



Medical Herbalism by David Hoffman (2003)

CLASS: G460

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.

There will be a lot of skipping in this book for the test. As you read through don't worry about understanding everything! You do not need to be a chemist or memorize all the properties of herbs to use them safely and effectively. So why this book? Many of the concepts and terms will show up during research and reading. Understanding the properties of herbs will help you choose the best combinations for remedies. It is also wise to have a reference book that will help you in further study. The Materia Medica will expand your knowledge (and your Reference Project!) of the most common and useful herbs used in Europe and North America.

Personal (and legal) issues with the words: medicine (remedy), patient (client), treatment (recommended supplementation), medicinal plants (herbs and food), treatment (balance, support),

Chapter 1

1. Horsetail and Silica: A review of the MedLine database and the standard reference books on human physiology produced no literature identifying a role for silicon in _____ metabolism....Even if there is a role for silicon, where is the evidence that horsetail is a source?

Bone. 2012 Mar;50(3):681-7

Dietary silicon interacts with oestrogen to influence bone health: evidence from the Aberdeen Prospective Osteoporosis Screening Study. Macdonald HM1, Hardcastle AC, Jugdaohsingh R, Fraser WD, Reid DM, Powell JJ.

“Silicon (Si), as Si(OH)₄, is derived mainly from plant-based foods. Dietary **Si is associated with bone mineral density** (BMD) in premenopausal but not postmenopausal women....This study suggests that oestrogen status is important for Si metabolism in bone health. Further work is required to elucidate the mechanism.”

Proc Natl Acad Sci U S A. 1994 Jan 4; 91(1): 11–17. *The anomaly of silicon in plant biology.*
Author: E Epstein

“In spite of this **prominence** of silicon as a mineral constituent of plants, it is not counted among the elements defined as "essential," or nutrients, for any terrestrial higher plants except members of the Equisitaceae.” **HORSETAIL (EQUISETUM ARVENSE)**

2. Sheep sorrel is a rich source of _____. Intake of oxalic acid or its salts increases the risk of developing kidney stones. In all the propaganda surrounding Essiac, I have seen no mention of this problem.

Livestock that have eaten **excessive** quantities of sheep sorrel have been poisoned. It has also been reported that **large** consumption of sheep sorrel causes dermatitis in some animals...Due to the high oxalic acid content, **large doses** of sheep sorrel can be toxic. Oxalic acid can cause kidney stones, irritate the kidneys, or worsen an existing kidney disorder. **For these reasons**, those with kidney problems or who are prone to kidney ailments should not use sheep sorrel. When using the leaves as a food, one should eat small quantities, or cook them to reduce the oxalic content. People with arthritis, rheumatism, endometriosis, gout, or kidney stones should use caution when taking sheep sorrel since it may aggravate their condition. Sheep sorrel should not be used by children, infants, or pregnant or breast-feeding women. <http://www.altmd.com/Articles/Sheep-Sorrel--Encyclopedia-of-Alternative-Medicine>

3. Symptoms may be caused by disease , but can also serve as _____ of the body's attempt to defend itself, to adapt and recover, or to heal itself.
4. In science, the words hypothesis and theory relate to the stage of _____ or knowledge about a physical phenomena.

My issue with double-blind studies is that there are numerous variables besides age, blood test health, disease diagnosis, and gender. What about diet, pop/soda, water intake, gut biology, heavy metal or pesticide exposure, congested lymphatics, unhealthy stress...? In addition herbs are treated as drugs - this for that - without treating the whole person. What if they needed depleted minerals for the enzymes to work properly with the herb...VARIABLES.

5. A number of countries are cooperating with WHO through programs that integrate traditional approaches with the scientific techniques of modern medicine. One report from a WHO committee proposes some interesting _____ for integration.
 - Valid factual data must be provided to overcome the current lack of information...
 - There must be legal recognition of traditional therapies and practitioners....
 - Dialogue among practitioners of different systems....

Note: This a prescription of the elimination of all traditional herbalists and holistic health professionals (regardless of what they say) for legalization is always confirmed with licensing and licensing will be given only to those who go to certain schools and follow the protocol of that school because it is now apart of the medical system with insurance companies and "scientists" saying what you can and can't do! That is how to write a run on sentence.

Chapter 2

6. Because an _____ arrangement provides some indication of the effect of a plant on the human body, this method of classification offers valuable information to the holistic practitioner.
7. When using plants in medicine, it is essential to know exactly which herb is being prescribed. _____ names are exact and internationally recognized and each Latin binomial refers to one plant and one plant only.

Chapter 3

8. Effectors are herbs that have an observable impact upon the body and are used in the treatment of _____ illness. (are used to balance or support specific body systems in self healing).
9. Herbal Constituent Groups (table 3.1): These categories vary with phytochemists. Lisa Ganora's groups are Carbohydrates, Amino Acids & derivatives, Polyphenols, Terpenoids, Steroids, and Alkaloids.
 - A) _____
 - B) _____
 - C) _____
 - D) _____
 - E) _____
 - F) _____
10. Primary metabolites, in plants, are compounds responsible for the primary life processes of respiration, _____, growth, development, and other essential functions..

Chapter 4

11. Mycopolysaccharides and polysaccharide-protein complexes make up the cell walls of various _____ (myco) . The mycopolysaccharides may have anticarcinogenic, nephroprotective, hypoglycemic, and anti caries effects.

