**Multiple Sclerosis**  
Chronic degenerative disease of the nervous system destroying myelin in the brain and spinal chord at different times. Age of onset is 20-40 and women are often affected more than men.  
Etiology: infection, trauma or injury triggering autoimmune disease, damage by toxic metals, aspartame poisoning has similar symptoms to MS, dysbioisis and subsequent internally generated toxins causing nervous system damage (plus evidence of intestinal damage similar to Celiac’s disease in people with MS), deficiency of EFA’s, abnormal B12 metabolism causing demyelinization, deficiency in glutathione which protects cells from oxidative damage and lipid peroxidation.  
Signs and Symptoms:   
Early symptoms are often non specific- stiffness, weak limbs, minor gait disturbance, double vision, vertigo and mild lability (involuntary crying, laughing or other emotional displays)   
Later stages- depending on where the demylination plaques have occured: impaired vision, impaired speech, lack of coordination, tremors, impaired position sense, weak limbs, paraplegia, incontinence, vertigo, seizures, mania or dementia.  
Pathophysiology: progressive demyelination (loss of white matter) of nerves occurs in a scattered pattern throughout the brain and spinal cord.  
Recommendations: text p. 100-102

**Raynaud’s Disease**Vasospastic disease of the small arteries and arterioles where there is an exaggerated vasomotor response to cold or emotion.Etiology: unknown but possibly autoimmune disease (often occurs alongside an autoimmune disease called scleroderma), and heavy metal toxicity, stress, attacks precipitated cold, factors that make it worse include the pill, female hormones and cigarette smoking (causes vasoconstriction)  
Signs and Symptoms: intermittent vasospastic attacks of varying severity and frequency that affects the fingers of both hands (and the toes less commonly), colour changes occur in sequence: first white, then blue, and then red as blood flow returns. Initially there is numbness and sensation of cold and with blood returning there is throbbing and paresthesia. When chronic, individuals may develop atrophy of the skin and subcutaneous tissues, brittle nails, occasionally skin ulceration and gangrene  
Pathophysiology: chronic vasoconstriction with its resultant decrease in oxygen and nutrients can affect any organ in the body and cause undernutrition and affect regeneration.  
Recommendations: text p 108-109   
 **Anxiety and Depression**  
*Anxiety-*  a reoccurring feeling of danger when it doesn’t exist (excessive worry)  
*Generalized anxiety disorder*- at least 6 months or more of persistent and excessive anxiety and worry *Depression-* mood disorder marked by loss of interest or pleasure in living*.*  
Etiology:   
*Anxiety*- hypothyroidism, hyperthyroidism, diabetes, heart disease, medication withdrawal, drug use/abuse, alcohol and caffeine withdrawal, withdrawal from anxiolytics and anti- depressents, psychological causes (financial, relationship, work and health concerns and spiritual conflicts) and of course nutritional deficiencies and their stress on the nervous system and adrenal glands  
*Depression*-decreased levels of serotonin, feelings of being out of control of one’s circumstances or situation, nutritional imbalances   
Signs and Symptoms:   
*Anxiety*- uneasy feeling of discomfort or dread accompanied by an autonomic response (a feeling of apprehension caused by the anticipation of danger (source being non specific or unknown to the individual)/ can become as bad as panic attacks and crippling fear   
Depression- persistent feelings of hopelessness, worthlessness and decreased interest in daily activities, inability to concentrate, persistent feelings of guilt or self criticism, changes in appetite or body weight, insomnia or excessive sleep, irritability and recurrent thoughts of suicide.  
Pathophysiology:   
*Anxiety* has a major effect on the adrenal glands which need extra support. It also shuts down digestion so malabsorption, dysbiosis and weakening of the tissues will occur resulting in other symptoms as well.  
*Depression*- little is known  
Recommendations: text p.

**Anorexia Nervosa and Bulimia***Anorexia- is an eating disorder where the person starves themselves  
Bulimia- is a condition where the person binge eats and then vomits*  
Etiology: unkown, psychological factors related to family, deficiencies of zinc and folic acid.  
Signs and Symptoms:   
*Anorexics*- extreme weight loss (over 25% body weight), thinning hair, dry skin, constipation, growth of lanugo down the body, low blood pressure, low body temperature, low pulse, yellow discoloration of the skin due to a deficiency of essential fatty acids and reduced capacity to convert beta carotene into Vit. A  
*Bulimia*- can be normal weight or slightly above it, dehydration  
*Both*- complex food and exercise rituals that control her life, self loathing, self denial  
Pathophysiology:   
*Anorexia*- menstruation stops, loss of menstrual cycle, post menopausal levels of estrogen and progesterone, liver and kidneys can also eventually dysfunction  
*Bulimia-* malnourished because they are either restricting their intake of food and binging on carbs, insulin dominance, hypoglycemia, metabolic syndrome, purging can result in biochemical abnormalities, pH changes and damage to the kidneys and liver  
Recommendations: text p. 118-119

**Parkinson’s Disease**Chronic degenerative disease of the nervous system that produces progressive movement disorders and changes in cognition and mood.  
Etiology: free radical damage to the brain, congested liver, deficiency of nutrients or generally poor diet  
Signs and Symptoms: tremor at rest, pill rolling, an expressionless face, difficulty in initiating or stopping a movement, a festinating gait, lead pipe rigidity, cogwheel rigidity  
Pathophysiology: loss of cells and dopamine resulting in too much acetycholine versus too little dopamine  
Recommendations: text p.   
  
