# Table of Contents

1. Behavioral Medicine Exam Notes
   1.1 Intro to Behavioral Med
   1.2 Empathy, Communication, and Counseling Skills
   1.3 Relational Problems, Abuse, Neglect, and Rape
   1.4 Mental Health Professions and Referral
   1.5 Behavioral Change
   1.6 Patient Adherence
   1.7 Difficult Clinical Encounters
   1.8 Stress and Disease
   1.9 Crisis Assessment and Intervention

2. Behavioral Medicine Exam II Notes
   2.1 Substance Use Disorders
   2.2 Toxicology of Substance Use
   2.3 Behavioral Medicine Pharmacotherapy
   2.4 Working With Specific Populations
   2.5 Behavioral Interventions for Substance Use and Other Unhealthy Behaviors
   2.6 Patient Education
   2.7 End of Life Issues

3. Psychiatry Exam Notes
   3.1 Intro to Psych
   3.2 Eating Disorders
   3.3 Anxiety Disorders
   3.4 Mood Disorders
   3.5 Somatoform Disorders
   3.6 Personality Disorders
   3.7 Psychotic Disorders
   3.8 Sleep Disorders
1 Behavioral Medicine Exam Notes

1.1 Intro to Behavioral Med

1.1.1 Background

- NCCPA competencies for PA profession:
  1. medical knowledge
  2. interpersonal & communication skills
  3. patient care
  4. professionalism
  5. practice-based learning & improvement
  6. systems based practice

1.1.2 Models of Health & Health Care

**Biomedical model**: physical processes such as pathology, biochemistry, and physiology are the primary determinants of health - developed in mid-1800s

**Biopsychosocial model**: biological, psychological, and social factors all play a significant role in human functioning in the context of disease - developed in 1977

**Travis’ wellness model**: health is not merely the absence of disease, but a continuum from premature death to a high level of wellness
- wellness is a process
- there are still things healthcare providers can do to support patient health when the patient is not actively ill or at a neutral point

**Psychosocial model**: examines the interplay of the individual with their family, community, and broader culture
- an individual’s core beliefs, values, and attitudes influence their health decisions
- family:
  - systems approach: the evaluation of the patient’s family dynamics and communication in making health care decisions that impact the patient
- community influences: religion, social services and other resources
- culture: customs and traits of a racial, religious, or social group
1.1.3 Models of Human Lifespan and Normal Psychological Development

**Stage theories:** Freud, Piaget, Erickson, and Kohlberg

**Life course model:** stages are defined by certain tasks or challenges, and knowledge of these stages and their related challenges help to plan more effective care strategies for patients at any stage

- there are normal or expected life events as well as abnormal or unexpected life events
- expected: puberty, functional decline in old age, onset of schooling, joining workforce, etc.
- unexpected: teen pregnancy, chronic illness, loss of job, divorce, etc.

1.1.4 Models of Individual Health Behavior

**Human behavior** includes affect, behavior, and cognitions

**Models:**

- **health belief model:** patients have certain beliefs based on what they value and expect
- your belief in a personal threat together with your belief in the effectiveness of the proposed treatment/behavior/lifestyle affects whether or not you seek that treatment/behavior/lifestyle
- explains rationale for not seeking medical care: don’t believe they have an illness, don’t see a benefit

- **theory of planned behavior:** attitude toward behavior, subjective norms, and perceived behavioral control, together shape an individual's behavioral intentions and behaviors

- **transtheoretical model and stages of change:** assesses an individual's readiness to act on a new healthier behavior, and provides strategies or processes of change to guide the individual through the stages of change to action and maintenance
- specific interventions are based on which stage the individual is in
1.2 Empathy, Communication, and Counseling Skills

1.2.1 Background

Terms:
- **empathy**: an intellectual identification with the feelings, thoughts, or attitudes of another where boundaries of the self are maintained
- results in increased understanding of the patient perspective without adopting their feelings
- skills in this may be a clinician’s most important tool as it enhances effectiveness of care, improves patient satisfaction, and lessens disposition towards malpractice suits
- **sympathy**: a temporary loss of self-awareness in which one feels emotionally the feelings of another such that the boundaries of the self are not maintained
- results in increased understanding of patient perspective along with adoption of the same feelings

How to maintain clear patient-provider boundaries:
- define boundaries by asking:
  - is this what a health provider does?
  - do I sense how the patient experiences this?
  - am I doing this for the patient or for me?
  - are my actions supporting the health of my patient?
- strategies for maintaining boundaries: being patient-centered, manage feelings of personal neediness, monitor for **transference** (displacement of feelings meant for someone else that come out at the provider instead), monitor for **countertransference** (provider’s feelings meant for someone else come out at the patient), no dual relationships, consult with colleagues if unsure

1.2.2 Empathy Barriers and How to Overcome

Clinician barriers:
- takes too much time → make the time
- too draining → make the effort
- will lose control of interview → be confident in redirecting patient to maintain some control of the dialogue
- can’t fix patient’s distress → be comfortable with patients in distress
- not my job → recognize role as healthcare provider is to express empathy
- perceived conflict of interest → remember there is no conflict of interest in empathy if appropriate boundaries are maintained
Patient barriers:
- cultural taboo about discussing emotions → information patients that mind shared is safe, confidential, and will be respected
- preference for interpreting distress in a biomedical model → remind pt they are welcome to share emotion
- somatization disorder → relate to pts that the experience of many emotions are a normal part of life
- desire to meet clinician’s expectations
- worry about being emotionally overwhelmed → inform patient that distressing or disabling emotions may represent a mental health disorder that may warrant further evaluation and treatment
- lack of language for emotions → help pt identify words to express self through empathy

1.2.3 Communication Skills
Skills are verbal as well as nonverbal
- verbal tools:
  - make acknowledgements such as mm-hmm, yeah, etc. as patient speaks
  - restatement of what the patient says
  - reflection of what you perceive the patient is feeling
  - validation of patient’s situation
  - express partnership by making statements that clinician is interested in supporting the patient
  - respect
  - appropriate use of self-disclosure: when clinician expresses similarities, etc. with the intention of making the patient feel empathized with, but done in a way to not retract attention away from the patient
  - making use of meaningful silences
  - nonverbal tools
    - eye contact in moderate amounts, no staring
    - facial expression: appearing interested, mirroring concept
    - head nods in moderation, no bobble-heading
    - maintain a 3-4 foot distance during history taking
    - posture: open stanced, relaxed, leaning towards patient

Communication skills are used to assure direct, honest, therapeutic communication with patients, to express empathy, and to counsel and educate

How effective are you at communicating?
- intention: what response do you intend to create?
- action: what skill do you need to yield the intended response from the patient?
- response: did the patient respond as intended?
- reflection: how was the experience and what would you do to modify it?

1.2.4 Counseling Skills
- First need to build a foundation with empathy and a therapeutic relationship with patient
- Make use of communication tools
- Coding considerations:
  - if > 50% of face to face time with patient is spent in counseling, time may be used as basis for selection of level of service

1.3 Relational Problems, Abuse, Neglect, and Rape

1.3.1 Background

Intimate partner violence: a chronic pattern of abuse by a current or former partner in an effort to gain control over the other
• one partner hitting another is not necessarily domestic violence, it is the pattern of behavior that is important
• includes threatened, attempted, or completed physical, sexual or psychological abuse as well as economic coercion
• occurs in both same sex and opposite sex relationships
• women are more likely to experience victimization

**Rape:** vaginal intercourse with an individual against their consent or when unable to give consent

**Sexual violence:** general term which includes all forms of unwanted sexual contact, exposure, or advances perpetrated against an individual without their consent or when unable to give consent

- 1/5 boys under age 18 have been sexually assaulted
- 13% of women have been sexually assaulted at some point in their lives
- rates are higher in veterans and current military

### 1.3.2 Intimate Partner Violence

- An important health care issue as it is an important contributing factor if not the root of many general, gynecologic, and mental health complaints contributes to health care costs and lost productivity at work and in society
- Lifetime prevalence of ~25% in women and 7-12% in men
- Alcohol and drugs:
  - often are being used by victim and/or batterer when violence takes place, but they don’t cause the battering
  - many people drink and they don’t beat their partners
  - injuries are more likely to be severe if batterer is drinking as their judgment is impaired
- Leaving the abuser:
  - a victim is at the greatest risk of being killed at the time of trying to leave because the batterer’s power and control is threatened
  - 75% of domestic murders occur when the victim and batterer are separated however, abuse tends to increase in frequency and severity over time may victims don’t know about resources available to them
  - shelters often have restrictions that don’t allow victims to bring male children over the age of 12 and only allow residents for 3-5 weeks
  - victim may not have financial support to be able to leave
  - hard to leave a relationship
- Victims:
  - tend to exhibit learned helplessness
  - have a hard time making decisions
- Batterers:
  - usually very charming people, leaders in the community, and successful businessmen or famous stars
  - outsiders find it hard to believe someone of this status would batter and victim finds it difficult to get assistance or call the police
  - majority of them are violent only with their partners, although they are more likely to abuse their children
  - because there are consequences to violent behaviors made public
  - usually injure their partners in areas that are covered by clothes: torso
- Pregnancy:
• unintended pregnancy increases risk of being battered
• 6% of all women pregnant women are abused

1.3.3 Screening Barriers
Only 10% of all physicians screen for intimate partner violence and sexual assault.

Reasons: lack of training, lack of confidence in ability to diagnose, perceived lack of resources, fear of offending the victim, lack of time, lack of privacy

1.3.4 Presentation
• Clinical signs can present as general, gynecologic, and mental health complaints
• Obesity and associated diseases
• Depression, panic disorders, chronic fatigue syndrome
• Recurrent vaginal infections, unintended pregnancy, chronic pelvic pain, sexual problems
• Chronic disease flares
• Functional GI symptoms
• Headache
• Substance abuse
• Interpersonal, social, physical, and psychological problems

1.3.5 Role of Health Care Providers
1. Assess:
• must disclose prior to inquiry any items that can’t be kept confidential
• harm to self
• when a life is in danger
• child abuse
• must be conducted routinely and in private
• only exception: kids under 3
• “because violence is so common, I ask all my patients…”
  o has your partner ever hit you, hurt you, or threatened you?
  o does your partner make you feel afraid?
  o has your partner ever forced you to have sex when you didn’t want to?
  o how does your partner treat you?
• better done face-to-face, more likely to get a disclosure
• use direct and nonjudgmental language that is culturally appropriate
• get assistance if needed by specially trained interpreters who don’t know the patient or the patient’s partner
• beware: batterers often claim that they are a victim

2. Validate:
• “you didn’t cause this, it isn’t your fault”
• “I’m concerned for your safety”
• “I’m afraid it’s going to get worse”

3. Document: names, places, witnesses with the patient’s words quoted, body map or photographs of injuries

4. Refer to other services and support systems
• offer patients a phone call right now to be able to talk to provider
• ask if it is safe for them to go home
1.3.6 Sexual Assault Survivors in the Medical Setting

Medical environment and type of procedure may trigger PTSD symptoms

Tips:
- greet patient while dressed
- give patient as much choice and control as possible
- treat the patient as the expert
- take a break or reschedule as needed
- explain what you will do
- listen to concerns
- plan for extra time

1.3.7 Mandatory Reporting in North Carolina

- **Grave injuries**: gunshot wounds, poisoning, knife wounds, grave bodily harm or grave illness resulting from a criminal act of violence, child abuse or neglect
- Providers are immune from any liability for reporting

1.4 Mental Health Professions and Referral

1.4.1 Mental Health Professions

Medical model
- psychiatrists
- training: MD or DO with 4 year residency, many subspecialties
- certified by the American Board of Psychiatry & Neurology
- licensed to practice by state medical board
- professional orgs: American Psychiatric Assn, World Psychiatric Assn
- physician assistants
- training: master’s - post-graduate fellowship programs available
- ARC-PA: in order to provide mental health services, PA curriculum must include instruction in interpersonal and communication skills, and in basic counseling and patient education skills
- scope of practice in NC same as for other fields of PA practice
- NCCPA provides specialty certification in this field
- AAPA guidelines for ethical conduct: stresses competency and need for education of patients

Nursing model
- nurse practitioners
- training: master’s or PhD, post-grad training programs and specialty certification available
- licensed to practice by state nursing boards
- professional org: American Academy of Nurse Practitioners b.) psychiatric mental health nurses
- training: 2 year program with a master’s degree
- subspecialties in child/adolescent mental health, geriatrics, forensics, substance abuse
- certified by American Nurses Credentialing Center
- licensed to practice by state medical boards
- prof org: American Psychiatric Nurses Assn
- Psychological-Counseling training model psychologists
- training: 5 year doctoral degree (PhD or PsyD)
- many subspecialties with specialty certification
- licensed to practice by the State Psychology Board
- professional org: American Psychological Association licensed professional counselors
- training: master’s or doctoral degree
- many subspecialties
1.4.2 When to Refer to Other Mental Health Providers

Indications:
- assessment and testing not within scope of practice
- advanced pharmacological treatment
- formal psychotherapy or professional counseling
- formal substance use disorder assessment and counseling
- consult for second opinion

Remember to identify and document clear reason for referral, follow standard of practice for release of information, consult with supervising as needed, and f/u with patient afterwards.

1.5 Behavioral Change

1.5.1 Background

Social learning theory:
- people learn from each other by observational learning, imitation, and modeling
- intrinsic motivation plays a role in learning
- changes can be behavioral or cognitive only = people can learn new information without demonstrating a changed behavior
- behavioral change requires attention, retention, reproduction, and motivation

1.5.2 Components of Motivation to Change

1. Desire to change
2. Ability to change
3. Reason for change
4. Need to change

1.5.3 Motivational Interviewing

Background:
- developed in the early 1980s by psychologists
- loosely based on the “stages of change” model: pre-contemplation, contemplation, preparation, action, maintenance, and relapse (sometimes)
- hope is that it eventually leads to a stable, improved lifestyle
- challenges the idea that failure is an inherent personality trait
- can be applied to any interview where long-term change is the goal
- ex. eating disorders, STI prevention, unintended pregnancy prevention
- people need to be persuaded be reasons they have discovered themselves rather than reasons come up by others
motivational interviewing is patient-centered, directive, relies on intrinsic motivation, and seeks to resolve ambivalence towards change

**Key motivational interview components:**

1. **Express empathy**
   - tips for establishing rapport:
     - open interview with a compliment
       - ex. “I’m really glad you made it here today”
     - helps break down barriers and allows patient to engage in the session
   - use open-ended questions
     - ex. “Tell me what you know about…”, “What connection, if any…”, “How is ___ going?”
   - affirmations
   - asking permission
     - ex. “I have some ideas that might help you, do you mind if I share them with you?” or “Some patients have found things that work well for them, can I tell you about them?”
   - normalizing
     - ex. “This happens to a lot of people”
   - reflective listening
     - simple reflection = using patient’s own words to state back what you heard
     - complex reflection = identifying emotion or meaning behind patient’s words, stating it back
   - summaries

2. **Develop discrepancy**: highlight difference between patient’s behavior currently and how the patient desires it to be
   - identify significance of discrepancy
   - contrast current behavior to important goals and decisions
   - work to understand reasons for ambivalence
   - use reflections incorporating patient’s own words
   - determine the goal and identify barriers
   - pros and cons to help envision what change would look like
   - help patient explore methods to elicit desired change:
     - importance ruler
     - ask what a typical day looks like for them and how it makes the change hard
     - hypothetical questions: if you made the change, how would it look for you/aid you
   - develop desire to change:
     - “what are 3 good reasons to change” or “what things make you think this is a problem”
     - state only facts