12. The sources of inulins marketed as nutritional supplements and functional foods are the roots of chicory and Jerusalem artichoke....they appear to help improve _____ absorption and balance..
13. Glycosaminoglycans are usually found in extracellular spaces... _____ acid is a universal component of the extracellular fluid that fills the spaces between the cells of body tissues.
14. _____ cover the linings of the respiratory and intestinal tracts, are responsible for the viscosity of saliva and cervical mucus, and lubricate the eyeball in the eye socket..
15. Cyanogens are substances that can release cyanide. Amygdalin is responsible for the bitterness and _____ of the seeds of bitter almond and of apricots. Laetrile is drug containing amygdalin.
16. Prunasin is the main active principle of wild cherry bark (*Prunus serotina*), used as an _____, antitussive, and flavoring agent in cough syrups.
17. Glucosinolates are common in broccoli, cabbage, cauliflower, brussels sprouts, and are also in kale and bok choy. They may have protective effect against _____ cancer, they interfere with the metabolism of carcinogens, and when broken down into Indole-3-Carbinol they may modulate estrogen metabolism.

“Data from clinical trials show that I3C is **effective** in treatment of precancerous cervical dysplasia and vulvar intraepithelial neoplasia. In premenopausal women, a supplement containing I3C and 7-hydroxymatairesinol **significantly** increased the urinary 2:16-hydroxyestronone ratio, a known biomarker for the reduction of breast cancer risk. I3C also stimulates **detoxification** enzymes in the gut and liver.” - Memorial Sloan Kettering Cancer Center

Because I3C induces cytochrome P450 enzymes, I3C may interact with several medications.

Chapter 6

18. The main terpene in oregano oil is _____. It is strongly antiseptic, shows antifungal and anthelmintic properties.
19. The best sources of thymol are the essential oils of some Lamiaceae plants, such as _____ and *Monarda punctata*..

20. Plants containing iridoids play a central role in herbalism, as they are often the basis of what is known as the _____ principle...Bitters are known to stimulate the release of gastrin in the digestive tract, leading to an increase in digestive secretions, including bile.
21. The majority of sesquiterpene lactones, at least 3,000 have been found, have been obtain from a single plant family, asteraceae. The herb _____ has migraine-preventive activity attributed to its content of sesquiterpene lactones.
22. _____ is the main bitter principle in wormwood, *Artemisia absinthium*.
Wormwood is used as an anthelmintic, as a bitter tonic, and for flavoring vermouth

Chapter 7

23. The anthraquinone class contains many important laxative compounds, including aloe-emodin and emodin, from *Aloe* species. Herbal laxatives containing anthraquinones:
 - A. _____ (aloe)
 - B. _____ cathartica (purging buckthorn)
 - C. _____(buckthorn)
 - D. _____ (cascara sagrada)
 - E. _____ (Chinese rhubarb)
 - F. _____ alexandriea (senna)
24. Quercetin has the widest distribution in nature of all phenolic compounds, and 135 different glycosides of quercetin have been described. Quercetin affects a whole array of enzyme systems. There appears to be a theme of involvement in inflammatory processes that partially explains the _____ action of many quercetin-containing plants.
25. _____ is specifically recognized as a free radical scavenger and has been used clinically against capillary fragility and varicosities.
26. Isoflavonoids are more restricted in distribution than flavors and flavonols, found regularly in only one subfamily of Fabaceae, the _____.
27. Flavonoids appear to modify the body's _____ to other substances, such as allergens, viruses, and carcinogens, as evidenced by their anti-inflammatory, antiallergenic, antiviral, and anticancer properties.

28. Collagen is destroyed during inflammatory processes that occur in rheumatoid arthritis, gout, and other conditions involving bones, joints, cartilage, and other _____ tissue. Anthocyanidins (flavonoid pigments: red to blue colors) and other flavonoids affect collagen metabolism in many ways...

“Exercise increases the generation of oxygen free radicals and lipid peroxidation. Strenuous exercise in a person who is unconditioned or unaccustomed to exercise will induce oxidative damage and result in muscle injury. However, aerobic exercise training strengthens the antioxidant defense system by increasing superoxide dismutase. Vitamin C and, especially, vitamin E are shown to decrease the exercise-induced increase in the rate of lipid peroxidation...Increased vitamin E intake has been associated with enhanced glucose tolerance and insulin action as well as improved lipoprotein status.” Vitamin E, vitamin C, and exercise, William J Evans: <http://ajcn.nutrition.org/content/72/2/647s.full>

vivo.colostate.edu: “Cellular vitamin E deficiency leads to an increase in peroxidation of membrane lipids. This often results in abnormalities in membrane transport, a decrease in mitochondrial energy production. An increased mutation rate due to oxidation of DNA is also commonly observed in deficient cells.

29. Flavolignans of milk thistle (*Silybum marianum*) and schisandrins from *Schisandra chinensis* have valuable hepatoprotective attributes. Schisandrins _____ destruction of liver cells by inducing cytochrome P450 activity..
30. One of the most important properties attributed to tannins is _____ action...When applied to wounds, they form a thin protective surface, cutting down on the secretion of exudates. Tannins also display antimicrobial properties.