**Alzheimer’s Disease**Chronic, progressive, degenerative cognitive disorder and accounts for more than 60% of all dementias.  
Etiology: unknown, the brain has many phospholipids which are subject to damage by free radicals, damage by free radicals and toxins is likely a cause or contributing cause  
see list of contributing causes p. 121  
Signs and Symptoms: shuffling gait, depression, anxiety, loss of recent memory and diminished range of mental functioning, logic and perception  
Pathophysiology: loss of neurons, degenerative areas of the brain called plaques, degeneration of nerve tracts affecting memory, abnormal blood transferring (protein that transfers substance to be detoxified, one of the substances that it detoxifies is aluminum which then accumulates and deposits in the nervous system (aluminum is often found in the plaques)  
Recommendations: text p. 123-125   
 **Attention Deficit Disorder**  
Hyperactivity and inattention that is more severe than what is observed in individuals at a comparable level of development  
Etiology: neurotoxins in the utero or within the environment, ADHD children have been shown to have a more permeable gut wall (leaky gut/dysbiosis), increased need for EFA’s, sugar, caffeine  
Signs and Symptoms: motor restlessness, impulsivity, difficulty concentrating on a single task or chore, typically do poorly in school despite intelligence  
Pathophysiology: reduced performance in the executive areas of the frontal lobes which are responsible for impulse control and ability to sustain attention, abnormal dopamine, hippocampus (concerned with memory), acetylcholine levels may also be a factor  
Recommendations: text p.

**Vertigo**   
*Dizziness-* sensation of being lightheaded or feeling unbalanced  
*Vertigo-* dizziness includes the false sensation that yourself or your surroundings are moving around you  
Etiology: benign, virus in the ear (resolves in 10 days to two weeks), drugs, tumors  
Signs and Symptoms: sweating, pallor, nausea, nystagmus (jerking or rotation of the eyes), attacks can be constant or sporadic and vary in duration  
Recommendations: text p.137   
 **Migraine Headaches**Periodic, usually unilateral, pulsatile headaches that begin in childhood or early adult life and tend to recur with diminishing frequency in later life   
Etiology: food sensitivities (dysbiosis, inflammation and leaky gut syndrome), internally generated toxins from the dysbiosis (people who have it typically have a history of periodic abdominal pain, colic and dizziness), attacks tend to decrease with age  
Signs and Symptoms: classic migraines present with a prodrome of light-headedness, auras like scotomas and sensitivity to noise (there is throbbing pain, always starting and usually remaining on one side of the head, pain is often behind the eye, or begins at the occiput and travels over one side of the head, presents with nausea and a general feeling of ill-being and there is often depression and irritability, it can last for 36 to 72 hours  
Pathophysiology: vascular and platelet instability, read the initiation, the prodrome, and the headache on p. 130  
Recommendations: text p.131-133  
*Read about other headaches on p. 133 & 134*  
**UTI’s Urinary Tract Infection (& Pylonephritis)**  
*UTI*- infection of the bladder  
*Pylonephritis*- kidney infection  
Etiology: E.coli infection or some other fecal bacteria, predisposing factors: urinary tract obstruction with stasis of urine, structural abnormalities, diabetes mellitus and pregnancy which produces ureteric dilation and urinary stasis.   
Signs and Symptoms:   
*UTI*-urgency to pee, burning when peeing, lower abdominal pain  
*Pylonephritis*- exhibit fever, rigors, pain in the lumbar area (lower back), urine contains pus cells, cellular casts and red cells   
Pathophysiology: kidney infection, thickening and scarring of the pelvis and calyces with patchy shrinkage and distortion, can progress to a chronic condition ending in renal failure  
Recommendations: text p.239-240

**Kidney Stones (Renal Lithiasis)**  
Presence of stones/concretions formed within the kidney or bladder composed of calcium (can also be uric acid or magnesium ammonium phosphate)  
Etiology: excess acidity, caffeine, excess Vit D, diet low in fiber, excess Vit.C, bacterial infections that raise the pH of the urine, hyperparathyroidism (chronic leaching of minerals from the bone)  
Signs and Symptoms: often unnoticed, back pain, renal colic when a stone obstructs ureter (pain, nausea, vomiting, chills and fever)  
Pathophysiology: stones are formed by the precipitation of urinary constituents together with a small amount of protein or polysaccharide, formation is favoured by concentrated urine, can be formed as a result of an infection in the urinary tract  
Recommendations: text p. 243-245