3. **Roll with patients resistant to change**
   - goal is to let the patient generate reasons for making change
   - challenging and arguing with the patient reinforces resistance
   - don’t impose your own perspectives
   - unhelpful responses to resistance patients that promote patient resistance and don’t help them to feel understood:
     - ordering, directing commanding
     - warning, cautioning, threatening
     - giving advice, making suggestions, or providing solutions
• persuading with logic, arguing, or lecturing
• telling people what they should do/moralizing
• disagreeing, judging, criticizing, or blaming
• interpreting or analyzing
• agreeing, approving, or praising
• reassuring, sympathizing, or consoling
• helpful responses:
  • simple or complex reflection
  • double-sided reflection
  • shifting focus
  • reframing with new information
  • agreeing with a twist
  • emphasize personal choice
  • coming alongside: time is not right for change now

4 Support self-efficacy: help patient realize that change is possible
• ask open questions that focus on ability
• ruler rating of confidence
• highlight past successes at change
• provide information and advice with permission
• help envision change, barriers, and how to resolve

Interview has 3 passes:
1. following: obtaining history, building rapport
   • make use of open ended questions and reflections
2. guiding: eliciting talk of change
3. directing: identifying a goal and choosing an action plan

Tips for the interviewer:
• let the patient bring up what they want to discuss and let the speaker talk about any ambivalent feelings
• use open questions that focus on desire to make a change, how to succeed, and why the patient needs to make a change
• periodically reflect what you are hearing
• ask “from 1-10, with 10 as the highest, how important would you say it is for you to make this change?”
• follow up with “why are you a __ and not a 1?”
  • gets them to admit they want a change!
• collaborate with family/patient
• elicit from the patient their thoughts
• give the patient control
• approach interview with curiosity rather than authority

1.6 Patient Adherence

1.6.1 Background

Adherence: the extent to which the patient continues the agreed-upon mode of treatment under limited supervision when faced with conflicting demands, as distinguished from compliance or maintenance
• allows room for inability of a patient to comply
• more of an equal role between provider and patient, a spirit of collaboration
• voluntary act of submission to authority
Compliance: the act of complying with a wish, request, or demand; acquiescence
- provides a power differential between provider and patient
- implies that a patient does not play an active part in this process
- means that it is a decision wilfully made by the patient or that they are incompetent
- involuntary act of submission to authority
- there is a code for “noncompliance with treatment”

1.6.2 Why Patients Don’t Adhere
- May not be able to afford prescriptions
- Fear of side effects
  - ask them if they have taken it before, if they concerns about taking it
- May not feel sick (HTN, diabetes)
- Denial of having illness
- Transportation issues
- Conscious, educated decision to not adhere
  - don’t believe treatment will work
  - study showed that even nurses are often not compliant with their medical treatments
- Too overwhelmed to even begin
  - regimen is too complex for them to handle
  - so make sure you pace treatment!
- Health illiteracy
  - patient doesn’t understand how to take the medication
  - patient does not understand disease
- Cultural differences
- Too emotional/worried about other things in their life

1.6.3 Provider Factors in Nonadherence
- Use of medical jargon
- Treatment is not tailored to patient’s lifestyle, situation, or culture
- Lecturing vs communicating

1.6.4 More About Adherence
How do you know if your patient is adherent?
- ask them directly, but in a nonjudgmental way

Predicting adherence:
- positive prediction with physician humanism, patient efficacy beliefs, family cohesiveness, social support, increased patient control, use of provider emotion when conveying information, evaluating patient desire for more information, respect of patient’s expertise about their own bodies and lives, designing treatment goals based on the patient’s values
- negative prediction with family conflict, patient depression

Improving adherence:
- use motivational interviewing
- consider patient’s perspective: understand their health beliefs, use their words and language
- provide options, and let the patient come up with options
- test the patient’s knowledge
- screen for readiness: is patient confident that they can change, and how important is change to them
- make suggestions that are simple and doable
- develop a comprehensive and realistic strategy that considers education and behavior
- be non-judgmental
• make visits patient-centered and respect patient as the decision maker
• agree on a workable plan
• empower patient to take ownership in their health

**Patient responsibilities**: being responsible, asking questions, voicing concerns, defining desire for health and motivation to change, suggesting treatments they are willing to follow

**Provider responsibilities**: negotiation of a plan, empowering patients, listening to patient ideas about illness even if you disagree, being a cheerleader for health.

### 1.7 Difficult Clinical Encounters

#### 1.7.1 How to Deliver Bad News

1. Set up the interview
   - have a plan in mind
   - make sure the setting is conducive
   - allot adequate time
2. Assess patient perspective
   - ask what the doctors have told them so far and what they know
   - what does the patient know about the purpose of tests?
   - what does the patient want to know?
3. Obtain the patient’s invitation to speak with them
   - ask if it is a good time for them
4. Give knowledge and information to patient in a sensitive manner
   - first fire a “warning shot”
     - ex. “We got the test results back, and they did not come out as we had hoped”
   - give clear and direct information
   - then shut up and let the patient digest the information
5. Address patient’s emotion
   - listen, acknowledge, legitimize, and empathize
     - ex. “I can see how upsetting this is for you” or “This must be very hard” or “I wish things were different”
     - ex. “What worries you the most about ___”
   - how to express empathy:
     - name
     - understand
     - respect
     - support
     - explore
6. Summarize and strategize
   - give simple, focused bits of information
   - address immediate medical risks or discomfort
   - minimize aloneness and isolation
   - maintain hope
   - agree on a specific follow-up plan
1.7.2 Pitfalls to Avoid

- Feeling that you are responsible for maintaining hope
- Ignoring your own feelings
- Making assumptions about what the patient knows
- Talking too much

1.7.3 Pearls

- Elicit the patient’s concern about the news
- Address affect first when patients ask difficult questions
- Hope for the best while preparing for the worst
- Give simple, focused bits of information

1.7.4 Responding to Difficult Patients

- Anger about bad news
  - don’t get defensive
  - redirect focus to next plan of action
  - name emotion
- Make expectations clear to avoid further confusion and anger

1.8 Stress and Disease

1.8.1 Background

- 70% of primary care visits are for stress-related problems
- Training of health care professionals on the role of stress and impact of stress reduction on health is variable in quality and quantity
- Characteristics of individuals who don’t manage stress well:
  - lack of emotional insight
  - substance abuse
  - lack of support
  - inability to adapt to new situations
- Characteristics of individuals who manage stress well:
  - adaptive coping skills: emotional intelligence, ability to compartmentalize
  - resilience through past stressful experiences
  - organization

1.8.2 Research on Stress and Illness

**Psychoneuroimmunology**: the study of the interactions of consciousness, the CNS, and the immune system

- acute stress → ↑corticosteroids, catecholamines, opiates, prolactin, GH
- chronic stress → ↑corticosteroids, catecholamines, opiates, proinflammatory cytokines
- and prolactin and GH ↓

Stressful life events have been found to be correlated to illness patterns

- includes CAD, CHF, sudden cardiac death, MI, common cold, exacerbations of autoimmune disease, cancer metastasis, more rapid HIV progression, tension and migraine headaches, precipitation of strokes, triggering of balance disorders, exacerbation of arthritides, fibromyalgia, TMJ, chronic pain, infertility, amenorrhea, testosterone or estrogen changes, dysmenorrhea, dyspareunia, endometriosis, impotence, inflammatory dermatoses, pruritus, changes in body temperature, delayed wound healing
- yet some individuals undergoing equally stressful changes remain healthy
1.8.3 Models of Conceptualizing Stress in Medical Practice

Review of models already discussed:
- biopsychosocial model
- Travis’ wellness model → stress prevention should occur to further wellness

**Stress model for medical care:** says that stress influences outcome of illness based on patient perception of threat of illness, coping methods to mitigate stress, physiological processes (hyperreactivity or immunosuppression), and use of arousal reduction activities (abdominal breathing, meditation, massage, nature, etc.)
- if we can control the stress, there should be less negative outcomes

Predicting patients that can handle stress well:
1. Can the patient make a commitment to manage stress effectively?
2. Does patient have a sense of control of his or her own life?
3. Does the patient perceive the circumstance as a challenge or opportunity?

Putting it into clinical practice:
- ask about stress
- recognition of stress
- education about relationship of stress and the respective disease
- avoidance of guilt-inducing statements
- make scenario positive by emphasizing opportunities for treating illness or promoting health
  - health-enhancing activities: getting enough sleep, eating right, hobbies, meditation, self-hypnosis, relaxation exercises, time in nature, massage, abdominal breathing, singing, tai chi, soothing music, psychotherapy
- verify patient’s understanding of personal responsibility
- clarify provider’s role as a supporting resource for medical care, but not the only resource
  - referrals to PT, psychotherapy, nutrition as needed
  - indicated if assessment and testing are not within scope of practice
    - ex. advanced pharmacological treatment, formal psychotherapy or counseling, formal substance use disorder assessment and counseling, consult for second opinion
- reassurance
- addressing concerns

1.8.4 Illness, Pain, and Patient Self-Management

**Chronic care model:** evidence-based change concepts in each element (community resources, health care organization, delivery of healthcare, decisional support, and clinical information systems) altogether foster productive interactions between informed patients who take an active part in their care and providers with resources and expertise

- self-management support = how healthcare providers are empowering their patients to be able to manage their health
  - setting an agenda
  - give information using “ask-tell-ask”, “close the loop”
  - collaborative decision making
  - promote adaptive coping: coping can be **problem-focused** (aim to change self or environment) or **emotion-focused** (regulating emotional distress that is contributing to the health problem)
Key principles of pain treatment:
- identify pain as an issue
- recognize pain behaviors: alleviating/aggravating factors, impacts on function
- assess meaning and impact of pain
- clinician role as an agent of change: empathy, building rapport & trust will help with adherence
- improved function is the goal in treatment

1.9 Crisis Assessment and Intervention

1.9.1 Background
There are many disorders and diseases where disease burden and suffering is high and psychological distress is prominent and plays a relevant role in symptom presentation
- ex. it is easier to talk about my abdominal pain than my psychological pain
- ex. personality disorders, substance abuse disorders are very prone to lashing out in substantial and violent ways
- ex. PTSD is reliving violent episodes where life was perceived as threatened
- ex. suicidality
- in African Americans is associated with an elevation in mood because they feel empowered
- seen at a higher rate of completion in patients with chronic disease, where suffering is high

1.9.2 Suicide

**Background:**
- greater than rates for war or murder
- males tend to be more successful in committing suicide
- whites are more likely to commit successful suicide, but depression tends to be more intense when it does occur in blacks
- lower SES associated with increased risk for negative effects of depression
- risk factors: substance abuse, sexual orientation, presence of psychiatric illness, stress, age, smoking, meds, genetics, FH, race or ethnicity, chronic illness, social factors, previous attempt at suicide
- protective: communalism, family cohesion, family support, friendships

**Assessment of suicidality:**
- interview
- psychometric tests
- patient’s verbal reports: often a sign of cries for help
  - inaccurate when patient wants to die
• behavioral evaluation or warning signs: selling personal property, life insurance policy changes, sudden elevation of mood in minorities
  • warning signs of potential violence: more rapid speech, higher pitched voice, louder voice, increased HR or BP, increased perspiration, flared nostrils

How and when to intervene with the (potentially) agitated patient:
• identify their warning signs as well as yours
  • make sure you are not the source of their anxiety!
    o if you are the problem → stop the crap flowing through your head at the moment, distract yourself with other things, meditation, avoiding overstimulation, relaxation training, physical distance
  • if they are agitated, decide if the conversation is worth having
    • if you must talk to them regardless → manage yourself first, be aware of your nonverbals, talk in a direct and calm way, have simple, direct, easy-to-understand conversation by making simple assertions rather than beating around the bush, describe the misbehavior NOT the person, empathize, remind other person of arrangement, share feelings, state consequences
  • law enforcement if needed, if things escalate
  • seclusion or chemical restraints if needed in inpatient setting
  • voluntary or involuntary commitment if needed
    • vast majority are voluntary
    • involuntary requires written legal documentation of endangerment to self or others

When to Refer to Psychiatry
Any time your primary skills have been exhausted at the planning or execution phases of clinical interaction

Barriers to Care
• Poor reimbursement or coverage by insurance
• Limited availability of mental health professionals
  • especially rural areas
• Hard to find expertise in areas of pain, pediatrics, or culturally sensitive topics
• Stigma of seeking psychiatric care
2 Behavioral Medicine Exam II Notes

2.1 Substance Use Disorders

2.1.1 Background

Classes of psychoactive substances used for nonmedical reasons: caffeine, nicotine, alcohol, cannabis, cocaine, amphetamines, opioids, sedative-hypnotics, hallucinogens, phencyclidine, inhalants

- people of many different reasons for using these substances, primarily aiming for positive effect or enhancement, or to relieve a tension or anxiety
  - in severe abuse, people need the substance in order to feel and function as normal
    - risk factors for progression to this: genetics/FH (BIGGEST factor), gender, impulsive or novelty-seeking temperament, chaotic childhood, psychological trauma, initiation of use at early age, specific drug characteristics, route of administration (smoking vs snorting), availability and cost, social and cultural milieu, underlying psychiatric disorders

2.1.2 Spectrum of substance use:

- DSM-IV diagnoses of disorders:
  - substance-induced disorders
    - substance intoxication: reversible substance-specific syndrome due to recent ingestion or exposure to a substance
      - causes clinically significant maladaptive behavioral or psychological changes due effect of substance on CNS developing during or shortly after use of the substance
      - not better accounted for by another mental disorder
    - substance withdrawal: development of substance-specific syndrome due to cessation of or reduction of substance use that has been heavy and prolonged
      - causes clinically significant distress or impairment in social, occupational, or other areas of functioning
      - not better accounted for by another mental disorder
      - withdrawal, delirium, dementia, amnestic, mood, anxiety, psychotic, sexual, sleep
  - substance use disorders
    - substance abuse: maladaptive patterns of use occurring within a 12 month period
      - must have at least ¼ of: immediately hazardous to user or others, interference with daily function, continues despite relationship problems, substance-related legal problems
      - patient must not meet criteria for substance dependence as dependence always trumps abuse
    - substance dependence: addiction; a maladaptive pattern of substance use
      - manifested by 3+ of the following within the same 12 month period:
        - unsuccessful efforts to quiet or cut down
        - uses more than intended
        - continued use despite adverse physical or psychological consequences
        - excessive time devoted to obtaining, using, and recovering
        - change in activities or relationships to rearrange life around use
        - tolerance: cellular and molecular changes have occurred to establish new homeostatic set point
          - withdrawal
o different from simple physiologic dependence!