Chapter 8

31. Lobeline produces pharmacological effects similar to but weaker than those of nicotine on peripheral circulation, neuromuscular junctions, and the central nervous system. It _____ the respiratory center and induces coughing...*Lobelia inflata* is a relaxant and bronchodilator and is used in physiotherapy to treat asthmatic conditions.
32. Atropine is a highly _____ compound that occurs in *Atropa belladonna*, *Datura stramonium*, and other Solanaceae plants, especially the roots.

Note: Comfrey has been used as an herbal medicine for more than 2,000 years. Comfrey's original name, knitbone, derives from the external and internal use of its leaves and roots to heal bones, burns, sprains, swelling, and bruises. It is also used for treating inflammatory disorders such as arthritis and gout.

Comfrey toxicity revisited by Dorena Rode, University of California: “Comfrey is a herbal medicine with a history of efficacious use in humans. However, owing to the presence in comfrey of pyrrolizidine alkaloids (PAs), which are compounds known to be hepatotoxic, many countries have restricted its availability. This review emphasizes crucial aspects of PA toxicity, and suggests that comfrey might not be as dangerous to humans as current restrictions indicate.” **Note:** I believe the dose, amount of time this herb is consumed, and the health of the liver before using comfrey determines the risk factors, or lack thereof.

33. _____ is an alkaloid found mainly in the cocoa plant, but also in tea, guarana, and kola.
34. Berbine is found in 23 genera spanning seven plant families. Berberine is found in highest concentration (about 6.1%) in the _____ of *Berberis vulgaris* (Barberry).
35. Vinblastine and Vincristine are alkaloids that have _____ activity and have widespread use in the treatment of leukemia and Hodgkin’s disease.
36. Quinine, and quinidine, are found in the bark of *Cinchona* officials. They are used as antimalarials against *Plasmodium flaccarpum*, which is usually drug-_____.

Chapter 9

37. Pharmacology addresses important questions about herbal medicines and their therapeutic indications. Consider the following five subject categories.
 - A. _____ and Distribution
 - B. Site of _____
 - C. Metabolism and _____
 - D. _____ and Adverse Effects
 - E. _____ Interactions
38. *Coleus forskohlii* activates the the enzyme adenylate cyclase that raises levels of cyclic adenosine monophosphate (cAMP) in cells. Cyclic AMP is a vital _____ compound involved in a variety of cellular functions.
39. Acetylcholinesterase inhibitors have effects on the parasympathetic nervous system which regulates processes responsible for energy assimilation and storage. Reduced ACh levels are observed in various forms of _____.

40. (p. 144) However, some herb books caution against the use of phytoestrogen-containing plants because estrogens can stimulate the development of tumors in the breast. To the contrary, human research has made it clear that phytoestrogens act as weak estrogen _____ in Type II estrogen receptors in the breast, and so might actually help reduce the risk of breast cancer related estrogens. **Note:** With over 300 species of plants having some degree of estrogen activity a person can easily find a safer food than soy to supply the need.
41. Infants do not develop a competent P450 system for more than _____ after birth.
42. Lectin containing plants familiar to the herbalist are poke (_____ americana), and mistletoe (*Viscum album*). **Note:** Poke root is a valuable lymphatic stimulator for cleansing and it is used for stimulating the lymphatic side of the immune system.
43. The principle _____ substance found in medicinal fungi is simply called B-glucans. Edible mushrooms rich in B-glucans include shiitake, maitake, himematsutake, button, wood ear, tremella, podia, and enoki.
44. Many symptoms associated with disease are caused not directly by a pathogen, but rather by the body's _____ to the pathogen or by the release of chemical mediators.
45. Kinins are highly bioactive peptides found in the _____ and a variety of other body tissues. They are powerful pain producers, their release may have a role in the pathophysiology of migraines.
46. Cytotoxics target cells with a high growth fractions, and since cancer cells proliferate faster than most normal cells, they are the ones most affected. Normal cells with a high proliferation rate include hair follicles, the lining of the _____ tract, and bone marrow. These normal cells suffer the same consequences and cancer cells during chemotherapy.
47. In _____, the cell fragments are phagocytized by macrophages or neutrophils without causing inflammation, and so adjacent cells are not damaged. Defects in apoptosis may be implicated in both the initiation and the proliferation of cancer cells. **Note:** In multicellular organisms, cells that are no longer needed or are a threat to the organism are destroyed by a tightly regulated cell suicide process known as programmed cell death, or apoptosis. (There is no consensus yet on how to pronounce it; some say APE oh TOE sis; some say uh POP tuh sis.).

48. A 1995 paper reported on the results of testing for superoxide anion-scavenging effects in 65 plant extracts. Of these, _____ and witch hazel were found to have strong scavenging and protective activities against cell damage induced by active oxygen.
49. Glutathione requires _____ for its activity and it reduces organic hydroperoxides and hydrogen peroxide.
50. Radical production by phagocytes is an important part of their _____ and antitumor functions, as phagocytosis is accompanied by an increase in oxygen consumption with an attendant production of oxygen ions.

Int J Biochem Cell Biol. 2007;39(1):44-84. Epub 2006 Aug 4. **Free radicals and antioxidants in normal physiological functions and human disease.** Valko M1, Leibfritz D, Moncol J, Cronin MT, Mazur M, Telser J.

