

Psychiatric Conditions and Disability

By

Frank Minirth, M.D., Ph.D.

Radio 03-12-09

- Introduction
- Bible Verses
 - Psalms 73:25-26 – Whom have I in heaven but thee? and there is none upon earth that I desire beside thee. My flesh and my heart faileth: but God is the strength of my heart, and my portion for ever.
 - James 5:14 – Is any sick among you? let him call for the elders of the church; and let them pray over him, anointing him with oil in the name of the Lord:
 - II Corinthians 1:3-4 – Blessed be God, even the Father of our Lord Jesus Christ, the Father of mercies, and the God of all comfort; Who comforteth us in all our tribulation, that we may be able to comfort them which are in any trouble, by the comfort wherewith we ourselves are comforted of God.
 - Jeremiah 29:11 – For I know the thoughts that I think toward you, saith the Lord, thoughts of peace, and not of evil, to give you an expected end.
- Neuropsychiatric conditions are among the leading medical causes of disability worldwide; in order of prevalence the top seven are:
 1. Depression – depression is the leading cause of loss of health in middle and high-income countries; depression is the eighth leading cause of loss of health in low-income countries. The rate of depression in women was 50% higher than men worldwide. The first line of treatment of MDD includes any of the newer antidepressants (SSRI, SNRI, atypical antidepressants). TCAs and MAOIs are often not chosen first because of the side effect profile; may need six to eight weeks to be sure of failure. Augmentation strategies include continue current antidepressant and add bupropion, for example, or switch to nortriptyline, for example. Other augmentation strategies are add lithium, fatty acids, folate (especially in women), or exercise. After two failures, one strategy is to try two antidepressants with different mechanisms of action (such as venlafaxine/Effexor plus

mirtazepine/Remeron. Other treatments include ECT, VNS, and TMS (transcranial metallic stimulation).

2. Alcohol dependency/problem use – This is seven times higher in males than females. Alcohol is the most common drug of abuse. Two hundred thousand Americans die each year from complications of alcohol abuse. Alcohol dependency is characterized by a need for increased amounts. Withdrawal symptoms include a lack of control and significant physical, psychological, and social consequences. Alcohol dependency decreases life span by 15 years. Two hundred thousand Americans die each year from alcohol-related causes. Desulfiram was used for alcoholism in the mid to late 1900's; naltrexone (ReVia) was approved in 1994; acamprosate (Campral) was approved in 2004; depot naltrexone (Vivitrol) was approved in 2006.
3. Bipolar disorder – A bipolar disorder is a physiological mood disorder characterized by severe mood swings, going from high, elated, or irritable to sad, depressed, and even suicidal. In the manic phase, symptoms may include elevated mood, irritability, grandiosity, rapid thinking, pressured speech, little sleep, hypersexuality, distractibility, and poor judgment. In the depressive phase, symptoms may include a sad mood, not enjoying life (anhedonia), altered sleep, altered appetite, low energy, agitation, guilt, and not wanting to live. Bipolar disorder is often treated with neuroleptics, lithium, or anticonvulsants. Incidentally, children or adolescents with comorbid bipolar disorder plus ADHD, the bipolar disorder is often treated first. The prevalence of bipolar disorder is 3.5 percent of the population.
4. Schizophrenia – Schizophrenia is a mental disorder characterized by such symptoms as delusions, hallucinations, disorganized speech, disorganized behavior, and marked social and occupational dysfunction. The primary symptoms of schizophrenia include the hallucinations and delusions; the secondary symptoms include alogia, being autistic, anhedonia, flat affect, being asocial, and having amotivation. The nucleus accumbens of the limbic system is involved in the positive symptoms of schizophrenia. The causes of schizophrenia are both

multigenic and various environmental factors; there is a disturbance in the neural circuits and the neurotransmitters. The dorsolateral prefrontal cortex is involved in the cognitive deficits; the ventromedial prefrontal cortex is involved in any affective components. The COMT gene influences the dopamine available. Dopamine is excessive in the limbic brain of those with schizophrenia; the dopamine is low in the dorsolateral prefrontal cortex of those with schizophrenia. The prevalence of schizophrenia is 1 percent of the population. Neuroleptics (Invega, Abilify, Geodon, Risperdal, Seroquel, Zyprexa, Loxapine, etc.) are used to treat schizophrenia.

5. Alzheimer's/dementias - Alzheimer's drugs nuances of interest:
 - Cholinesterase inhibitors are approved for Alzheimer's disease; they result in more of the neurotransmitter, acetylcholine; acetylcholinesterase (AChE) and butyrylcholinesterase (BChE) metabolize acetylcholine—they are inhibited by cholinesterase inhibitors resulting in more acetylcholine; cholinesterase inhibitors include donepezil (Aricept), rivastigmine (Exelon), galantamine (Reminyl/Razadyne), and tacrine (Cognex)
 - Tacrine (Cognex) is a non-selective inhibitor of AChE and BChE; donepezil (Aricept) is selective for AChE; galantamine (Reminyl/Razadyne ER) is a competitive inhibitor of AChE and is an agonist at nicotinic acetylcholine. Exelon is an inhibitor of both AChE and BChE.
 - Aricept is metabolized by 2D6 and 3A4; Reminyl is metabolized by 2D6 and 3A4; Cognex is metabolized by 1A2; Exelon is metabolized through hydrolysis by esterases and excreted in the urine
 - Memantine (Namenda) is an antagonist at the NMDA receptor; the belief is that reducing excitotoxicity is neuroprotective; memantine is not affected by drugs that inhibit hepatic enzymes; drugs that alkalinize the urine such as carbonic anhydrase inhibitors increase Namenda
 - In addition to AChE inhibitors and an NMDA antagonist other drugs that have been used off-label in Alzheimer's dementia include clonidine, guanfacine, amantadine,

folic acid, bromocriptine, selegiline (Eldepryl), hydergine, piracetam, nerve growth factor, estrogens, NSAIDs, vitamin E, ginkgo biloba, and calcium channel blockers—for the most part the effectiveness of these drugs are nonconclusive