- further course specifiers:
  o **early full or partial remission**: no criteria for substance dependence met for 30 days to 12 months
  o **sustained full remission**: no criteria met for > 12 months
    - however, vulnerability will remain for life
    - on agonist therapy like methadone or buprenorphine
    - use in a controlled environment

- at-risk use
  o ex. alcohol is > 14 drinks per week for men and > 7 drinks per week for women or those over 65
  o risk factors for progression to substance use disorder: genetics, gender, impulsivity/novelty-seeking temperament, chaotic childhood development or abuse, psychological trauma, initiation of use at early age, specific drug characteristics, route of administration, availability and cost of drug, social and cultural milieu, psychiatric disorders

- moderate use
- abstinence

- Pathophysiology of addiction:
  - all substances involved turn on dopamine system → activation of reward pathway
  - also affect other NTs: glutamate (NMDA) excitation, GABA inhibition, endogenous opioid system, serotonin
  - up and downregulation of receptors with sustained exposure → tolerance
    o ex. anhedonia as a result of chronic cocaine use, increased adrenergic activity and glutamate excitation with alcohol withdrawal

### 2.1.3 Alcohol Abuse

Implicated in 1/3 of suicides, ½ of homicides, 40% of MVA deaths, ½ of domestic violence incidents, and ½ of trauma center cases

- Demographics:
  - alcohol dependence much more likely in Native Americans while much less likely in Asian patients
  - Is alcohol dependence a disease?
  - it has genetic risk factors (even adopted children have the risk of their biological parents) and its heritability is in the same ballpark as DM and HTN
  - Its use induces neurobiological changes
  - relapse rate is similar to DM and HTN, as it depends on resources and incentives

- Presentation:
  - withdrawal: tremor, tachycardia, HTN, sweating, insomnia, nausea, vomiting, photophobia, hallucinations (tactile or visual), hyperreflexia, irritability, anxiety, alcohol craving, seizures
    - triggered by abrupt cessation or reduction of intake in dependent individuals
    - onset in 12-24 hours after last drink, with peak intensity @ 24-48 hours
    - lasts 4-7 days
    - mortality is 10-15%
  - nervous system effects: insomnia, anxiety, depression, psychosis, agitation, cognitive impairment, seizures, cerebellar ataxia, peripheral neuropathy, myopathy
  - CV: HTN, a-fib, cardiomyopathy
  - GI: esophagitis, gastritis, upper GIB, pancreatitis, hepatitis, cirrhosis
related illnesses: infants with fetal alcohol syndrome, pneumonia, TB, breast, liver, throat, esophagus, cancers

Treatment of withdrawal:
- inpatient management if h/o seizures, delirium, medically unstable, suicidal or homicidal ideation, psychosis, unstable environment, no support or transportation
  - consider outpatient otherwise
- benzos dosed on CIWA protocol (goal is to keep score under 8)
- thiamine
- reduction of stimulation
- support and reassurance
- assessment and treatment of medical illness

2.1.4 Cocaine Abuse

Presentation:
- nervous system effects: insomnia, anxiety, depression, aggression, paranoid psychosis, seizures, delirium, cognitive impairment
- CV: arrhythmias, coronary vasospasm, angina, MI, cardiomyopathy
- reproductive: sexual dysfunction, abruptio placentae

2.1.5 Evaluation of Substance Abuse

Signs of substance use disorder:
- complications of injection drug use: skin infections, abscesses, HIV, hep B & C, endocarditis, lung damage from additives, overdose
- relationship problems or divorce
- financial problems
- academic problems
- legal problems, especially DWIs
- self-neglect

Screening:
- all patients and all providers: NIAA recommends asking about substance use, assessment of use, advising & assistance as needed
  - there is no service within the hospital where problems of substance abuse won’t be seen
- USPSTF recommends screening of all adolescents and adults. Tools used:
  - CAGE is used to identify alcohol dependence, but is not as good at identifying other alcohol problems
  - AUDIT has widely replaced CAGE as it can identify both alcohol dependence and at risk or abuse level drinkers
    - women or men over 60 have a positive screen with 4+
    - men under 60 have a positive screen with 8+
  - CAGE-AID = CAGE adapted to include drugs
    - DAST = drug abuse screening test
    - TWEAK used to screen pregnant women

why is it hard to do this?
- patient barriers: fear of being given suboptimal treatment
- clinician barriers: fear of embarrassing patient or being accusatory (a result of embedded judgement), not enough time
- system barriers: limited treatment resources
- use appropriate language:
  - “identify” or “diagnose” instead of “accuse”
- “reports” or “reports no” instead of “admits” or “denies”
- some think “alcohol” only means hard liquor, not beer → ask about use of “alcoholic beverages including beer, wine, and liquor”
- also ask about specific size of drinks

If screen is positive:
- this does not constitute a diagnosis! need further investigation
- assess for alcohol use disorder, any conditions requiring immediate treatment (like withdrawal), motivation to change, confidence in change, readiness for change, and look for any comorbid medical and psychiatric conditions
- take a detailed history (now or later)
  - be non-judgmental and empathetic
  - use a concerned, matter-of-fact tone
  - persist if the answers are vague or evasive
  - use a balance of open and closed questions
    - when was your last drink or use?
    - ask about prior episodes of abstinence to inquire about motivation, underlying disorders, and relapse triggers: what prompted you to quit, how did you become and remain sober, how was your life during sobriety, what lead to your resuming use?
  - address confidentiality concerns
- review collateral information: medical record, input from significant others (with patient consent)
- PE: odor of alcohol, HTN, tremor, traumatic injuries, skin lesions at injection sites, stigmata of liver disease, cognitive impairment, psychosis, belligerence, agitation, depression, anxious or labile affect
  - however, will typically be normal in patients with substance use disorders
- investigation:
  - remember to trust but verify
    - ex. acknowledge that you believe the urine drug screen will be negative but that it will be useful to have that objectively documented via a lab test
- labs:
  - tests for drugs and alcohol
    - require patient consent except in emergency
    - consider timeframe for given substance to test positive
      - most substances are positive for 48-72 hours afterwards
      - methadone is + for up to a week after last use
      - cannabis is + for ≥ a month in chronic, heavy users
      - standard opioid screen will not catch methadone or buprenorphine and is unreliable for oxycodone
      - handheld breathalyzer
    - others: LFTs, MCV and carbohydrate-deficient transferrin reflect heavy drinking
      - usually not helpful as screening tests

2.1.6 Intervention

Dependence needs referral for specialized treatment, recommendation for 12-step recovery group like AA or NA.
- substance dependence:
  - recommend total abstinence from all potentially addictive substances
  - assess risk of acute withdrawal
• assess psychiatric and medical comorbidities
• refer for evaluation and treatment in an organized substance use disorder program
• schedule follow-up to assess adherence and support recovery
• Abuse and at-risk use can benefit from brief intervention
  • a < 15 min initial discussion delivered by physician or other clinic staff with one or more follow-up sessions
  • appropriate as a stand-alone intervention for at-risk and abuse drinkers
• FRAMES:
  o feedback: discuss specific adverse effects resulting from substance use, specific hazards of drinking given this patient’s health concerns and problems
    • not a general litany of risks
  o responsibility: acknowledge patient’s autonomy and that only they can make the decision to take action and change, and that with autonomy comes responsibility for outcomes
  o advice: must be clear and specific
    • “as your physician, I believe it would be in your best interest to consume no more than ___ drinks per day/week”
  o menu of options: outpatient treatment, inpatient rehab, AA, SMART recovery, religion-based organizations
  o express empathy: “I understand that you have mixed feelings about changing your drinking pattern and it’s really common for people to feel that way”
  o support self-efficacy: point out patient’s strengths and past successes as evidence of their ability to succeed in making change

Moderate use can benefit from reinforcement and education:
• At risk or moderate use can be guided in primary care setting

2.1.7 Treatment

Phases of treatment:
1. problem recognition or acceptance
2. achieving initial abstinence
3. rehab
  • goals are to maintain abstinence, avoid relapse, modify lifestyle to manage stress and conflict, develop alternative rewarding activities, develop non-using social network, treat comorbidities
4. maintenance

• Medication for relapse prevention:
  • alcohol abuse: naltrexone, acamprosate, disulfiram
  • opioid abuse: buprenorphine, methadone
• Treat concurrent psychiatric conditions
• Follow up visits, support, partnership
• Case management is usually handled by a social worker

2.1.8 Other Reasons to Advise Alcohol Abstinence
• Pregnancy or planning to become pregnant
• For all patients with a medical condition that is caused or aggravated by alcohol use
• For all patients taking medications that interact adversely with alcohol
• For all patients with past or current alcohol or other drug dependence
2.1.9 How to Handle a Drunk Patient in the Clinic
- Seek patient cooperation to call for a ride or wait for blood alcohol level to decline before driving
- Consider adoption clinic-wide policy allowing notification of law enforcement when impaired driver refuses to not drive

2.2 Toxicology of Substance Use

2.2.1 Substance Abuse Testing
- No universal requirement for informed consent
- policy is usually institution specific
- When to do:
  - to confirm suspected substance use
  - known substance user, want to know what else they are taking
  - workplace testing
    - guided by DHHS & NIDA
    - specifically checks for amphetamines, cannabinoids, cocaine, opiates, and phencyclidine
      - thresholds may not be appropriate for clinical (non-work) settings
- monitoring therapeutic drug use
- newborn testing if concern for maternal substance abuse
- Possible specimens: breath, blood, urine, sweat, gastric aspirate, hair, feces, nails
- Methods:
  - urine specimen must be at least 1 mL
  - immunoassay is the most common method for initial screening
    - pros: fast, can be used as POC or at-home
    - cons: false +, requires confirmation via GC-MS or HPLC
  - GC-MS or HPLC
    - pros: the most accurate and sensitive testing, differentiates specific drugs
    - cons: time-consuming, expensive
- Detection varies with drug pharmacokinetics, presence of metabolites, patient body mass and comorbidities, duration of drug use, amount of drug use, urine pH, and time of last ingestion
- Urine samples are also evaluated for adulterants, substitutions, or diluents
  - CrCl measured to compare
    - ex. bleach, glutaraldehyde, pyridium chlorochromate, nitrites, vinegar, peroxides
- Results usually back in about 4 hours if urine specimen

2.2.2 Alcohol Testing
- Ethanol distributes into the water of both plasma and erythrocytes
  - clearance occurs at a constant rate independent of concentration
  - blood levels fall by 15-18 mg/100 mL body fluid per hour
- Indication: to establish diagnosis in patient who presents as comatose/unresponsive, h/o chronic abuse, potential for withdrawal
- Methods: breath, urine, blood
  - partition ratio: correlation between whole blood, urine, and breath analysis of ethanol
    - breath:urine:blood is 1:1.3:2100
  - blood concentration preferred
<0.01% is the legal limit for public transportation drivers
0.02% → slight mood alterations
0.04% is the legal limit for pilots
0.08% is the legal limit for citizens
0.30% → diminished reflexes, semi-conscious
0.40% → loss of consciousness, very limited reflexes
0.50% → death

- enzymatic assays detecting alcohol dehydrogenase reaction detect all alcohols, need to order gas liquid chromatography to be able to definitively distinguish
- Other labs to determine chronic usage: MCV for macrocytosis, CBC for anemia or thrombocytopenia, decreased albumin and protein, elevated AST, ALT, GGT, CDT, bili
- Detection window:
  - 1.5 to 12 hours in blood
  - urine positive for 1-2 hours additionally, but varies with hydration status
- Legal issues:
  - providers must perform alcohol or drug testing if requested by law enforcement officers
    - can be done against patient consent
    - must follow “chain of custody” = legal samples need to be drawn by specially trained phlebotomists using kits provided by police, drawn without use of alcohol prep pad, witnessed (usually by law enforcement)
- Special:
  - Other toxic alcohols: methanol, isopropanol, ethylene glycol
  - Always assume other drugs are involved

2.2.3 Commonly Tested-For Substances
- Depressants
  - opiates
    - chemical modification of natural product yields heroin and hydrocodone
    - synthetic formulations of meperidine and methadone may not test positive
    - detection window of minutes
- Stimulants
  - amphetamines
    - sympathomimetics with direct stimulation of CNS and myocardium
    - includes oral amphetamines, IV methphetamine
    - ephedrine and phenylpropanolamine are available OTC and may give false +
    - confirmatory testing needed
    - detection window of 2-3 days
  - cocaine
    - CNS stimulant derived from leaf of the coca plant
      - direct vasoconstriction
      - direct toxicity that is fairly specific to the myocardium
    - detection window of 2-4 hours
- Hallucinogens
  - cannabinoids
    - marijuana from the flowers of the hemp plant
    - hashish from the resin of hemp
prominent psychoactive substance is THC
lipophilicity means it is stored in fat for days to weeks
- present for 1-7 days with light use
- present for ~ 1 month in chronic/heavy user
false positives on screening is high
- unknown reason, maybe due to NSAIDs, passive smoke
• PCP (phenylcyclidine)
  - aka “horse tranquilizer”
  - excreted in urine
  - may be detected for a week or more after last dose
• LSD (lysergic acid diethylamide)
  - c.

2.2.4 Serum Drug Screen
- Primarily for overdose and alcohol intoxication situations
- Includes acetaminophen, salicylate, tricyclics, and ethanol testing
- Can't use alcohol prep (false positives)

2.3 Behavioral Medicine Pharmacotherapy

2.3.1 Smoking Cessation

STAR plan:
- set a quit date ~2 weeks out
- tell friends, family, and loved ones
- anticipate challenges
- remove tobacco products from environment

Fagerstrom test: survey to measure nicotine dependance and formulate appropriate drug dosages

Nonpharmacologic methods:
- cold turkey
- unassisted tapering: weaning yourself off or using lower nicotine cigarettes or filters or holders to reduce
  nicotine
- assisted tapering: QuitKey device is adjusted to individual's smoke schedule
- formal cessation programs
- aversion therapy
- acupuncture
- hypnotherapy
- massage therapy

Pharmacologic methods:
- first-line therapies:
  - nicotine replacement therapy: supplies less nicotine than cigarettes and relieves physiological and
    psychomotor withdrawal symptoms
    - increase likelihood of successful quitting by 2-3x
    - helps 7% of smokers remain abstinent
    - low abuse potential
    - patients must stop using all forms of tobacco on initiation of replacement therapy
    - most forms available OTC for adults but prescription needed for minors
    - should be offered to all smokers who are prepared to quit
    - caution: underlying CV disease, recent MI, serious arrhythmias, serious or worsening
      angina, pregnancy, lactation
- because nicotine replacement can cause increased HR and BP
  - forms:
    - transdermal patch: Nicoderm
      - supplies nicotine at a constant rate through the skin and bloodstream to avoid first pass metabolism
      - can’t cut patches as this can result in nicotine evaporation from cut edges and lowered effectiveness
      - must remove patches before MRI to avoid burns
      - not for relief of acute cravings
      - side effects: skin irritation, insomnia, nightmares or vivid dreams
    - gum: Nicorette, generics
      - need to chew gum slowly and tuck between cheek and gum several times until tingling fades
      - can’t eat or drink 15 min before or after use
      - problem: patients tend to not use these frequently enough
      - helps with craving relief
      - side effects: nausea, vomiting, abdominal pain, hiccups, mouth irritation, sore jaw, unpleasant taste
    - lozenge: Commit, Nicorette
      - can’t chew, need 30 min to dissolve slowly
      - can’t eat or drink 15 min before or after use
      - dose based on time to first cigarette
      - helps with craving relief
      - side effects: mouth irritation or ulcers, abdominal pain, nausea, vomiting, diarrhea, headache, palpitations
    - mini-lozenge: dissolves 3x faster
    - inhaler: Nicotrol
      - benefit of hand-to-mouth behavior
      - not meant to be inhaled all the way into lungs
      - open cartridge retains potency for 24 hours
      - prescription needed
      - side effects: mouth and throat irritation, cough
      - not recommended in severe airway reactivity
    - nasal spray: Nicotrol NS
      - benefit of nicotine bolus that mimics nicotine burst from cigarette • fast craving control but also abuse potential
      - prescription needed
      - side effects: local nasopharyngeal irritation, runny nose, sneezing, cough, throat and eye irritation, headache
      - not recommended in severe reactive airway disease
    - combination of nicotine replacement products are more effective than single replacement therapy alone
      - **bupropion: Zyban**
        - one to two doses daily, starting one week prior to quit date to allow time for accumulation in the body and inhibition of norepinephrine and dopamine
- 7 week trial before d/c if ineffective
- best bet for patients with severe CV disease
- side effect: insomnia, dry mouth, suicide risk
- contraindications: patients with seizure disorder, patients with h/o anorexia or bulimia, pts undergoing abrupt d/c of ethanol or sedatives