(I have removed some notations and information to make it easier to read)

Reactive oxygen species (ROS) and reactive nitrogen species (RNS) are well recognised for playing a dual role as both deleterious and beneficial species... Overproduction of ROS results in oxidative stress, a deleterious process that can be an important mediator of damage to cell structures, including lipids and membranes, proteins, and DNA.

In contrast, beneficial effects of ROS/RNS occur at low/moderate concentrations and involve physiological roles in cellular responses to noxia, as for example in defence against infectious agents, in the function of a number of cellular signalling pathways, and the induction of a mitogenic response. Ironically, various ROS-mediated actions in fact protect cells against ROS-induced oxidative stress and re-establish or maintain "redox balance" termed also "redox homeostasis". The "two-faced" character of ROS is clearly substantiated. For example, a growing body of evidence shows that ROS within cells act as secondary messengers in intracellular signaling cascades which induce and maintain the oncogenic phenotype of cancer cells, however, ROS can also induce cellular senescence and apoptosis and can therefore function as anti-tumourigenic species.

51. Coenzyme Q10 (CoQ10) is an essential part of the cellular respiratory chain, the components of which are physically located in the inner membrane of the _____.

Mitochondria are known as the powerhouses of the cell. They take in nutrients, break them down, and create energy rich molecules (ATP) for the cell. The biochemical processes of the cell are known as **cellular respiration**. CoQ10 is a component needed to generate this energy in the form of ATP. Ninety-five percent of the human body's energy is generated this way! In addition to our muscles, the heart, liver, and kidneys have the highest energy needs and therefore the highest CoQ10 concentrations. CoQ10 is the only lipid-soluble antioxidant that is synthesized in our bodies.

Deficiencies of coenzyme Q10 result in a number of neurologic and myopathic (muscle) syndromes. Statins (class of drugs to lower cholesterol) interfere with the production of mevalonic acid, which is a precursor in the synthesis of coenzyme Q10. The statin medications routinely result in up to 40% lower coenzyme Q10 levels.

Coenzyme Q10 in the serum is largely found bound to the lipoprotein transport of low-density lipoprotein (LDL) cholesterol and does not circulate in any appreciable concentration as an unbound form. Dietary supplementation of coenzyme Q10 increases levels of its reduced form within the circulating lipoproteins and inhibits LDL peroxidation.

Exercise may also induce a relative coenzyme Q10 deficiency because of increased demands on the mitochondria for ATP production. Oxidative stress as found in testing after vigorous exercise may cause depletion of muscle levels of coenzyme Q10.

52. Coleus forskohlii and forskolin lower blood pressure (relax arteries) and improve the contractility of the _____ (increases force), making this herb relevant in the treatment of hypertension, congestive heart failure, and angina.

53. A wealth of European research has produced data showing that milk thistle seeds can reverse toxic liver _____ as well as protect against damage from hepatotoxins.

54. Momordica charantia, _____ is a traditional remedy of the Pacific and Indian Ocean islands for diabetes mellitus...This hypoglycemic action was observed in 86% of subjects.

Chapter 10

55. My first concern is pharmacological...It is a challenge to accurately assess levels of such constituents in whole plants or extracts without some form of _____ or batch-by-batch chromatographic analysis.

Note: A standardized extract is a process by which one active constituent is extracted from the original herb. This concentrate, standardized into one active ingredient, is then “loaded” back into an herbal base of that product. Basically, by isolating one ingredient at the expense of another, we change the natural balance of the herb’s components.

56. This is of no consequence when we are using plants for gentle effects, such as Urtica dioica (stinging nettle), but with a plant like Atropa _____, knowledge and understanding of such variations is critical to safe prescribing.

Note: I/we don't prescribe, I/we are not medical doctors. Atropa belladonna? I do not know one reference to belladonna that is not highlighting the fact that it is highly poisonous and toxic! There are thousands of non-toxic herbs on the shelves. Millions of people have used them safely all over the world for thousands of years. DO NOT USE HERBS LIKE DRUGS. If they are known to be poisonous or dangerous without strict dosage do not use them, even if some herbalist have or are using them.

57. Similarly, the use of _____ measurements when dosage levels are critical borders on malpractice.”

Note: I know from further reading that he is talking about herbs like belladonna but at the same time he is trying to instill fear. Of course we should not use known poisonous herbs. If we must worry about whether a person takes 30 drops or 35 drops we are not using non-toxic herbs. Herbs have always had variations. This does no harm and it does not affect the actions of the herb when you are balancing the person as a whole.

Safety Guidelines - Don't jump to unwarranted conclusions about therapeutic indications and contraindications from research findings if:

1. They are derived from **animal** experiments.
2. The studies utilized **isolated** constituents, not whole plants.
3. They disagree with established phytotherapeutic **experience** and protocols.

58. Pharmacokinetic Interactions: An herb may affect drug pharmacokinetics by altering drug _____ or cause changes in the rate of drug _____.

59. Drug bioavailability may be _____ by herbs that increase the rate of absorption.

60. An additive, cumulative effect is the most common interaction. It may occur when the herb and the drug have _____ mechanisms of activity. **Note:** An example would be when both the herb and the medication are lowering high blood pressure or sugar levels.

