of:
1. damaged _____

2. nutritional _____

Part Two: Chapter 1

Questions start at page 99.

41. The most common carbohydrates are _____, _____ and _____.
42. Galactose is found in _____ products, like yogurt.
43. All grains and some root vegetables are very rich in _____.
44. To allow enterocytes to recover and to stop feeding abnormal gut flora, starch has to be cut out of the diet for GAPS children and adults. It means _____ grains or _____ made out of them and no _____ vegetables.
45. The best sources of easy-to-digest and very nourishing proteins are _____, _____, and fish.
46. To be absorbed fats require _____.
47. Impaired absorption of fats also causes deficiencies in _____ vitamins: A,D, E, and K.

No processed foods, please!

48. Processed carbohydrates get absorbed very _____, producing an unnaturally rapid increase in blood glucose. A rapid increase in blood glucose, called _____, puts the body into a state of shock, prompting it to pump out lots of insulin very quickly to deal with the excessive glucose.
49. As a result of this over-production of insulin, about an hour later the person has a low level of blood glucose, called _____.
50. The fiber in breakfast cereals is full of _____ - substances that bind essential minerals and take them out of the system, contributing to a patient's mineral deficiencies.

51. Trans-fatty acids: What they do in the body is to replace the vital omega-3 and omega-6 fatty acids in cellular structure, making the cells _____.
52. Being a staple in the Western world, _____ is also a number one cause of food allergies and intolerances.
53. Sugar was once called a “white death”. It deserves _____ of this title.
54. Fruit juices are full of _____ fruit sugars and molds.
55. Soy is a natural _____. It has the ability to impair _____ absorption and reduce thyroid function.

Note: It is important to read the diet chapters. Many clients will need simple guidelines or they get overwhelmed. So keep in mind things like No Grains (that includes gluten-free), No Dairy, No Corn, No Soy, No Processed Foods, No Artificial Flavorings or Colors. A list of all the items they CAN eat is very important (make a master copy) or they will think there is nothing left to eat!

Supplementation for Children and Adults with GAP Syndrome (p. 245)

56. The most important fats for GAPS patients, which should be consumed daily and which should constitute the bulk of all fat consumption, are _____ fats: fats in fresh meats, fats rendered from meats, dairy fats (butter, cream and ghee) and fats in eggs yolks.

Note: No cream if there are milk sensitivities, and not in the beginning stage of changing the diet and healing the intestines.

57. TRUE or FALSE: Is the saturated fat in coconut oil healthy?
58. The simplistic idea that eating fat makes you fat is completely _____. Consuming processed carbohydrates causes obesity. Dietary fats go into the structure of your body: your brain, bones, muscle, immune system, etc. - every cell in the body is made out of fats to a large degree.
59. Every cell of every organ in our bodies has _____ as a part of its structure.

60. The human brain is particularly rich in cholesterol: around _____ of all body cholesterol is taken by the brain.
61. After the brain the organs hungriest for cholesterol are our _____ glands: adrenals and sex glands. They produce steroid hormones. Steroid hormones in the body are made from cholesterol: testosterone, progesterone, pregnenolone, androsterone, estrone, estradiol, corticosterone, aldosterone and others.
62. There are two fatty acids that are essential for life but our body does not make them. We must get them from food. These are _____ and _____ fatty acids.
63. EPA and _____ are absolutely vital for normal brain and eye development.
64. TRUE or FALSE: For GAPS patients is supplementing with flax oil sufficient?
65. _____ oil is a good source of DHA and EPA and one of the oldest ways of supplementing these essential fats.
66. Arachidonic Acid (AA) is found in _____, _____, and _____ products.

Supplementation: Chapter 3-4

67. In people with digestive problems, such as GAPS children and adults, it is virtually impossible to obtain vitamin A from fruits and _____.
68. Vitamins A and D are _____ !

Digestive Enzymes

69. What two hormones are so important in normal food digestion that without them this digestion simply cannot happen? A. _____ B. _____
70. But in the stomach with low acidity, overgrowing microbes start _____ dietary carbohydrates, often with the production of various _____ and gas, which can make it very uncomfortable for the GAPS child or adult and make them refuse food.

71. Betaine HCl with added Pepsin should be taken at the _____ of each meal.