  - **varenicline**: Chantix
    - blocks nicotine from cigarettes from binding
    - begin 7 days before quit date, or being varenicline and quit 8-35 days after
    - differing doses throughout treatment
    - side effects: nausea, insomnia, abnormal dreams, impaired driving or operating machinery, suicide risk, CV risk
    - accounts for most cases of suicide attempt while undergoing smoking cessation
    - need to weigh individual risks
    - doses should be taken after eating and with a full glass of water

- **2nd-line therapies:**
  - nortriptyline
    - side effects: dry mouth, sedation
  - clonidine
    - side effects: dry mouth, sedation, hypotension, dizziness

- not enough evidence for use in pregnant women, smokeless tobacco users, light smokers, or adolescents → Good combination therapies: nicotine patch + lozenge or gum, nicotine patch + nicotine inhaler, nicotine patch + bupropion SR, medication + counseling (preferably multiple)

Other options:
- electronic cigarettes: vaporized nicotine
  - not FDA approved for smoking cessation
  - recent safety issue with battery igniting

### 2.3.2 Obesity

**Background:**
- drug therapy generally not recommended unless BMI > 30, or comorbidities of HTN, DM, etc with BMI > 27, or those that have failed other therapies and have a BMI > 27

**Options:**
- sympathomimetics: potentiate norepinephrine
  - controlled substances due to abuse potential
  - only for short term use, < 12 weeks, due to CV risks
- orlistat (Xenical is prescription, Alli is OTC): blocks pancreatic lipase → fat not broken down
  - side effects: increase in fatty stools, diarrhea, risk of liver damage
  - interactions: fat-soluble vitamins
- bupropion/naltrexone (Contrave)
- lorcaserin (Lorcess)
  - less CV effects
  - risk of breast adenocarcinoma in rats
- phentermine/topiramate (QNEXA)
  - risk of cleft lip or palate in pregnancy

### 2.3.3 Substance Abuse
Alcohol:
- **disulfiram**: Antabuse
  - inhibits acetaldehyde dehydrogenase
  - if alcohol is ingested → flushing, tachycardia, nausea, vomiting, vertigo, anxiety
  - poor adherence with therapy
- need to monitor LFTs
- **acamprosate**: Campral
  - GABA analog that decreases excitatory transmission during withdrawal
  - approved for relapse prevention
  - side effects: diarrhea
- **naltrexone**: ReVia or Vivitrol
  - blocks all opioids and pleasurable effects of drinking
  - reduces cravings
  - can precipitate withdrawal
  - most effective in motivated, supervised patients
  - side effects: nausea, headache, arthralgia, anxiety, sedation, hepatotoxicity

Opiates:
- **methadone**: longer-acting synthetic opioid
  - doses high enough to inhibit euphoria from other opioids
  - side effects: respiratory depression, constipation, sedation, QT prolongation
- **buprenorphine**: Subutex or Suboxone
  - partial mu receptor agonist that limits euphoria from IV opioids
  - may be safer than methadone
  - naltrexone

2.4 Working With Specific Populations

2.4.1 The Family System

- Healthy families modify their hierarchy and boundaries as the roles of each member change over time
- Dysfunction can occur in boundaries, hierarchies, and self-regulatory family feedback → transitional struggling amongst family members
- Physical symptoms and illness ↔ family dysfunction
  - dissatisfaction in the home can lead to somatization
  - 10% of primary care visits are spent discussing family issues
  - 18% of individual visits discuss the health of family members not in the room
- Family roles are shaped by family rules, belief systems, and shared expectations
- Providing care to the family:
  - patients may view provider as ally or as enemy
  - basic family assessment helps provider understand how the family will influence care and family dynamics
    - ask about family relationships → formation of a family genogram
      - squiggles mean discord between individuals
      - double lines mean divorce or estrangement
    - identify family life cycle stages
    - screen for problems associated with family life cycle stages or patient’s medical problems
• When to convene a family conference:
  • when serious family dysfunction interferes with medical care
  • when provider-patient relationship is disabled by family influence
  • when patient’s functional abilities and quality of life are impaired by family dynamics
• A brief intervention can empower a patient and their family to face their issues more directly
• Be familiar with your local resources and rely on them to help improve your approach to challenging family situations

2.4.2 Cross-Cultural Communication

Fundamental aspects of cross-cultural communication
• understand illness from patient’s viewpoint
• make sure patient understands the biomedical explanation
• guide patient through healthcare system

Social location: an individual’s position in society relative to others
• more specific and relevant description than race and ethnicity alone
• takes into account race, ethnicity, immigration status, language spoken, residence, generations living in US, education, income, occupation, religion, previous experiences with racism
  • anomie: a sense of purposelessness
  • alienation: lack of feelings of belonging
  • can decrease ability to manage daily life stress and lead to somatization

Biomedicine: a system of healing informed by scientific knowledge
• a cultural system shaped by politics, insurance reimbursement, specialization rivalry, regional biases, competing ideology
• in the US, healthcare providers are taught to value hard work, self-sacrifice, self-reliance, autonomy, hygiene, punctuality, articulation, clear separation between work and personal life, respect for authority and hierarchy, and conservatism in dress and emotional expression
• this can lead to dysfunctional communication between provider and patient
  o provider may judge patient for not following these standards
  o patient may view provider as arrogant, elitist, judgemental, money hungry, rushed, rigid, uninterested

What to do:
• understand illness from patient’s perspective (their “explanatory model”)
• make sure patient understands as much as possible about the biomedical explanation
• guide patient through navigation of healthcare and resources

What not to do:
• emphasize personal blame at the expense of a patient’s understanding their illness
• fail to recognize social context or personal situations that foster illness
  • ex. depression, social isolation, low self-esteem
• not explain the clinical process (waiting for appointments, etc.)
2.4.3 Vulnerable Patients

Includes patients experiencing violence, uninsured, literacy/language barriers, neglect, economic hardship, race or ethnic discrimination, addiction, brain disorders, immigrant, legal status, isolation, caregivers, transportation problems, vision and hearing problems, patients living in a “sick role”, unstable shelter.

Types of vulnerability:

- **direct vulnerability**: when vulnerability directly leads to poor health
  - ex. addiction to IVDU → skin abscess
- **indirect vulnerability**: when vulnerability creates a barrier to effective care and accelerates course of disease
  - ex. depression → noncompliance with heart meds

Profound benefits for vulnerable populations are gained through maintaining a **therapeutic alliance**: when a patient and provider develop a mutual trusting, caring, and respectful bond to allow collaboration and treatment

- currently being promoted through relationship-centered care models such as the patient-centered medical home
- built through transparency (explanation for intimate questions), doing what you say you will do, and addressing concerns (avoiding appearing rushed, managing multiple issues with kindness and practicality), demonstrating commitment to the relationship, allowing yourself as well as the patient to be human, learning the patient’s story, searching for patient’s strengths and resources, expressing care overtly, and clarifying boundaries

2.5 Behavioral Interventions for Substance Use and Other Unhealthy Behaviors

2.5.1 Psychotherapy for Substance Use Disorders

Provided by mental health providers such as psychiatrists, psychologists, counselors, licensed psychiatric nurses, social workers.

Sessions involve initial individual assessment and follow-up appointments:

- assessment includes complete substance use history, medical history, SH, FH
- may be group or individual
- long-term goals and short-term objectives
- set plans for specific therapeutic interventions that patient agrees to follow

2.5.2 Tobacco Use

- Smoking is the leading preventable cause of death in the US
- 20% of the US population smokes
- Smoking is more closely linked to education than factors like age or race
- Health consequences of tobacco use: CV disease, cerebrovascular disease, PVD, COPD, cancers (lung, laryngeal, oral cavity, esophagus, bladder, kidney, pancreas, uterus, cervix, respiratory infections, postmenopausal osteoporosis, PUD, cataracts, macular degeneration, sensorineural hearing loss, premature skin wrinkling, pregnancy complications, secondhand smoke exposure

**Benefits of cessation**:

- reduced risk of all related illness and complications
- overall mortality rate will approach that of nonsmokers after 10-15 years of abstinence
- 50-70% risk reduction for lung cancer after 10 years of cessation

**Why do people smoke?**

- addiction, coping with stress or negative emotions, social reasons, routine or habit, triggers

**Why do people choose not to smoke?**

- avoid withdrawals, fear of illness or health risks, financial expense, socially unacceptable
Withdrawal from smoking:
- withdrawal symptoms: cravings, irritability, restlessness, anger and impatience, difficulty concentrating, anxiety, depressed mood, excessive hunger, sleep disturbance
- onset of symptoms 2-3 hours after last cigarette with peak 2-3 days after quitting
- resolution of withdrawal symptoms 1 month after quitting
- increased with > 25 cigarettes daily, first cigarette within 30 min of waking, discomfort if forced to refrain from smoking

Behavioral interventions:
- behavior leading to cessation is a learning process rather than a discrete episode of willpower
- useful models:
  - Stages of Change
  - Motivational Interviewing
  - The Five A’s (ask/advise/assess/assist/ arrange)
  - The Five R’s (relevance, risks, rewards, roadblocks, repeat)

2.5.3 Obesity

Background
- BMI > 30
- accounts for 30% of US adults
- causes:
  - overeating: coping with stress or emotion, social, routine, triggers, mental illness
  - sedentary: all of the above + disability
- complications: CAD, DM2, HTN, dyslipidemia, colon, ovary, breast cancers, DJD, gallbladder disease, GERD, thromboembolic disease, CV disease, heart failure, OSA, depression, greater risk for surgical and obstetric complications, greater risk for accidents

Behavioral interventions:
- goals are to learn skills to decrease caloric intake and to increase physical activity
- techniques:
  - goal setting: quantifiable, realistic, reasonable
    - short and long-term
  - self-monitoring: quantifying and qualifying
    - monitor cognitive and emotional factors surrounding eating and exercise
    - logs or journals
  - stimulus control: identify stimuli that increase likelihood of desired and undesired behaviors
  - cognitive skills: problem solving with cognitive restructuring
    - identify and modify dysfunctional thoughts and replace with more functional cognitions
  - social support
- evidence-based recommendations: PCP advice on weight loss, motivational interviewing
- counseling should not be low to moderate intensity but should be intensive
2.6 Patient Education

2.6.1 Background

Low health literacy
- health literacy includes reading as well as numeracy
- most health literature is written at the 10-12\textsuperscript{th} grade level
  - most adults read at 8-9\textsuperscript{th} grade level
  - 20\% of patients read at 5\textsuperscript{th} grade or lower
  - half of patients are unable to read printed healthcare materials
- risk factors: ESL, older patients, developmental disabilities
- why do we care?
  - linked to poor health outcomes, increased hospitalization rates
  - trouble scheduling visit or following directions to clinic
  - difficulty filling out forms
  - signing consents they don’t understand
  - inability to understand instructions and prescriptions
  - difficulty controlling chronic illnesses

How to assess health literacy
- common mistakes: asking last grade level completed (literacy deficits increase with age), asking patients how well they read (false response to reduce embarrassment)
- look for behaviors suggestive of inadequate health literacy skills: asking staff for help, bringing along someone who can read, inability to keep appointments, making excuses, noncompliance with medication, poor adherence to recommendations, postponing medical decision making, mimicking behavior of others
- use tools:
  - \textbf{Rapid Estimate of Adult Literacy in Medicine (REALM)}: time consuming but thorough test of functional health literacy in adults

2.6.2 Improving Understanding in Low Literacy Patients

- Slow down and take time
- Don’t use jargon
- Show or draw pictures
- Limit information given at each interaction, and repeat instructions
- Use “teach back” or “show me” approaches to confirm understanding and assess learning
- Be respectful, caring, and sensitive
- Empower your patients

2.6.3 Patient Education

- Barriers to providing good education: literacy, time, availability of patient education resources for provider
- Types of patient education materials:
  - med lists
  - written instructions
  - prescription instructions: especially for insulin
  - information on medical conditions

Tips:
- determine quality of educational handouts
- make sure they’re from good sources
• make sure they’re easy to read: 5th grade level, straightforward, minimal pathophys, focus on patient’s experience of the condition
• have a few go-to handouts: American Academy of Family Physicians
• know what sites you like for patients to use: mdconsult.com, familydoctor.org, uptodate.com, cdc.gov, choosemyplate.gov, hhs.gov, diabetes.org, heart.org
• search keywords

2.7 End of Life Issues

2.7.1 Background

• What do patients want?
  • pain control
  • peace with God
  • presence of family
  • being alert/mentally aware
  • following choice of treatment
  • finances in order
  • feeling that life was meaningful
  • resolution of conflict
  • death at home
• Psychological and spiritual issues:
  • anticipatory grief
  • fear of the unknown
  • fear of abandonment by provider or family
  • increasing spiritual focus
• Providers believe addressing end of life issues are difficult due to:
  • limitations of medical treatment
    • although early palliative care has been found to prolong life and increase quality of life
  • fear of failure
  • fear of patient or family distress
    • although directness has actually been found to lead to better outcomes
  • magical thinking

2.7.2 Helping Patients Transition to Palliative Care

• Listen to their concerns
• Understand patient beliefs and values
• Emphasize what you can do rather than what you can’t
• Don’t talk too much, ask how much they want to know
• Try to understand family dynamics and relationships
  • past wrongdoings of the patient to their family
• If children are involved, make sure conversation is tailored to their developmental age
• Use the SPKES protocol!
  • proper setting: quiet space, sit down
  • gauge patient’s perception of condition and understanding of seriousness
2.7.3 DNR Discussions
- Use language the patient will understand
- Never say “do you want us to do everything”
- Try to find out what life was like before they got sick
- Will usually need to have more than one conversation

2.7.4 What To Do if There is Conflict
- Clarify any misunderstanding
- Confront and respond to emotion present

2.7.5 Advance Directives
- Asking about them is the law for any facility receiving federal funding
- Types:
  - living will
  - HCPOA: different from financial POA!
  - in NC, there is a MOST (medical order for scope of treatment) form
    - orders for CPR, antibiotics, artificial nutrition and hydration
    - patient or proxy must sign form, and it must be re-signed yearly
- Hierarchy of decision making in NC:
  1. legal guardian
  2. HCPOA
  3. spouse
  4. majority wishes of reasonably available parents or children over 18
  5. majority wishes of reasonably available siblings who are at least 18
  6. an individual who has an established relationship with the patient who is acting in good faith on behalf of the patient

2.7.6 Hospice vs Palliative Care
- Hospice is a part of palliative care
  - provides and promotes quality care, comfort, and dignity for patients and their families at the end of life, wherever they may be (private residence, assisted living, nursing home, hospital)
  - prognosis of ≤ 6 mo
  - focus on comfort cares
  - included in Medicare benefit
  - multidisciplinary care: RNs, counselors, volunteers, chaplains
  - most care provided at home
  - different levels of care, from acute care to 24 hour caregiving to respite-only care
  - need to meet specific criteria
- Palliative care is provided at any time during any illness
  - may be combined with curative care
  - independent of payer
  - can be received in acute care settings
  - any diagnosis
2.7.7 Grief and Mourning