61. Antagonistic is when one medicine _____ the effects of the other.

62. Damage to DNA causes altered genetic expression (mutations). If the mutation occurs in a germ cell (gametes come from germ cells, two gametes coming together equal a fetus/baby) the effect may be _____.

Note: “Category 1 chemicals are “known to induce heritable mutations or to be regarded as if they induce heritable mutations in the germ cells of humans,” and Category 2 chemicals are those that “cause concern for humans owing to the possibility that they may induce heritable mutations in the germ cells of humans” (UNECE, 2004). Substances that induce heritable damage or damage in animal germ cells are regarded as suspect human germ cell mutagens as well as possibly having implications for carcinogenicity.”

63. Not all individuals are subject to the same health risk. For this reason, the term _____ group was coined.
64. Thujone toxicity is cumulative. (Note: The herbs listed are always used for a specific condition and therefore a limited time.) However, thujone is a terpene of widespread occurrence that is found in many _____.
65. Warfarin is a _____ chemical derived from coumarol. It is used in rodenticides and acts as a vitamin K inhibitor to block the blood-clotting process and provoke hemorrhage.
66. Gossypol is found in _____ oil and if it is not removed it makes men infertile.
67. Tropane alkaloids are found mainly in the _____ family: thorn apples (Datura), angel's trumpets (Brugmansia), henbane (Hyoscyamus niger), belladonna or deadly nightshade (Atropa belladonna), and European mandrake (Mandragora).
68. Mycotoxins are toxic metabolites produced by _____ and molds. Mold growth can occur at any time, from herb harvest until consumption. Mold spores are everywhere, and they lay format until conditions are right for them to sporulate and grow.
69. There are two major reasons why it has become necessary to monitor levels of toxic metals in herbs. First, contamination of the general environment has increased. Second, exotic herbal remedies, particularly of Asian origin, have been repeatedly reported to contain toxic levels of heavy metals or _____.

Chapter 11: This section has been covered in the Herbal Preparations class. I would recommend reading and comparing with the other books but you will not have any test questions.

Chapter 12: Again, much of this section has been covered in previous books/tests.

70. In the hands of an experienced herbalist, knowledge of plant _____ can add to the healing possibilities, but **not as much** as is often believed.
71. A dosage of **5 ml** is roughly equivalent to 1 teaspoon.
72. A child that is 4 years old would get approximately **1/4** of the adult dose.

Chapter 13

73. Castor oil has a _____ effect that is **too strong** to warrant use of this agent for common constipation.
74. Diarrhea may be a temporary or a chronic problem. (**Note:** 1-4 often cause 6-7) A
few common causes are:
- A. _____ infections
 - B. _____ infections
 - C. _____ intolerances
 - D. _____
 - E. Reactions to _____
 - F. _____ diseases
 - G. Functional bowel _____
75. In the broader context of treatment for aphthous ulcers, iron, vitamin C, _____ complex, and zinc supplement can be very helpful, in some cases even enough to clear the problem.
76. *Helicobacter pylori* is implicated in the development of many gastric and duodenal ulcers. This may help explain why *Hydrastis canadensis* (_____) can be so effective against ulcers.
77. Diverticulitis treatment will affect elimination in general, so support for the liver and _____ is essential.
78. *Hypericum perforatum*, (St John's wort) contains the compounds hypericin and pseudohypericin which are known to disrupt **viral** replication by damaging the integrity of the lipid envelope.

Chapter 14

79. Blood vessel or vascular _____ are often rich in constituents called flavonoids.
Note: Flavonoids (or bioflavonoids from citrus) are a class of plant secondary metabolites. A diet high in a variety of vegetables and fruits is the best prevention for most diseases.
80. Simply stated, hawthorn will help keep the heart healthy, _____ the development of coronary diseases.

81. Ginkgo biloba is recommended both for prevention and treatment of a number of heart and blood vessel problems, especially those due to _____ circulatory and cerebral vascular insufficiencies.
82. An angina attack is not a heart attack! Crataegus can be considered the closest to a _____ for this condition. Crataegus may inhibit the progression of atherosclerosis, increase coronary perfusion, and confer mild hypotensive effects.

Chapter 15

83. Types of **bacteria** that cause acute bronchitis include Streptococcus pneumonia and Hemophilus _____. **Note:** When we see the term influenza the first thought is the flu virus but Haemophilus influenzae is an anaerobic bacterium that can lead to severe infection or pneumonia.
84. _____, commonly known as whooping cough, is caused by the bacterium Bordetella pertussis. The disease lasts about 6 weeks and has three well-defined stages. While there are a number of possible herbal specifics, they support antibiotic therapy and do not replace appropriate antibiotic treatment.

Note: Many parents choose to let their children go through the immune process without antibiotics. This is the parents choice. You should never say that the herbs are anything more than supportive and ask them if they have considered antibiotics. Why? If something happens you do not want to be legally responsible. If it is an infant (under 2) or an infant is in the household they SHOULD get antibiotics and you should let them know it is best. Older children rarely have an issue with coughing the mucous up but it is dangerous for babies.

85. Asthma that begins in childhood is closely linked with the presence of eczema, hay fever, _____, and migraine in the patient or in close relatives. These children often have a history of slow recovery from upper respiratory tract viral infections. **Note:** Eczema and hives are usually food intolerances and allergies with milk, eggs, and wheat as primary suspects. Hay fever and migraines are usually liver issues from nutritional deficiencies or too many toxins (back to food intolerances/bowels).
86. The _____ system should be a primary focus in the treatment of tonsillitis.