- The half-lives of the various drugs for Alzheimer's dementia varies: donepezil is 70 hours, rivastigmine is 1.5 hours; memantine is 60-80 hours; and galantamine is 7 hours
- Various AChEIs are FDA approved for mild to moderate to severe Alzheimer's dementia; memantine is approved for moderate to severe Alzheimer's dementia
- AChEIs increase acetylcholine and therefore, caution should be used in those with bradycardia, cardiac conduction defects, COPD, and asthma
- AChEIs should be used with caution in general anesthesia since they prolong effects of succinylcholine
- Memantine increases the risk of side effects with ketamine (a general anesthetic agent)
- Dosing of drugs for Alzheimer's dementia vary:

	<u>starting dose</u>	<u>eventual dose</u>
donepezil (Aricept)	5 mg/day	10mg/day
rivastigmine (Exelon)	1.5 mg b.i.d.	6 mg b.i.d.
galantamine (Reminyl or Razadyne)	4 mg b.i.d.	12 mg b.i.d.
memantine (Namenda)	5 mg/day	20 mg/day

- Exelon once-daily skin patch is approved for mild to moderate Alzheimer's disease
6. Panic disorder – It is more common in women, and the average age of onset is twenty-five years. It occurs more often in identical (monozygotic) versus nonidentical (dizygotic) twins. A recent stress such as marital separation may be a precipitant. The benzodiazepines such as alprazolam (Xanax, Niravam) and the SSRIs (Prozac, Paxil, Zoloft) have been used the most in treatment. Other treatments include SNRI, TCAs, beta-blockers, and cognitive/behavior therapy.
 7. Drug dependency/problem use – Following is a list of drugs that are most commonly used.

- Caffeine may cause anxiety, irritability, decreased sleep, and headaches.
- Alcohol. Seventy percent of the population drinks alcohol. Two out of three Protestants drink alcohol. There are ten million alcoholics today. There were only three million in 1950; there are ten million more problem drinkers now. Cirrhosis of the liver from alcoholism is the number three cause of death. One of every two highway accidents is caused by substance abuse.
- Nicotine. On the average, one of every five people smoke. Up to fifteen percent of deaths are the result of smoking. Smoking contributes to the damage to the lungs (cancer) and the heart (heart attacks).
- Marijuana breaks down into a chemical called THC (tetrahydrocannabinol). THC becomes part of the fatty tissues of the brain. It may cause those who have smoked too much marijuana to have difficulty being motivated (amotivational syndrome).
- Amphetamines may cause cardiovascular problems and CNS problems such as psychosis and depression.
- Cocaine can result in sudden death. It is one of the fastest growing drugs of abuse. THC and opioids are also major drugs of abuse.
- Barbiturates, other sedatives, and benzodiazepines create problems with tolerance, withdrawal, and seizures.
- Sleeping pills can be abused or at least some can be abused.
- Opium. Only one in three opium users lives past his thirties. HIV is also a problem for opium users.
- Hallucinogens create problems with judgment as well as psychosis and death.
- Inhalants. Inhalant use affects the liver, kidneys, and heart. Psychosis and death are also possible problems.
- Anabolic steroids may cause aggression and a sense of being invulnerable. Discontinuation can result in severe depression.

Disability Worksheet

Name: _____

Date: _____

of Hospitalizations _____
 # of Manic episodes _____
 # of Depressive episodes _____
 # of Medications tried _____
 # of episodes that rendered nonfunctional _____

0 means functioning well, 10 means totally nonfunctioning

Scales of Functioning Data

0 to 10	Area affected:
	Mood
	Social relationships
	Ability to function in daily life
	Living/housing
	Ability to get around physically
	Work
	Overall sense of well-being
	Physical health
	Household activities
	Family activities
	Sex drive and interest
	Economic status

Work Function Impairment Levels: 1 = No Impairment; 2 = Minimal Impairment; 3 = Slight Impairment; 4 = Moderate Impairment; 5 = Severe Impairment	
Level of impairment (1 to 5):	Supporting data:
Ability to comprehend and follow instructions. “ ”	
Ability to perform simple and repetitive tasks. “ ”	
Ability to perform complex or varied tasks. “ ”	
Ability to relate to other people beyond giving and receiving instructions. “ ”	
Ability to influence people. “ ”	
Ability to accept and carry out responsibility for direction, control, and planning. “ ”	
Ability to make generalizations, evaluations, or decisions without immediate supervision. “ ”	

- **Conclusion**

- Bible verses
 - Psalms 73:25-26 – Whom have I in heaven but thee? and there is none upon earth that I desire beside thee. My flesh and my heart faileth: but God is the strength of my heart, and my portion for ever.
 - James 5:14 – Is any sick among you? let him call for the elders of the church; and let them pray over him, anointing him with oil in the name of the Lord:
 - II Corinthians 1:3-4 – Blessed be God, even the Father of our Lord Jesus Christ, the Father of mercies, and the God of all comfort; Who comforteth us in all our tribulation, that we may be able to comfort them which are in any trouble, by the comfort wherewith we ourselves are comforted of God.
 - Jeremiah 29:11 – For I know the thoughts that I think toward you, saith the Lord, thoughts of peace, and not of evil, to give you an expected end.