- **Bereavement**: the time period during which the survivor feels the pain of loss, grieves and mourns, and then adjusts to a world without the deceased
- **Grief**: the reaction to the perception of loss, disaster, misfortune, failure, or hurt; inward experience of acute sorrow
  - normal reaction to loss
- **Mourning**: outward expression of grief
  - includes conscious and unconscious processes to cope with and process grief
- Factors complicating the mourning process: sudden or unexpected death, death from an overly long illness, loss of a child, mourner’s perception of the death as preventable, relationship with deceased was angry, ambivalent, or dependent, prior or concurrent mourner losses or stressors and mental health issues, mourner’s perceived lack of social support, mourner’s dissatisfaction or anger with healthcare system, personnel, or treatment
- Appropriate care-provider interactions:
  - excellent communication skills
  - communication that is honest and compassionate
  - recognition of grief, support and referral
  - sending family a letter of condolence
  - attending a memorial or funeral service
  - acknowledgement of own sorrows with development of self-care strategies and rituals
3 Psychiatry Exam Notes

3.1 Intro to Psych

3.1.1 Background

- **Psychiatry**: the study and treatment of mental illnesses
  - includes mood, cognition, and behavioral illnesses
- Mental illness is thought to be caused by a variety of genetic and environmental factors
- Problems: patient may feel like it must not be a real thing if there is no known cause, or that there must be no treatment, creates environment for social judgment, patient may feel like it is their fault
- **Stigma**: a negative judgment based on a personal trait
  - patient education: disease information, talk about treatments, don’t let stigma create self-doubt and shame, seek support, don’t equate self with illness, make use of resources including advocacy groups, speak out
- History lessons:
  - 2008 Mental Health Parity and Addiction Equity Act passed to ensure that mental health care was covered as equally as other medical conditions by insurance companies, with similar reimbursements
- Models of health and health care
  - biomedical model: physical processes such as pathology, biochemistry, and physiology are the primary determinants of health
    - developed in mid-1800s
  - biopsychosocial model: biological, psychological, and social factors all play a significant role in human functioning in the context of disease
    - developed in 1977

3.1.2 DSM (Diagnostic and Statistical Manual of Mental Disorders)

- Divides mental disorders into types based on criteria sets with defining features
  - creates standardization
  - creates groups of diseases
    - 16 major diagnostic categories
- Assessment involves 5 axes, each of which refers to a different domain of information that can help the clinician plan treatment and predict outcome
  - **Axis I**: clinical disorders, including major mental disorders, learning disorders and substance use disorders
  - **Axis II**: personality disorders and intellectual disabilities
  - **Axis III**: acute medical conditions and physical disorders
  - **Axis IV**: psychosocial and environmental factors contributing to the disorder
  - **Axis V**: Global Assessment of Functioning or Children's Global Assessment Scale for children and teens under the age of 18
- Primary basis for diagnosis
- Used by many kinds of providers and health professionals
- Published by the American Psychiatric Association
  - input from 13 workgroups using EBM
  - 5th revision being published in May
- Issues in use: separation of mental disorders from physical origin, classification of people as being defined by their disease, separates potentially related mental disorders, can be used like a cookbook rather than incorporating clinical judgment, can’t be used in forensic settings to establish existence of mental disorder
- Benefits: takes into account cultural variations in clinical presentations
- Coding of mental disorders:
  - official system is the International Classification of Diseases (ICD)
3.1.3 Psychiatric Drugs and Receptors

- **Extrapyramidal symptoms**: various movement disorders suffered as a result of taking dopamine antagonists
  - acute dystonic reactions: muscle spasms
  - pseudoparkinsonism
  - akathisia: motor restlessness
  - neuroleptic malignant syndrome: catatonia, fever, unstable BP, myoglobinemia
    - can be fatal
  - perioral tremor
  - tardive dyskinesia

<table>
<thead>
<tr>
<th>Receptor type</th>
<th>Effects of psychiatric drugs</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dopamine (D2)</td>
<td>Antagonists ≤ antipsychotic effect, relief of + symptoms of schizophrenia, ↑ extrapyramidal symptoms, increased prolactin levels</td>
<td></td>
</tr>
<tr>
<td>Serotonin 1A (5-HT1A)</td>
<td>Agonists ≥ antidepressant &amp; anxiolytic</td>
<td></td>
</tr>
<tr>
<td>Serotonin 2A (5-HT2A)</td>
<td>Antagonists ≤ improvement in nen</td>
<td></td>
</tr>
<tr>
<td>Serotonin 2C (5-HT2C)</td>
<td>Antagonists ≤ weight gain and associated risks</td>
<td></td>
</tr>
<tr>
<td>Serotonin 3 (5-HT3)</td>
<td>Antagonists ≤ antiemetic effect</td>
<td>Usually antipsychotics are not associated with antagonistic effect</td>
</tr>
<tr>
<td>Alpha-1 adrenergic (α-1)</td>
<td>Antagonists ≤ sedation, hypotension, reflex tachycardia</td>
<td></td>
</tr>
<tr>
<td>Histamine (H1)</td>
<td>Antagonists ≤ sedation, contribution to weight gain</td>
<td></td>
</tr>
<tr>
<td>Muscarinic (m1)</td>
<td>Antagonists ≤ anticholinergic effects</td>
<td></td>
</tr>
</tbody>
</table>
3.1.4 Screening Tools for Psychiatry

- **Background**
  - simple screens have high sensitivity but low specificity
  - psych ROS is a kind of screen
    - asking about depression, sadness, sleep disturbance, anhedonia (interest deficit), suicidal or homicidal ideation, loss of libido, anxiety, hallucinations, delusions, behavioral changes, changes in appetite, psychomotor retardation (slow reactions to situations)
    - make use of techniques of normalization (reassurance that behavior is normal), symptom assumption (phrase question in the way that implies you think patient has the symptom), transitioning techniques (using previous topics or comments as jumping off points)
  - open-ended questions may or may not result in useful information
  - significant others, friends, and family can provide useful information that the patient might not volunteer due to shame or stigma, or lack of self-awareness due to illness
    - may provide more accurate or objective information
  - be alert to nonverbal cues: body language, tone, appropriate affect
  - sometimes silence is golden and you just need to listen
  - use reflective statements: “you seem pretty down right now”
  - build rapport
  - don’t ignore emotional cues!
    - ignoring this can lead to a prolonged encounter, creation of misunderstandings, erosion of trust, and potential misdiagnosis

- **When to use a screening tool:**
  - every encounter (needs to be a simple tool)
  - investigation: when a chief complaint indicates a potential mental disorder
  - monitoring of patients with known mental illness

- **Screens only identify possibility of mental disorder, they don’t diagnose it**

- **Benefits of screening tools:**
  - fast, simple, objective, standardization across patients, monitoring illness over time, involvement of patient in self-assessment (can lead to a light-bulb moment), can make argument for treatment or referral easier

- **Cons of screening tools:**
  - can feel cold or sterile, relies on patient honesty, doesn’t replace conversation, may need special training to administer, cost, time involved in administering cuts into appointment
  - Most screens are not valid if translated into another language
    - must be validated in population first!

3.1.5 Primary Care Alcohol Abuse Screening Tools

- mental illness and substance abuse can be closely related

1.) **CAGE Assessment:** 4 quick questions
  - cut back, annoyed, guilty, eye-opener

2.) **Michigan Alcohol Screening Test (MAST):** 22 questions

3.) **Short Michigan:** 13 questions
  - 3+ yes answers indicate probable alcohol issue

4.) **Two-Item Conjoint Screening for Alcohol (TICS):** focuses on detecting alcohol AND concurrent use of another substance

3.1.6 Other Screens

- many other screens are available for adult ADHD, bipolar disorder, dissociative identity disorder, internet addiction, OCD, social anxiety disorder
1.) **HITS**: short domestic violence screen
   - hurt, insult, threaten, scream
   - scores > 10 suggest abusive relationship

2.) **PRIME-MD**: screens for 5 of the most common mental health disorders in primary care
   - depression, anxiety, alcohol, somatoform, and eating disorders
   - takes ~8.4 minutes to administer
   - frequently the full PHQ is administered instead as it is quicker and self-administered by the patient

### 3.2 Eating Disorders

#### 3.2.1 Background
- **Etiology** is a combination of psychological, social, and biological factors
  - psych features: perfectionism, hypercritical self-evaluation and judgment, unrealistically high
  - expectations, need for control, non-assertiveness or “people pleasing”, hypersensitivity to real or perceived rejection, negative and positive reinforcement, ambivalence with interpersonal relationships
  - social factors: over-valuing thinness, sexualization of women, emphasis on external validation, unrealistic expectations, restricted expression of emotion, certain family types (perfect, overprotective, or chaotic), familial emphasis on weight control, hyperconsciousness of food, weight, and appearance, high degree of life stressors
  - biological factors: genetic influences, serotonin imbalance in bulimia, comorbidities of major depression and bipolar disorder in bulimia
- Anorexia and bulimia more prevalent in middle and upper class families
- **WWII experiment** starving men:
  - imposed starvation causes increase in food preoccupations, odd eating behaviors and rituals, strong emotional reactions to food, regret and self-disgust after binge eating, and irritability, anxiety, apathy, depression, and even psychosis
    - lasts weeks to months
  - social changes: withdrawal, decisional reluctance
  - re-feeding after imposed starvation results in regaining original weight plus more, and being less satisfied even with larger meals
- **Screen for** in primary care using **SCOFF**: eating disorder screen for anorexia and bulimia nervosa
  - sick, control, “one stone”, fat, food
  - 2+ points suggest eating disorder
  - considered to be 100% sensitive and 88% specific
- **Investigation**:
  - be aware of patients falsifying their weight (pocket objects, heavy clothing, etc)
  - EKG: bradycardia, prolonged QT, nonspecific ST changes
  - labs: electrolyte abnormalities, thyroid panel, vitamin levels
  - DEXA for bone density
- **Treatment**:
  - intervention: decrease shame, validation of patient feelings, assessment of social supports, encourage patient to be open and honest (secrecy is destructive), inform of available resources, affirm willingness to provide ongoing support
  - **goals**:
    - restoration of healthy body weight
    - resumption of healthy thoughts and practices around food and nutrition
    - address psychological issues to avoid relapse: self-esteem, perfectionism
  - psychotherapy: individual and family
  - medical monitoring and regular visits
  - nutritionist
  - social support
  - when to hospitalize: use American Psychiatric Assn guidelines
• weight loss of > 35% ideal, unresponsiveness to outpatient therapy, rapid weight loss, hypovolemia, electrolyte abnormalities, malnutrition, severe depression or suicidality
• force-feeding is reserved for life-threatening cases

Prognosis:
• complications:
  o **refeeding syndrome**: when shift from fat to CHO metabolism causes hypophosphatemia  
    □ depletion of intracellular ATP and tissue hypoxia  □ impairment of myocardial contractility  □ cardiovascular collapse, seizures, rhabdomyolysis, delirium
    ▪ insulin secretion from response to caloric load also shifts K intracellularly
    ▪ at risk: severe anorexia, rapid weight loss, prolonged weight loss
    ▪ prevent by starting slow and increasing by 100-200 kcal/day
  o Wernicke’s encephalopathy: prevent with thiamine during refeeding

### 3.2.2 Anorexia Nervosa

**Background:**
• mortality of 5-20%
• **restrictive type anorexia nervosa**: self-starvation
• **binge purge type anorexia nervosa**: use of laxatives, vomiting, diuretics, or enemas to purge after bingeing
• average duration of illness 5.9 years

**Presentation:**
• preoccupation with food
• social withdrawal
• obsessive exercise
• frequent weighing
• fatigue
• hair loss
• cessation of menstruation
• sensitivity to cold
• pt tends to be avoidant/anxious type: perfectionism,
unwillingness to inhabit the adult mold, pride in ability to control food - pt family tends to be extremely achievement-oriented and over-emphasizes slimness and fitness
- serious: arrhythmia, dehydration (renal and electrolyte abnormalities), malnutrition, hypotension, bradycardia, reduced bone density, heart failure, dental problems, hypothermia, fainting, lanugo

Investigation:
- DSM-IV criteria: distorted body image, intense fear of becoming overweight, weight loss to 15% below ideal, amenorrhea

Treatment:
- psychotherapy
  - Maudsley family therapy: empowering parents with task of nourishing child back to health, weight becomes focus of treatment with slow return of control back to patient
    - most effective for adolescents anorexic for < 1 year
  - biggest challenge is the ego-syntonic nature of anorexia (behaviors are in tune with patient’s ego’s needs)
- meds: only useful after weight is restored
  - atypical antipsychotics, tricyclics, SSRIs, Li
  - anxiolytics before eating

Prognosis: 50% have good results, 25% intermediate, 25% poor

3.2.3 Bulimia Nervosa

- Background:
  - 80% of patients are female
  - onset in adolescence or young adulthood
  - purging bulimia: use of laxatives, vomiting, diuretics, or enemas to prevent weight gain
  - non-purging bulimia: use of fasting or excessive exercise to prevent weight gain
  - average duration of illness 5.8 years

Presentation:
- patients tend to be of the dramatic/erratic type: impulsivity, alcohol and drug abuse
- engaging in binge eating that they can’t voluntarily stop
- purging gives sense of relief
- react to emotional stress by overeating
- frequent weight fluctuations
- guilt or shame about eating
- depressive moods
- may have menstrual irregularities
- severe: dehydration, malnutrition, electrolyte abnormalities, hypotension, bradycardia, heart failure, parotiditis, tooth decay, irregular bowel motility, esophageal inflammation and rupture risk

Investigation:
- DSM-IV criteria: recurrent episodes of binge eating, constant body image dissatisfaction, inappropriate compensatory behavior to prevent weight gain
  - minimum of 2 days per week for 3 months

Treatment:
- psychotherapy:
  - long-term psychiatric prognosis is worse than anorexia
  - biggest challenge in treatment is feelings of shame and embarrassment
- establishment of regular, non-binge meals
- improvement of attitudes towards exercise
- meds: SSRIs

Prognosis:
- half will recover with therapy within 5-10 years
- 1/3 will relapse

3.2.4 Binge Eating Disorder

Background:
- patients are 60% women and 40% men
- patient weight can be normal or overweight
- onset later in life than other eating disorders
- average duration of illness is 14.4 years

Presentation: obesity, HTN, high cholesterol, heard disease, DM, galbladder disease

Investigation:
- criteria (3/5): eating much more rapidly than normal, eating until uncomfortably full, eating large amounts of food when not feeling physically hungry, eating alone because of embarrassment, feeling disgusted, depressed, or very guilty after eating
  - minimum of 2 days a week for 6 months
- no purging = not bulimia
- feel ashamed of behavior = not anorexia
- similar to anorexia and bulimia in that eating is done secretly

Treatment:
- psychotherapy
  - biggest challenge in treatment is feelings of shame and embarrassment
- meds: SSRIs, topiramate, naloxone

3.2.5 Eating Disorder Not Otherwise Specified

Comprises a spectrum of food and body image disorders that do not fit criteria for other disorders
- ex. over-dieting, chewing and spitting, grazing, over-exercise, food phobias, purging without bingeing
- female athletic triad: disordered eating (crash diets, bingeing, meds, excess exercise), menstrual dysfunction, and osteoporosis (due to loss of menstruation)
- Most common diagnosis among eating disorders!
- Hard to establish trust and frequent loss to follow up