Chapter 16

87. Stress is the response of the body to any demand. The regulation of physiological responses to threats or stressful demands is handled mainly by the _____ gland.
88. Soviet scientists coined the term _____ to describe herbs that produce this wonderful increase in resistance and vitality.
89. Herbs that can be described as adaptogens include:
- A. _____ ginseng/Korean
 - B. P. quinquefolius/_____ ginseng
 - C. _____/Siberian ginseng
 - D. Withania/_____
 - E. Lentinus/_____ mushroom
 - F. Shisandra/_____
90. A daily supplement of _____ vitamins and vitamin C is indicated.
91. In addition to the nervine relaxant herbs already mentioned, consider passionflower, valerian, _____, and wild lettuce.
92. Conditions associated with increased anxiety or worry often keep people from falling asleep, whereas depressive illnesses often result in early-morning awakening or trouble _____ asleep. **Note:** Using a B-complex and adaptogens often works for the worriers who can't turn off their brain and fall to sleep.
93. Migraine triggers are varied and different for each individual. Food sensitivities, general toxicity, _____, structural factors...Feverfew is a long-term treatment, not an immediate cure for a migraine attack.

Chapter 17

94. The kidneys are the major organs of _____. They work in conjunction with the liver, the lungs, the skin, and the bowels to help ensure a clean internal environment.
95. The distal tubule (kidney) regulates the overall acidity of the urine, and ultimately of the blood, by excretion of _____ ions. All the blood glucose will be removed from the urine unless the blood glucose exceeds normal concentrations by a considerable amount.

96. An increase in frequency indicated that the _____ cannot hold as much fluid as usual. Infection, foreign bodies, stones, and tumors can all injure the tissue of the bladder wall and cause inflammation. **Note:** Candida and bacteria are common reasons for the bladder to be “overactive” - it wants to release the irritants.
97. With edema, water retention, the most effective diuretic herb is dandelion leaf. Dandelion leaf provides the benefit of a rich source of _____ (a critical electrolyte for the electrical system of the heart - low potassium may cause irregular heart beats).
98. Urinary calculus are referred to as kidney stones. A number of plants have a long tradition of use as specifics in Europe. Important examples are Hydrangea, Parsley, Couch grass, Nettle, and Goldenrod. To these we can add the North American plants:
1. _____/Eupatorium purpureum
 2. _____/Collinsonia canadensis
 3. _____/Zea mays

Chapter 18 - Most of this information was covered in previous books. Do read and take notes to help clarify or expand your knowledge.

Note: Make a list of herbs safe during pregnancy for it is much easier than a list of herbs NOT to use during pregnancy!

Chapter 19

99. Osteoarthritis is also known as degenerative joint disease and is the most common type of arthritis. osteoarthritis primarily affects _____. Bony spurs may form at the edges of a joint.
100. Rheumatoid arthritis is an _____ disease of the lining of the joint that results in pain, stiffness, swelling, deformity, and loss of joint function.
101. Fibromyalgia patients experience _____ pain, fatigue, and sleep disturbances (because of pain!). **Note:** Low minerals, vitamin D, B vitamins, food intolerances/parasites/candida, and viruses are often indicated.
102. Eat foods that contain plant _____ (phytoestrogens), especially tofu and other soy products. **Note:** This is what I consider bad advice!
103. Restless legs syndrome is a puzzling _____ disorder for which a cure remains elusive. The symptoms worsen at night.

Note: I had several clients with restless legs and each had a different “cure”. For one client it was low iron (not anemia), one was magnesium, one was magnesium and calcium, one was low B vitamins (all got B vitamins), three had type 2 diabetes and when nutrients were given and the diet changed the nerve issues went away also, one was a heavy load of metals and liver toxicity, and one was a sensitivity to red dye. Like most dis-eases in the body there are several pathways to the same disorder.

Chapter 20

104. With eczema, dietary factors are particularly important, especially in children. _____ and milk products are the most common triggers (also in asthma - bowel/lung/skin).
105. Psoriasis flare-ups commonly accompany _____, especially infections of the upper respiratory tract. Note: Bowels, Liver, and Immune systems must be supported.

Chapter 21

106. Because immunity must be seen in the context of homeostatic, whole-system function, we must also emphasize general detoxification and _____.
107. Autoimmune diseases are conditions in which the lymphocytes produce antibodies that attack the body’s own cells and tissues as if they were _____ substances, thus causing pathological damage.
108. Appropriate remedies for immune system problems must be selected on the basis of the _____ need. The word immune does not mean Echinacea!
109. Detoxification - The physiotherapist can aid the process by using basic, simple, and safe herbs. The important point is to address _____ processes as a whole, not just to focus on the colon.
110. A combination of equal parts lavender and _____ essential oils is a long-standing treatment for athlete’s foot among aromatherapists in the UK. - this also works on the fungus when it appears on other parts of the body.

Chapter 22 was covered in other classes/books.

Chapter 23 and 24 make notes on your Herbal Reference Project, especially for children’s issues.

Chapter 25 - Take notes for your Herbal Reference Project

Chapter 26

I will only be using test questions to point out information that may not have been covered in your other herbal books. Make note of dosages that are out of the “normal” range or 1 to 4 ml. Add new information or insights to your Herbal Reference Project.