3.3 Anxiety Disorders

3.3.1 Background
• A maladaptive response to stressors, trauma, or injury
  • affects neurobiology
    o ↓ GABA activity
    o ↓ serotonin (5HIAA)
    o overactive amygdala
  • genetic predisposition
  • Anxiety disorders are the most prevalent psychiatric disorders in the US
  • Patients tend to visit PCPs more than psychiatrists for these disorders (shame factor)
  • Result in more frequent medical visits □ extensive and sometimes unnecessary diagnostic testing
  • Anxiety screening tools in primary care:
    • anxiety ROS: do you ever feel fearful, nervous, jittery, panic, are you a worrier?
    • Beck Anxiety Inventory:
      o need to purchase
      o easy to administer
      o helpful for monitoring of therapy
  • Endler Multidimensional Anxiety Scales:
    o need to purchase
    o confirms that anxiety is present and is also affecting daily life
  • Investigation:
    • differential: normal adaptive response, maladaptive response, primary anxiety disorder, substance-induced anxiety disorder, medical disorder induced anxiety disorder, comorbid anxiety with other psychiatric disorder
    • must rule out medical illness!
  • basic blood work
  • Treatment:
    • psychotherapies:
      o supportive psychotherapy: reinforcement of the patient’s own healthy and adaptive patterns of thought behaviors in order to reduce the intrapsychic conflicts that produce symptoms of mental disorders
        ▪ therapist engages in a fully emotional, encouraging, and supportive relationship with the patient as a method of furthering healthy defense mechanisms, especially in the context of interpersonal relationships
      o cognitive behavioral therapy (CBT): addresses dysfunctional emotions, behaviors, and cognitions through a goal-oriented, systematic process
      o interpersonal therapy: a time-limited treatment that encourage the patient to regain control of mood and functioning typically lasting 12-16 weeks
      o psychodynamic therapy: primary focus is to reveal the unconscious content of a client’s psyche in an effort to alleviate psychic tension
      o family/marital counseling:
  • Prognosis:
    • recurrence is common
    • patients with anxiety disorders are more likely to develop a medical illness like CAD, stroke, DM, HTN

3.3.2 Pharmacologic Treatment of Anxiety Disorders

A.) Acute episode:
  • benzodiazepines are the most effective
  • MOA: promote binding of GABA to its receptor □ inhibitory CNS effects of sedation, muscle relaxation, anxiety reduction, and increased seizure threshold
  • good at relieving somatic symptoms of anxiety such as muscle tightness and jitters
  • may also be used as a temporary bridge to relieve acute distress while beginning treatment with a longer-acting agent
should not be used long-term due to ineffectiveness in managing comorbid mood symptoms, failure to bring about a sustained remission, and risk of dependence
- physiologic dependence occurs as a result of acute decrease in GABA neurotransmission - symptoms of insomnia, anxiety, restlessness, muscle tension, irritability, nausea, malaise, diaphoresis, night mares, hyperreflexia, ataxia, paranoid delusions, hallucinations seizures
- dosing:
  - initiate low and titrate up to relieve symptoms
  - try to d/c after 6-8 weeks of use, but taper to avoid withdrawal and rebound anxiety
- types:
  - alprazolam: specifically approved for panic disorder
  - clorazepate: rapid absorption
  - diazepam: longest half-life, rapid absorption
  - lorazepam:
  - oxazepam:
  - all are approved for anxiety disorders
  - all are equally effective; agent is chosen based on pharmacokinetics and patient considerations
  - those with short duration (lorazepam, oxazepam) are a good choice for the elderly and those with liver disease
  - those with long duration (alprazolam, clorazepate, clonazepam, chlordiazepoxide, diazepam) only need a dose q HS
- side effects: sedation, ataxia, slurred speech, confusion, weakness, psychomotor impairment, anterograde amnesia
  - seen when used with other CNS depressants like alcohol

B.) Maintenance
- first-line maintenance therapies are SSRIs or SNRIs
  - no agent clearly superior to another
  - SSRIs: fluoxetine, citalopram, escitalopram, fluvoxamine, sertraline, paroxetine
  - SNRIs: venlafaxine (has the most SNRI data), duloxetine, dexvenlafaxine
- second- and third-line therapies vary with disorder type

3.3.3 Panic Disorder
- Background:
  - panic disorders affect more females than males
- Presentation:
  - panic attack: periods of intense fear or apprehension that are of sudden onset and of relatively brief duration
    - caused by an overreaction to stimulation of the amygdala and adrenal gland
    - a symptom of panic disorder if repeated
    - shaking, trembling, choking sensation, SOB, sweating, derealization, depersonalization, persistent concern about having another attack, chest pain
    - can occur one to several times per week, with frequency waxing and waning
    - unpredictable
    - psych comorbidities: agoraphobia, social anxiety, depression, or suicidal ideation is common
    - medical comorbidities: asthma, HTN, mitral valve prolapse, IBS, interstitial cystitis, migraines
- Investigation:
  - DSM-IV criteria for panic attack: palpitations, pounding heart, tachycardia, sweating, trembling, shaking, SOB or smothering, feeling of choking, chest pain, nausea, abdominal pain, dizziness, derealization, depersonalization, fear of losing control, fear of dying, paresthesias, chills, hot flashes
must have 4+ of these symptoms, developing abruptly and reaching a peak within 10 minutes

Treatment:
- first line: psychotherapy, SSRI or SNRI (all shown to have same outcome)
  - all SSRIs are effective in panic disorder
    - 60-80% of patients will become panic-free, usually takes > 4 weeks
    - dose low and titrate up (way up if necessary) to avoid stimulant effects
  - venlafaxine has most SNRI data
- second line:
  - all SSRIs are effective in panic disorder
    - 60-80% of patients will become panic-free, usually takes > 4 weeks
    - dose low and titrate up (way up if necessary) to avoid stimulant effects
  - venlafaxine has most SNRI data
- second line:
  - benzodiazepines are ok as long as there isn’t another comorbid mood disorder
    - studies show there are no trends of misuse to get high in panic disorder patients
    - alprazolam: has the most data, 55-75% patients will be panic free after 1 week
    - clonazepam
  - imipramine: highly effective in panic disorder but high rate of stimulant side effects and weight gain
- third line: phenelzine, clomipramine, pindolol

3.3.4 Post-Traumatic Stress Disorder

Background:
- more common in males
- incurs increased risk for development of other psych disorders
- risk factors: initial severe reaction to trauma, parental neglect, poor social support, low SES, person or FH psych disorder
  - includes postpartum women, firefighters, adolescent survivors of MVCs, female rape victims, POWs, abused children, survivors of natural disasters
- Prevention: immediate on-site counseling, debriefing on the stress of a critical incident, intervention within 14 days of trauma, education on breathing and muscle relaxation techniques
- Screening:
  - direction questioning is necessary
  - trauma, military, assault history
- Presentation:
  - panic attacks, paranoia, h/o traumatic event, flashbacks, nightmares, dissociation or numbing, avoidance behaviors, insomnia, irritability, difficulty concentrating, hypervigilance
  - comorbid major depressive disorder or alcohol abuse
  - comorbid character disorder
  - acute stress disorder: similar to full-blown PTSD, but occurs within 4 weeks of trauma
    - greater dissociative symptoms
    - usually disappears within 4 weeks after treatment, but can progress to PTSD if not treated
- Investigation:
  - DSM-IV criteria: h/o trauma, reliving or re-experiencing trauma, hypervigilance, dissociation/detachment or avoidance
    - must last > 1 month to be acute and > 3 months to be chronic
    - symptoms can’t be preceded by drugs, alcohol, meds, or other medical disorders
- Treatment:
  - must treat comorbid disorders simultaneously
  - may need therapy indefinitely
  - first line: SSRI or SNRI
    - may be more effective for non-combat-related PTSD than combat-related PTSD
    - strongest evidence with paroxetine, sertraline, and fluoxetine
    - need > 12 weeks to respond
    - response rates are < 60%, and only < 20-30% of patients will achieve remission
  - second line: TCAs, nefazodone, mirtazapine, prazosin
  - third line/augmentation therapy:
    - atypical antipsychotics: risperidone, olanzapine
3.3.5 Obsessive Compulsive Disorder

- **Background:**
  - contributing factors: genetics, serotonin system, autoimmunity?
  - more common in white patients

- **Presentation:**
  - symptoms beginning in adolescence
  - obsessive thoughts
    - ex. contamination, need for order, repeated doubts, religion, sexual imagery, aggressive impulses
  - compulsive behaviors
    - ex. cleaning, ordering, organizing, checking, counting, masturbation, fights
    - recurrent or repetitive
  - irrationality
  - distress
  - feelings of shame and secrecy

- **Investigation:**
  - average time to treatment after meeting criteria for diagnosis is 11 years
    - difficult to detect without a high awareness and suspicion
  - DSM-IV criteria: obsessions and/or compulsions that are recurrent, intrusive, excessive, or irrational, panic attacks or tension severe enough to be time-consuming for > 1 hour per day
    - symptoms not a result of drugs, alcohol, meds, or other medical disorders

- **Treatment:**
  - first line: exposure-based cognitive therapy or SSRI
    - SSRI needs 6-12 week trial
    - may need really high doses for OCD
    - if successful, treat for 1-2 years then taper off
  - CBT needs 13-20 sessions
  - second line:
    - clomipramine: tricyclic antidepressant with strong serotonin reuptake inhibition
      - probably works better than SSRI, but not for use until failure of 2-3 SSRIs due to side effects: sedation, weight gain, anticholinergic effects, conduction disturbances, toxicity
      - caution in patients with hepatic or CV disease, elderly, pregnancy, seizure disorders
  - venlafaxine
  - third line: mirtazapine, prazosin, MAOIs, atypical antipsychotics
  - last resort: transcranial magnetic stimulation, deep brain stimulation, ablative neurosurgery

3.3.6 Social Anxiety Disorder

- **Background:**
  - slightly more common in females
  - onset is almost always between ages 11-19
  - median delay in pursuing medical attention is 16 years

- **Presentation:**
  - intense, irrational, persistent fear of being scrutinized by others
  - history of shyness
  - panic attacks in social situations
  - choosing or changing a job due to social issues
  - can be brought on by major life change
  - comorbid major depressive disorder, substance abuse, or bulimia nervosa

- **Investigation:**
- DSM-IV criteria: panic with social situations, marked and persistent fear of social situations, avoidance of social situations, impaired performance
  - must be present for at least 6 months
  - symptoms not a result of drugs, alcohol, meds, or other medical disorders

**Treatment:**
- treat for 6-12 months, then taper and d/c
- first line: SSRI or SNRI or CBT
  - 50-50% will respond in 8-12 weeks
  - fluoxetine not recommended due to inconsistent results
- second line: benzodiazepine
  - for patients who can’t tolerate or don’t respond to SSRI s or SNRI s
  - a good option for PRN use for performance anxiety
  - clonazepam is the best studied
    - side effects of anorgasmia, unsteadiness, dizziness, and blurred vision
  - risks: use > 2 weeks may result in physical dependence, ineffective for comorbid depression
- third line: gabapentin, mirtazapine, phenelzine, pregabalin
  - other antidepressants: mirtazapine, nefazodone, bupropion
    - only small or open-label trials
  - anticonvulsants: gabapentin, pregabalin
    - lower response rates
  - antipsychotics: olanzapine
    - only small trials
  - β-blockers: may be effective PRN for performance anxiety
  - MAOIs: use limited by side effects and dietary restrictions

### 3.3.7 Generalized Anxiety Disorder

**Background:**
- associated with significant functional impairment
- often underdiagnosed and undertreated
- median onset in early 20s
  - usually gradual, but can be precipitated by stressful life events
- may wax and wane
- risk factors: middle age, female, separation/divorce/widowed, low SES, FH

**Presentation:**
- comorbid major depression, panic disorder, social anxiety disorder, PTSD, specific phobia, or substance abuse

**Investigation:**
- DSM-IV criteria: excessive, irrational, uncontrollable worry, tension, insomnia, fatigue, irritable mood, restlessness, difficulty concentrating
  - for at least 6 months
  - symptoms not a result of drugs, alcohol, meds, or other medical disorders

**Treatment:**
- first line: SSRI or SNRI
- give it a 6-8 week trial
  - good response □ treat for a year
  - remaining insomnia □ add non-benzo hypnotic, benzo, trazodone, mirtazapine, or sedating hypnotic
  - inadequate response □ switch antidepressants OR add atypical antipsychotic, benzo, antihistamine, or buspirone
- second-line therapies:
  - buspirone: a non-benzo anxiolytic that has reduced abuse potential
    - MOA: partial serotonin agonist
    - a good option for patients with h/o substance abuse or who can’t tolerate benzos
    - no motor impairment or hypnotic properties
• not associated with weight gain or sexual dysfunction
  • not as effective as SSRIs/SNRIs and not as quick
  • take 1 week to start with max benefit in 4-6 weeks
  • drug interactions with CYP3A4 inhibitors and inducers
    o benzodiazepines
    o imipramine: considered when patients fails SSRIs or venlafaxine
  • limited use due to side effects: anticholinergic, sedation, CV, CNS
• third-line therapies
  o hydroxyzine: use limited by sedation and lack of efficacy in comorbid diseases
  o pregabalin: comparable efficacy to SSRIs and SNRIs
  o quetiapine: comparable efficacy to SNRIs, long-term risks unclear

3.3.8 Specific Phobias

• Presentation:
  • fear is caused by a specific object or situation
    o may in in presence of object or in anticipation
  • causes panic symptoms that don’t meet criteria for panic attack
  • avoidance of object or situation
• Investigation:
  • must have had the symptoms at least 6 months for diagnosis
• Treatment:
  • only responsive to behavioral therapy, no response to meds

3.3.9 Adjustment Disorder

• inability to adjust to or cope with a stressor
• Presentation:
  • avoidant behavior
  • anxiety and depression
  • does not meet criteria for other major types of anxiety disorders
• Treatment:
  • psychotherapy: relaxation techniques, supportive therapy, CBT
  • meds: sedatives, brief trial of antidepressant

3.3.10 Brief Reactive Psychosis

• delusions, hallucinations, catatonic symptoms, and strange speech, lasting for one day to one month, after which the individual returns to full normal functioning

3.4 Mood Disorders

3.4.1 Background

• Mood vs affect:
  • mood: a person’s predominant internal state at any one time, described in their own words
  • affect: the apparent emotion conveyed by a person’s nonverbal behavior and tone
• Mania, hypomania, and cyclothymia
• Treatment:
  • psychotherapy
  • electroconvulsive therapy
  • transcranial magnetic stimulation
  • exercise
  • meditation
  • yoga
  • increase intake of omega-3 fatty acids
3.4.2 Major Depressive Disorder

- **Background:**
  - different from dysthymia, which is a chronic, milder mood disturbance
  - causes: biological (variation in serotonin transporters, lack of serotonin, endocrine disturbance?), psychological (stress, negative emotionality, low self-esteem, vulnerability factors), and social factors (poverty, social isolation)
  - depressive episodes are classified as mild, moderate, or severe

- **Subtypes:**
  - melancholic depression: loss of pleasure in most or all activities, nonreaction to pleasurable stimuli, worsening of symptoms in early morning hours, early morning waking, psychomotor retardation, excessive weight loss, excessive guilt
    - responds best to TCAs or MAOIs
  - atypical depression: mood reactivity, weight gain, excessive sleep, sensation of heaviness in the limbs, significant social impairment as a consequence of hypersensitivity to perceived rejection
    - responds best to SSRIs and SNRIs
  - catatonic depression: a rare and severe form involving disturbances of motor behavior and other symptoms
  - postpartum depression: intense, sustained depression experienced within one month of giving birth
  - seasonal affective disorder: episodes in the fall or winter that resolve in the spring