111. Achillea/Yarrow is considered a specific in thrombotic conditions associated with hypertension, and is thought to lower blood pressure through dilation of _____ vessels.
112. Buchu is useful in _____ of the genitourinary system, such as cystitis, urethritis, and prostatitis. **Note:** anything ending in “itis” refers to inflammation.
113. Agrimony may be used to treat indigestion and is a specific for childhood _____.
114. All inflammatory disorders of the gastrointestinal tract will benefit from the application of marshmallow root, including inflammations of the mouth, gastritis, peptic ulceration, and _____.
115. Celery seed finds its main use in the treatment of rheumatism, _____, and gout.
116. Burdock is a valuable remedy for the treatment of skin conditions that result in dry and scaly patches. In general, burdock will move the body to a state of integration and health, improving indicators of _____ imbalance, such as skin problems and dandruff.
117. Bearberry/Uva-ursi has a specific antiseptic and astringent effect on the membranes of the _____ system. It is specifically used for conditions in which there is gravel or ulceration in the kidney or bladder.
118. Arnica should not be taken _____, as it is potentially toxic.
119. Artemisia absinthium/wormwood is a powerful remedy against _____ infestations, especially roundworm and pinworm (itchy butt). **Note:** This herb is often part of a formula rather than used alone. **Note:** Artemisia vulgaris is Mugwort!
120. Pleurisy root is effective against respiratory infections, reducing inflammation and _____ expectorant. It can be used for bronchitis, influenza, and other respiratory conditions. As its popular name indicates, pleurisy root is of much value in treating pleurisy (Inflammation of the tissues that line the lungs and chest cavity).

121. Astragalus appears to strengthen both specific and nonspecific _____. Dose: 4-8 ml which is more than many others.
122. Oats/Oatstraw is one of the best remedies for “feeding” the nervous system, especially when the patient is under stress. It is considered a specific in cases of nervous debility and _____ associated with depression.
123. Wild Indigo is advised in all diseases of the _____ systems...in scrofula (swelling of lymph in the neck) and in cutaneous infections, the agent should be long continued.
Note: Figwort is also specific in scrofula.
124. Barberry has the interesting ability to reduce the size of an enlarged _____. It has antimalarial (bacteria) actions and is effective against infections caused by protozoa.
125. Caraway seeds are calming and help ease flatulent dyspepsia and intestinal _____, especially in children. It has also been used to increase milk flow for nursing mothers.
126. Fringetree is a specific for the treatment of gallbladder inflammation and a valuable component of treatment for _____. Because it stimulates the release of bile, it also acts as a gentle and effective laxative.
127. Black Cohosh is a valuable relaxant and normalizer of the female reproductive system. As a _____ and anti-inflammatory it is very effective against rheumatic pain, muscle problems, and is helpful for neurological pain, including sciatica and neuralgia.
128. Collinsonia/Stoneroot finds its main use in the treatment and prevention of _____ gravel in the urinary system and gallbladder. It is a strong diuretic.
129. Dioscorea/Wild Yam actions are: _____, anti-inflammatory, antirheumatic, hepatic, cholagogue, diaphoretic.
130. Sundew may be used to great benefit in _____ and whooping cough.
131. Echinacea is often effective against both bacterial and viral attacks. Clinical data support the use of echinacea in a variety of situations. It is often _____ used as “daily immune support”.
132. Couch Grass is of value in the treatment of benign _____ hypertrophy (BPH, or enlarged prostate), andy also be used for kidney stones and gravel.

133. Horsetail is invaluable in the treatment of _____ and bedwetting in children. It is considered a specific for cases of inflammation or benign enlargement of the prostate gland.
134. California Poppy has been used as a sedative and hypnotic for children, especially in cases of _____ and sleeplessness.
135. Boneset/*Eupatorium perfoliatum* is one of the best remedies for the relief of symptoms that accompany _____. It will speedily relieve aches and pains and help the body deal with any fever present.
136. Eyebright is an excellent remedy for mucous membrane problems when used internally for sinusitis and other _____ states.
137. Meadowsweet is one of the best _____ remedies available. It is used in the treatment of heartburn, hyperacidity, gastritis, and peptic ulceration.
138. Kelp/Bladderwrack has proved useful in the treatment of _____ thyroid and goiter. Prolonged ingestion of kelp may reduce gastrointestinal iron absorption (due to binding properties of fucoidan).
139. Goats Rue is one of the many herbal remedies with the ability to reduce _____ levels. In addition it stimulates both the production and the flow of breast milk. It may also stimulate the development of mammary glands.
140. Cleavers is one of the best tonics available for the _____ system: swollen glands, tonsillitis, adenoid trouble.
141. Gentian is an excellent bitter that stimulates digestion but it is contraindicated during pregnancy and for those with gastric or duodenal _____.
142. Hops has a marked relaxing effect upon the central nervous system, and is used extensively for the treatment of _____ (and anxiety, worry). However, patients experiencing significant depression should avoid hops, as it may accentuate this mood state.
143. Elecampane is a specific for irritating bronchial coughs, especially in children. The mucilage has a relaxing affect, while the essential oils bring about stimulation, so the herb both _____ irritation and promotes expectoration.