- **Prevalence of depression in US:**
  - half of these cases are missed by PCPs
  - shorter life expectancy than those without depression
  - depression associated with increased CV risk
  - more common in women
  - first episode between ages 30-40, smaller peak in ages 50-60
  - risk factors: alcoholism, benzodiazepine use, neurologic conditions

- **Screening in primary care:**
  - USPSTF recommends screening for depression in practices that have available support systems to assure accurate diagnosis, consultation, effective treatment, and f/u

- **Options:**
  - **Patient Health Questionnaire:** 2 or 9 question formats for depression evaluation
    - can identify minor or major depression
    - minor = 5/9 symptoms, including depressed mood or anhedonia, most of the day
    - misses dementia, psychosis, or personality disorders
    - not the fastest
    - requires some specialized training
  - **Winnie-the-Pooh test:** does your patient resemble Eeyore?
  - **Beck Depression Inventory:** 21 self-assessment questions
    - scores over 10 indicate depression is likely
    - scores over 30 coincide with severe depression
    - validated for ages 13 and up
    - old and reliable 90% of the time
    - should be administered by a health care professional with experience in psych
    - can be used to f/u patients with known depression
    - needs to be purchased
  - **Zung Self-Rating Depression Scale:** 20 statement self-rated frequency of symptoms scale
    - scoring can be complicated
    - for f/u of patients with diagnosed depression
  - **Hamilton Depression Rating Scale:** 21 statements rating symptom severity

- **Presentation:**
  - low mood
  - low self-esteem and rumination over feelings of worthlessness
- inappropriate guilt or regret
- helplessness and hopelessness
- loss of interest or pleasure in normally enjoyable activities
- hypophonic or slowed speech,
- psychomotor retardation
- poor eye contact
- hypoactive DTRs
- give-way weakness
- poor concentration and memory
- withdrawal from social situations and activities
- reduced sex drive
- thoughts of death or suicide
- insomnia or hypersomnia
- physical symptoms: fatigue, headache, digestive problems, pain
- decreased or increased appetite □ weight loss or gain
- comorbid anxiety, PTSD
- severe: psychotic symptoms including delusions or hallucinations

Investigation:
- differential: dysthymia, adjustment disorder with depressed mood, bipolar disorder
- mental status exam
  - determine suicide risk: ask about intent/plan, use SADPERSONS scale, ask about access to weapons or FH of suicide
- cognitive testing to r/o dementia
- labs: TSH to r/o hypothyroidism, electrolytes and Ca to r/o metabolic disturbance, CBC to r/o systemic infection, folate, vit D, vit B12, drug screen, IFN-β or γ, steroid levels
- DSM-IV criteria: single or recurrent major depressive episodes characterized by a severely depressed mood persisting for at least two weeks
  - excludes patients whose symptoms are a result of bereavement

3.4.3 Treatment of Major Depressive Disorder
- Exercise for mild depression
- Psychotherapy:
  - treatment of choice for patients under 18
  - CBT has the most research
- Pharmacological therapy:
  - duration of treatment depends on whether it this is the first depressive episode or it is a relapse
    - in any case, treat acutely for 6-12 weeks
      - first episode: if remission is achieved (3 weeks without depression symptoms), continue for another 4-9 months, and then taper off with watchful waiting for any relapse
      - second episode: if remission is achieved, continue for another 4-9 months, and then continue med for maintenance phase for a year or more
      - third or more episode: if remission is achieved, continue for another 4-9 months, and then continue med for maintenance phase indefinitely
      - failure to achieve remission before d/c a drug results in a 3.5x greater chance of relapse
  - choosing a drug:
    - effectiveness of SSRIs, SNRIs, bupropion, TCAs, and MAOIs is generally comparable
    - choose a drug based on patient preference, safety, side effects, comorbidities, and cost
    - MAOIs should be restricted to patients who don’t respond to other drugs due to side effects
    - switch if no response by 2 weeks (although full response won’t be seen until 4-8 weeks)
      - 50-60% of patients will respond to a given trial of an antidepressant
  - dosing:
    - use lowest initial dose
o raise dose incrementally until patient achieves remission
  ▪ patients may need doses higher than those approved by the FDA
  o taper off over several weeks before d/c
• treating refractory depression (no response to at least 8 weeks of medical therapy):
  o confirm diagnosis and medication adherence, and rule out organic causes of depression
  o switch to another antidepressant or augment with CBT, bupropion, or buspirone
  o switch to a different pharmacologic class of antidepressant or augment with Li or triiodothyronine
  o switch to tranylcypromine or venlafaxine + mirtazapine
• available drugs:
  o selective serotonin reuptake inhibitors (SSRIs): inhibit reuptake of serotonin as well as slight effects on histamine-R, α1-R, and muscarinic-R
    ▪ fluoxetine:
      ● longest half-life
      ● many drug interactions
      ● lowest weight gain = good for eating disorders
      ● highest risk for serotonin syndrome
      ● good for tapering
    ▪ citalopram: low risk of sexual side effects
    ▪ escitalopram: low risk of sexual side effects
    ▪ fluvoxamine:
    ▪ sertraline: few drug interactions
  o serotonin-norepinephrine reuptake inhibitors (SNRIs): inhibits reuptake of both serotonin and norepinephrine
    ▪ venlafaxine: extended release available
    ▪ duloxetine: better side effect profile than venlafaxine
  ▪ desvenlafaxine:
    ● equally effective as SSRIs for treating major depression
    ● SNRIs may be more effective in the setting of diabetic neuropathy, fibromyalgia, musculoskeletal pain, stress incontinence, sedation, fatigue, and patients with comorbid anxiety
  o atypical antidepressants:
    ▪ bupropion: inhibits reuptake of norepinephrine and dopamine
      ● stimulant effects: good for ADHD, bad for anxiety
      ● may increase sexual function
      ● good for bipolar, incurs less risk of mania
      ● side effects: lower seizure threshold, insomnia, nervousness, agitation, anxiety, tremor, seizures or status epilepticus in overdose, arrhythmia, HTN, tachycardia, Stevens-Johnson syndrome, weight loss, GI, arthralgia, myalgia, confusion, dizziness, headache, insomnia, seizure, tinnitus, tremor, agitation, anxiety, mania, psychosis, suicidal ideation
- mirtazepine: increases norepinephrine and serotonin, with slight antagonistic effects on α1-R and muscarinic -R, and strong antagonistic effects on histamine-R
  - side effects: the most sedating antidepressant, weight gain, somnolence, orthostatic hypotension, dizziness, dry mouth
  - benefits: less nausea and sexual side effects, overdose is generally safe
- nefazodone:
- trazodone:
  - side effects: arrhythmia, hyper or hypotension, diaphoresis, GI, hemolytic anemia, leukocytosis, dizziness, headache, insomnia, lethargy, memory impairment, seizure, somnolence, priapism, weight gain
- tricyclic antidepressants: inhibit reuptake of serotonin and norepinephrine
  - first gen have greater effects on serotonin, and have greater effects on histamine-R, muscarinic-R, and α1-R
  - second gen have greater effects on norepinephrine i.) amitriptyline:
    - clomipramine:
    - desipramine:
    - doxepin:
    - imipramine:
    - nortriptyline:
  - side effects: anticholinergic, CV including conduction delays, CNS, weight gain, sexual dysfunction, decreased seizure threshold, overdose can be lethal
  - consider EKG prior to initiation
- monoamine oxidase inhibitors (MAOIs): block destruction of monoamines centrally and peripherally
  - -MAO-A acts on norepinephrine and serotonin
  - -MAO-B acts on phenylethylamine and dopamine
  - phenelzine: irreversible
    - hits more A than B
  - tranylcypromine: irreversible
    - hits more A than B
  - selegiline: reversible
    - patch only
    - only hits B at low doses — dietary restrictions:
    - side effects: anticholinergic, lower seizure threshold, weight gain, rash, orthostasis, sexual dysfunction, insomnia, somnolence, headache, hypertensive crisis in presence of monoamines, overdose is lethal
    - 2-week washout period of other antidepressants needed before initiation of MAOI (or switching from another antidepressant to an MAOI) in order to prevent serotonin syndrome
      - contraindications: codeine, tramadol, TCAs
- Electroconvulsive therapy: last resort

3.4.4 Bipolar Disorder

- Background:
  - causes: genetic factors, environmental factors (traumatic or abusive childhood experiences
  - disorders are on a spectrum:
    - bipolar I: 1+ manic episodes ± depressive or hypomanic episodes
    - bipolar II: 1+ hypomanic episodes and 1+ major depressive episodes
    - cyclothymia: 1+ hypomanic episodes with periods of depression not meeting criteria for major depressive episodes
      - low-grade mood cycling that interferes with functioning
• bipolar disorder NOS: any other mood state not meeting the criteria for a specific bipolar disorder
• onset usually in late adolescence or young adulthood
• highest prevalence in ages 15-30
• proposed linked to creativity

Presentation:
• episodes of mania (abnormally elevated energy levels, cognition, and mood) and/or depressive episodes
  o mania = rapid speech, pressured speech, rapid thought processes, grandiosity, heightened thought activity, labile affect, hyperactive DTRs, feelings of euphoria, decreased need for sleep, impaired judgment, spending sprees, engagement in atypical behaviors, substance abuse, aggression, feeling loss of control, increased sexual drive, irritability or rage, severe anxiety
    ▪ severe psychotic symptoms with delusions, hallucinations
    ▪ or hypomania = milder elevated moods, characterized by optimism, pressure of speech and activity, and decreased need for sleep
      • usually does not inhibit functioning like mania does
      • can just look like happiness = hard to diagnose
      • can last a few weeks to a few months
  o depression:
    o depressive episodes last 2 weeks to 6 months untreated
    • some patients experience mostly depressive symptoms while others are mostly manic
    • both manic and depressive episode occurring within the same week = mixed episode
      o more common in females and younger or older patients
    • mania and depression that occur frequently = rapid cycling
      o 4+ episodes (manic, mixed, hypomanic, and/or depressive) within a year, sometimes changing within a day
      o risk factors: antidepressant or stimulant use, hypothyroidism, premenstrual mood changes, women
  • both mania and depression occurring simultaneously
    o e.g. tearfulness during a manic episode
  • comorbid OCD, social phobia, panic disorder, ADHD, substance abuse
  • postpartum exacerbation

Investigation:
• differential: schizophrenia (common misdiagnosis)
• measure severity of symptoms using mania and bipolar spectrum scales
• labs: steroids, drug screen, TSH
• DSM-IV criteria:
  o mania: symptoms for at least one week (or less if hospitalization is required)
  o history of depression is not required for diagnosis

Prognosis
• earlier onset of disease is associated with increased risk of psychotic features, a chronic course, and less favorable response to treatment
• life expectancy is reduced by 9 years

3.4.5 Treatment of Bipolar Disorder
• Goals: resolve bipolar symptoms, end acute episodic symptoms, prevent further episodes, minimize side effects, comply with treatment, patient education, avoidance of precipitating factors
• Involuntary commitment if at risk of self-harm or danger to others
• Psychotherapy
• Pharmacological therapy:
  • duration of treatment:
    o continue therapy for at least 12 months
consider long-term therapy for 2+ lifetime manic episodes, severe manic episode, strong FH, or 1+ episodes per year

choosing a treatment:

- acute manic or mixed episodes:
  - patients not yet being treated for bipolar disorder:
    - if severe \( \square \) Li + antipsychotic OR valproate + antipsychotic
    - if milder \( \square \) monotherapy with Li, valproate, or an antipsychotic
    - short-term adjunct of benzodiazepine if needed
  - patients suffering a breakthrough manic or mixed episode while on maintenance therapy
    - ensure therapeutic serum levels of maintenance med
    - add an antipsychotic
    - short-term benzodiazepine if needed

- acute depressive episode
  - patients not yet being treated for bipolar disorder:
    - initiate Li OR lamotrigine
    - severely ill \( \square \) consider Li + antidepressant
  - patients suffering a breakthrough depressive episode while on maintenance therapy
    - ensure therapeutic serum levels of maintenance med
    - consider adding lamotrigine, bupropion, or paroxetine
    - alternatives: add another SSRI, venlafaxine, or MAOI if permitted (no TCAs as these can cause a switch into mania)
    - psychotic features \( \square \) add antipsychotic

- maintenance therapy:
  - d/c antipsychotics valproate
  - alternative: anticonvulsant (lamotrigine, carbamazepine, oxcarbazepine)
    - switch or augment if no response in 2-4 weeks
    - add an anticonvulsant: carbamazepine or oxcarbazepine
    - add an antipsychotic or change to a different antipsychotic
      - clozapine good for refractory cases
    - add an antidepressant

- psychosis during a manic or mixed episode:
  - treat with a second-gen antipsychotic d.) rapid cycling:
    - identify and treat any underlying medical condition or substance abuse
    - taper antidepressants that may be contributing to the cycling
    - initial treatment with Li or valproate
      - alternative: lamotrigine
    - may need both Li and valproate, or one of them plus an antipsychotic

- dosing:
  - mood stabilizers require 7-10 days for response
  - adjunct benzos and antipsychotics need 3-5 days for response
  - taper before d/c

- drug options:
  - mood stabilizers
    - anticonvulsants:
      - carbamazepine
        - need to monitor serum levels, toxicity can be fatal
        - pregnancy category D, must d/c before pregnancy due to risk of fetal carbamazepine syndrome, should not breastfeed
        - side effects: headache, nystagmus, ataxia, sedation, rash, leukopenia, ↑LFTs
        - many drug interactions that influence serum levels
        - contraindications: bone marrow depression
      - valproate
        - need to monitor serum levels, but toxicities are rare
• pregnancy category D due to risk of neural tube defects and fetal valproate syndrome • black box warning to increase folate if taken during pregnancy
• may still be able to breastfeed
• side effects: tremor, sedation, diarrhea, nausea, weight gain, hair loss, ↑LFTs
• some drug interactions that influence serum levels
• contraindications: hepatic dysfunction, pregnancy, kids under 2

- lamotrigine
  • overdose can be fatal
  • pregnancy category C, should not breastfeed
  • best for preventing depression relapse
  • side effects: black box warning for Stevens-Johnson syndrome, sexual dysfunction, dizziness, double vision, sedation
  • some drug interactions that influence serum levels

- lithium:
  • need to monitor serum levels
  • signs of toxicity: interstitial nephritis, ataxia, slurred speech, blurred vision, nystagmus, apathy, sleepiness, stupor, seizure, coma, ST depression, inverted T waves, AV block, arrhythmias, MI
  • pregnancy category D due to slightly increased risk of Ebstein's anomaly (tricuspid malformation)
    • if decision to continue during pregnancy, need to increase dose due to ↑GFR, stop 3 days before birth, then decrease dose post-delivery, and can’t breastfeed
  • side effects: thirst, polyuria, cognitive complaints, tremor, weight gain, sedation, diarrhea, nausea, hypothyroidism
  • increased levels with antibiotics, methyldopa, ACEIs, diuretics, NSAIDs
  • decreased levels with valproate, caffeine, bronchodilators, Ca channel blockers
  • contraindications: renal disease, severe CV disease, h/o leukemia, 1st trimester pregnancy
    • atypical antipsychotics: aripiprazole, asenapine, olanzapine, quetiapine, risperidone, ziprasidone, olanzapine + fluoxetine
      • can be used for maintenance therapy, monotherapy, or combination therapy
      • rapid reduction in manic symptoms in acute episodes
    • antidepressants
      • SSRIs not good for bipolar monotherapy
      • bupropion is associated with the lowest switch rate d.) benzodiazepines
      • clonazepam and lorazepam good for reducing insomnia and agitation in acute mania but not good for long-term therapy
    • Ca channel blockers
      • verapamil and nimodipine good for Li responders that don’t respond to any other treatment but can’t tolerate the Li
      • may be useful during pregnancy and breastfeeding