144. Blue Flag is a cholagogue, hepatic, alterative. It is specific for _____ congestion due to venous or lymphatic stasis. They recommend it for chronic hepatitis, rheumatic conditions, toxic sciatica, scrofulous skin conditions, eczema, psoriasis, herpes, enlarged thyroid gland and uterine fibroids. **Note:** This wonderful and powerful liver stimulator combines well with yellow dock, burdock, and nettles to cleanse the bowels, liver, and kidneys.
145. Bugleweed is a specific for _____ thyroid, especially when symptoms include shortness of breath, palpitations, and shaking. **Note:** Do not use with hypothyroid!
146. Condurango is a bitter that may be used to treat a whole range of digestive and stomach problems. This herb also relaxes the nerves of the _____, making it useful for settling indigestion associated with nervous tension and anxiety.
147. Peppermint has a relaxing effect on the muscles of the digestive system. It combats flatulence, intestinal colic, and _____ the flow of bile and digestive juices. **Note:** For childhood and infant stomach issues a mixture of peppermint herb, fennel and marshmallow at 3-10 drops 2-3 times per day works wonders.
148. Partridgeberry is among the best remedies for preparing the uterus and whole body for _____. It should be taken for some weeks before the child is due.
149. Quaking Aspen is a relevant anti-inflammatory for arthritis and rheumatism accompanied by pain and _____. It is similar to willow and most effective when used as part of a broad therapeutic approach.
150. Wild Cherry has a powerful sedative effect on the cough _____ and finds its main use in the treatment of irritating coughs. **Note:** A common cold formula for children and adults in my office: Elderberry (sinus), Wild Cherry (cough), Echinacea (viral, bacteria). If they are prone to sinus infection I replace the Wild Cherry with Goldenseal (adults) or Barberry (children).
151. Yellow Dock is an alterative used extensively in the treatment of _____ skin complaints, such as psoriasis. **Note:** This is another favorite in my office. It is high in vitamin A, iron, and other minerals to “feed” the liver (which reflects the skin) and it has a stimulant effect on the bowels.
152. Red Sage/Salvia/Sage decreases _____, and may also be used to lessen the production of breast milk. **Note:** Used with supporting herbs, sage will often help with night sweats and hot flashes that result in sweating.

153. Figwort/Scrophularia ...gently stimulating and relaxing alterative with lower abdominal and pelvic emphasis. Deobstruent to enlarged and _____ lymph glands.
154. Skullcap effectively soothes nervous tension while _____ and revivifying the central nervous system. It has a long history of traditional use for the control and treatment of petit map seizures.
155. In women, saw palmetto is used for _____ enlargement, with tenderness and dull aching pains, weakened sexual activity, and small undeveloped mammary glands.
156. Milk thistle promotes milk secretions and is perfectly _____ for use by breast-feeding mothers.
157. Goldenrod/Solidago is perhaps the first plant to consider for upper respiratory _____. It is also helpful as an anti-inflammatory urinary tract antiseptic.
158. Thyme/Thymus is an excellent cough remedy, producing expectoration and _____ spasm. It may be effective in the treatment of bronchitis, whooping cough, and asthma. The oil is also stingily antiseptic. Note: The whole herb, not the essential oil of thyme.
159. Linden is a specific for high blood pressure associated with _____ and nervous tension. It may also have a role in the treatment of some types of migraine.
160. Red Clover is a useful remedy for children with skin problems (eczema). As an alterative, it is indicated as part of a holistic approach for a _____ of problems. ...mild, stimulating and relaxing alterative with a special affinity for the throat and salivary glands... chronic bronchial or throat conditions.
161. Slippery Elm is a soothing, nutritive _____ that is perfectly suited for treating sensitive or inflamed mucous membrane linings in the digestive system.
162. Nettle is one of the most widely applicable plants in the materia medic. The herb _____ and supports the whole body.
163. Mullein is a very beneficial respiratory remedy, useful for most conditions and ideal for toning the mucous membranes of the vital system. It is considered a specific for bronchitis characterized by a _____ with soreness. **Note:** It stimulates fluid production and facilitates expectoration so it is useful for dry, unproductive coughs.

164. Cramp Bark and _____ are “sister plants” - closely related with similar uses. They are antispasmodic and relax muscular tension and cramping: asthma, threatened miscarriage, false labor, menstrual cramps.
165. Sweet Violet has a reputation as an “anticancer herb”; while the concept is inappropriate, as an alterative the herb definitely has a role to play in _____ approaches to the treatment of cancer.
166. Vitex/Chasteberry has the effect of stimulating and normalizing _____ gland function, especially as it relates to relative progesterone levels. Vitex not only eases the symptoms of PMS, but also, over time, may actually cure the disorder. PMS has been linked to abnormally high levels of estrogen. **Note:** Endometriosis is also the result of too much estrogen compared to progesterone. PMS also calls for a B-complex and adrenal support.
167. Prickly Ash is a circulatory stimulant and may be used in similar ways to cayenne, although its action is slower. Any sign of poor _____ calls for prickly ash, including leg cramps and varicose veins, loss of sensitivity in injured nerves.
168. Ginger is best known as a treatment for motion sickness. It also effectively stimulates _____ circulation. In feverish conditions, ginger acts as a useful diaphoretic.

END OF TEST