3.4.6 Premenstrual Dysphoric Disorder

- Background
  • causes: genetic
- Presentation:
  • symptoms usually begin luteal phase of the menstrual cycle and end with menses
  • cyclic, predictable pattern
feelings of sadness or despair, suicidal ideation, intense tension or anxiety, panic attacks, rapid and severe mood swings, bouts of incontrollable crying, increased interpersonal conflicts, disinterest in daily activities and relationships, difficulty concentrating, chronic fatigue, food cravings or binge eating, insomnia or hypersomnia, feeling overwhelmed, breast tenderness or swelling, heart palpitations, headaches, myalgias, swollen face and nose, feeling bloated

Treatment:
- well-balanced diet
- exercise
- SSRIs

3.4.7 Postpartum Depression

Background:
- can occur in women or men
- risk factors: formula feeding, h/o depression, cigarette smoking, low self-esteem, childcare stress, prenatal depression, low social support, poor marital relationship, infant colic, low SES, unplanned pregnancy
- possible causes: hormonal changes during pregnancy

Screening:
- Edinburgh Postnatal Depression Scale (EPDS): short 10 question scale
  - for pregnant as well as postpartum women
  - validated in Spanish

Presentation:
- sadness, fatigue, changes in sleeping and eating patterns, reduced libido, crying episodes, anxiety, irritability, hopelessness, low self-esteem, guilt, feeling overwhelmed, inability to be comforted, anhedonia, social withdrawal, feeling inadequate in caregiving for infant, anger spells, panic attacks

Investigation:
- DSM-IV criteria: depression onset within 4 weeks of childbirth

Treatment:
- support group or counseling
- psychotherapy
- meds
- healthy diet and sleep patterns

Prognosis: can last several months to a year if untreated

3.5 Somatoform Disorders

3.5.1 Background

Somatization: psychological distress expressed as physical symptoms
- a common way of responding to stress than can be seen in non-psychiatric settings
  - ex. tension headaches, butterflies, etc.
- can also be a result of physical or sexual abuse or other trauma (natural disaster, combat PTSD)
- most patients with somatic symptoms won’t have a true somatoform disorder
  - more likely to be a true disorder if many different organ systems are involved and course is fluctuating, if there is comorbid anxiety or depression, if symptoms can lead to psychological/emotional gain, symptoms are chronic, or there is idiosyncratic response to meds
- becomes a problem with it leads to overutilization of health care, with lots of imaging and tests done
  - iatrogenic complications
  - somatization ends up being reinforced by health care providers as they tend to overlook psychosocial aspects of disease and focus on more “real” disease with physical symptoms
- **Somatosensory amplification**: when hypervigilance to bodily sensations intensification of sensations
  - often seen in patients who have or have had serious illness
- **Treatment of somatoform disorders**:
  - investigate all symptoms
  - don’t try to reason away symptoms as they are not conscious processes
  - be empathic, validate symptoms, and don’t say “it’s all in your head”
  - focus on care, not cure
  - reassurance
  - schedule brief, regular visits that don’t coincide with symptoms
  - treat comorbid psychiatric conditions
  - minimize polypharmacy
- **Complications of somatoform disorders**:
  - somatic symptoms can be comorbid with organic pathological processes risk of misdiagnosis of only somatization disorder and harm or death
  - many accepted general medical conditions are currently functional disorders: IBS, fibromyalgia, migraines
  - confusion and disputes over insurance coverage

3.5.2 **Somatization Disorder**

- Physical symptoms due to psychological stress that cannot be explained by another general medical condition
- **Investigation**:
  - diagnostic criteria:
    - physical complaints must begin before the age of 30 and occur over several years
      - four pain symptoms
      - two non-pain GI symptoms
      - one sexual symptom
      - one pseudoneurologic symptom
    - all symptoms must have been appropriately medically investigated
    - symptoms are neither intentionally produced nor feigned

3.5.3 **Undifferentiated Somatoform Disorder**

- “Somatization disorder light”
- For patients not fitting exiting category criteria
- The most widely applicable diagnosis
- **Investigation**:
  - diagnostic criteria: 1+ physical complaints persisting for more than 6 months

3.5.4 **Conversion Disorder**

- The presence of symptoms or deficits that affect voluntary motor or sensory function in a way that suggests neurological condition but is medically unexplainable
- **Background**:
  - the most common somatoform disorder
  - related to dissociative disorders
  - more common in women
  - affects all ages
  - relapses
- **Presentation**:
  - preceded by psychological stress
  - significant distress that is not feigned

3.5.5 **Pain Disorder**
• the presence of pain in 1+ anatomic sites caused by psychological distress that is not intentionally produced for feigned
• Presentation:
  • may or may not be associated with a general medical condition
  • helplessness and hopelessness with respect to pain and its management
  • inactivity, passivity, or disability
  • increased pain requiring clinical intervention
  • greater perception of pain correlated to higher religiosity
  • insomnia and fatigue
  • disrupted social relationships at home, work, or school
  • depression or anxiety
  • comorbid depression, somatization, or conversion disorder
    o especially with delusions of parasitosis or delusional body dysmorphic disorder

3.5.6 Hypochondriasis
• preoccupation with fears of having a serious disease based on one’s misinterpretation of bodily symptoms
• Presentation:
  • persistent fear despite appropriate medical evaluation and reassurance
  • preoccupation causes significant distress or impairment
• Investigation:
  • DSM-IV criteria: must last at least 6 months

3.5.7 Body Dysmorphic Disorder
• preoccupation with imagined defect in appearance
• Background:
  • affects men and women equally
  • many seek plastic surgery
  • probably on the OCD spectrum
  • associated with high rates of hospitalization and suicide attempts
• Treatment:
  • high-dose SSRIs
  • atypical antidepressants, antipsychotics, benzodiazepines, tricyclics, mood stabilizers
  • psychotherapy: CBT, behavior modification

3.5.8 Somatoform Disorder Not Otherwise Specified

Factitious Disorder: the production of feigning of symptoms of a medical or mental disorder
• Background:
  • primary, emotional gain is sought
    o vs. malingering, which seeks secondary, external gain like disability benefits, avoiding military duty, getting narcotics, financial compensation, or avoiding work
      ▪ malingering is not considered to be a mental illness
  • prevalence is unknown and research is limited
• Presentation:
  • patients will often have a medical background
  • comorbid borderline personality disorder

3.6 Personality Disorders

3.6.1 Background
• Personality disorder: enduring pattern of psychological experience and behavior that differs prominently from cultural expectations
• difference in cognition, affect, interpersonal functioning, or impulse control
• inflexible and pervasive across a wide range of situations
• causes clinically significant distress or impairment in important areas of functioning
• begin in adolescence or early adulthood
• not better accounted for by another mental disorder, substance use, or a general medical condition
• occur in different clusters
• Patients have different responses to personality disorders
  • can be egosyntonic (believe that what they are experiencing is consistent with who they are and that the problem lies with their environment) or egodystonic (believe that their experience is not who they are and is a problem)
• These disorders are diagnosed in ~half of all patients seen in psychiatric settings
  • occur in the general population at a rate of 10-15%
• Treatment of personality disorders:
  • difficult!
  • psychotherapy is best bet: CBT is most common
  • meds are of limited utility
    o treat comorbid mood disorders
    o mood stabilizers and antipsychotics to target affective instability and impulsivity
    o antipsychotics for dissociation and psychotic features

3.6.2 Cluster A Personality Disorders: odd or eccentric

A.) Paranoid personality disorder: pervasive distrust and suspicion of others such that their motives are interpreted as malevolent
• presentation:
  • guarded, hypervigilant, anxious, irritable, hostile, suspicious of harm from clinicians, and preoccupied with justice and rules
  • comorbid depression, substance abuse, OCD, agoraphobia
• investigation:
  • differential: psychotic disorder
  • DSM-IV criteria: 4+ of the following
    o suspicion without sufficient basis that others are exploiting, harming, or deceiving them
    o preoccupation with unjustified doubts about loyalty of friends or associates
    o reluctance to confide in others because of unwarranted fear that information will be used maliciously
    o reads benign remarks or events as threatening or demeaning
    o persistently bears grudges
    o perceives attacks on his/her character that are not apparent to others and quick to react angrily or counterattack
    o has recurrent suspicions, without justification, regarding fidelity of spouse or sexual partner
• treatment: usually does not respond to psychotherapy

B.) Schizoid personality disorder: pattern of detachment from social relationships and restricted range of expression of emotions in interpersonal settings
• presentation:
  • eager for visits to end
  • offers little comment or elaboration
  • may delay care until conditions are advanced
• investigation:
  • differential: avoidant personality disorder, autism spectrum disorder
  • DSM-IV criteria: 4+ of the following
    o neither desires nor enjoys close relationships, including being part of a family
    o almost always chooses solitary activities
    o has little, if any, interest in having sexual experiences with another person
o takes pleasure in few, if any, activities
o lacks close friends or confidantes other than first-degree relatives
o appears indifferent to the praise or criticism of others
o shows emotional coldness, detachment, or flattened affect

C.) Schizotypal personality disorder: pattern of social and interpersonal deficits marked by acute discomfort with and reduced capacity for close relationships, as well as by cognitive of perceptual distortions and eccentricities of behavior

- closely related to schizophrenia
- presentation:
  - odd, peculiar behavior
  - difficulty with face-to-face communication
  - eccentric beliefs, paranoid tendencies, may appear guarded
  - uncomfortable with physical exam
  - comorbid depression
- investigation:
  - differential: psychotic disorder
  - DSM-IV criteria: 5+ of the following:
    - ideas of reference (interpretation of things in the environment as pertaining to you or having a special meaning for you)
    - odd beliefs or magical thinking that influences behavior and is inconsistent with subcultural norms
      - ex. superstitiousness, belief in clairvoyance, telepathy, or a 6th sense
    - unusual perceptual experiences, including bodily illusions
    - odd thinking and speech: vagueness, metaphors, overelaboration, stereotyping
    - suspiciousness or paranoid ideation
    - inappropriate or constricted affect
    - behavior or appearance that is odd, eccentric, or peculiar
    - lack of close friends or confidantes other than first-degree relatives
    - excessive social anxiety that does not diminish with familiarity and tends to be associated with paranoid fears rather than negative judgments about self

3.6.3 Cluster B Personality Disorders

- dramatic, emotional, and erratic

A.) Antisocial personality disorder:
- presentation:
  - h/o conduct disorder before age 15
  - pervasive pattern of disregard for and violation of the rights of others
  - current age of at least 18
  - appear superficially charming and cooperative
  - impulsive and manipulative
  - lacking guilt or remorse for behavior
  - usually deceitful
  - comorbid impulse control disorder, depression, substance abuse, pathologic gambling, malingering
- investigation:
  - differential: adult antisocial behavior
  - DSM-IV criteria: 3+ of the following
    - failure to conform to social norms with respect to lawful behaviors as indicated by repeatedly performing acts that are grounds for arrest
    - deceitfulness, as indicated by repeated lying, use of aliases, or conning others for personal profit or pleasure
    - impulsivity or failure to plan ahead
    - irritability and aggression, as indicated by repeated physical fights or assaults
    - reckless disregard for safety of self and others
o consistent irresponsibility, as indicated by repeated failure to sustain consistent work
behavior or honor financial obligations
o lack of remorse, as indicated by being indifferent or rationalizing having hurt, mistreated,
or stolen from another
  - treatment: usually does not respond to psychotherapy

B.) Borderline personality disorder: pattern of instability in interpersonal relationships, self-image, affect,
and marked impulsivity
  - presentation:
    - interpersonally intense with superficial sociability and periods of intense anger
    - idealization or devaluation
    - impulsive, self-destructive behavior
    - unstable choices in career, sexual orientation, or appearance
    - self-injurious behavior
    - suicidal ideation
    - comorbid substance abuse, mood disorder, eating disorder, PTSD
  - investigation:
    - differential: bipolar disorder (episodic mood lability vs fixed)
    - DSM-IV criteria: 5+ of the following
      - frantic efforts to avoid real or imagined abandonment
      - a pattern of unstable and intense interpersonal relationships characterized by
        alternating between extremes of idealization and devaluation
      - identity disturbance: markedly and persistently unstable self-image or sense of self
      - impulsivity in at least two areas that are potentially self-damaging: promiscuous sex,
        excessive spending, eating disorders, binge eating, substance abuse, reckless driving
      - recurrent suicidal behavior, gestures, threats or self-injuring behavior such as cutting or
        picking
      - affective instability due to a marked reactivity of mood
      - chronic feelings of emptiness
      - inappropriate anger or difficulty controlling anger
      - transient, stress-related paranoid ideation, delusions, or severe dissociative symptoms
  - treatment: dialectical behavioral therapy: structured group and individual sessions on
    mindfulness, distress tolerance, emotional regulation, and interpersonal effectiveness

C.) Histrionic personality disorder: pattern of excessive emotionality and attention seeking
  - presentation:
    - dramatic and attention-seeking
    - exaggerated displays of emotion to manipulate
    - seductive
    - comorbid depression or somatization disorder
  - investigation:
    - differential: borderline personality disorder
    - DSM-IV criteria: 5+ of the following
      - uncomfortable in situations in which they are not the center of attention
      - interaction with others is often characterized by inappropriately sexually seductive or
        provocative behavior
      - displays rapidly shifting and shallow expression of emotions
      - consistently uses physical appearance to draw attention to oneself
      - has a style of speech that is excessively impressionistic and lacking in detail
      - shows self-dramatization, theatricality, and exaggerated expressions of emotion
      - is suggestible/easily influenced by others or circumstances
      - considers relationships to be more intimate than they actually are

D.) Narcissistic personality disorder: pattern of grandiosity, need for admiration, and lack of empathy
  - presentation:
    - egocentrism, acts entitled, hypersensitivity to criticism
    - patient seeks “the best” clinician
• difficulty in accepting diagnoses that are incompatible with self-image
  o ex. depression, erectile dysfunction, low testosterone
• comorbid depression, substance abuse
• investigation:
  • DSM-IV criteria: 5+ of the following
    o grandiose sense of self-importance
    o preoccupation with fantasies of unlimited success, power, brilliance, beauty, or ideal love
    o belief that they are special and unique and can only be understood by, or should associate with, other special or high-status people
    o requires excessive admiration
    o sense of entitlement
    o interpersonally exploitative
    o lacks empathy
    o often envious of others or believes others are envious of him or her
    o shows arrogant, haughty behaviors or attitudes

3.6.4 Cluster C Personality Disorders: anxious or fearful

A.) Avoidant personality disorder: pervasive pattern of social inhibition, feelings of inadequacy, and hypersensitivity to negativity
• presentation:
  • extreme sensitivity and fear of rejection
  • appears shy and anxious
  • reluctant to disagree or ask questions
  • may delay medical care for fear of looking foolish
  • comorbid mood disorder, social phobia
• investigation:
  • differential: schizoid personality disorder, social phobia
  • DSM-IV criteria: 4+ of the following
    o avoids occupational activities that involve significant interpersonal contact due to fear of criticism, disapproval, or rejection
    o is unwilling to get involved with people unless certain of being liked
    o shows restraint within intimate relationships because of the fear of being shamed or ridiculed
    o is preoccupied with being criticized or rejected in social situations
    o is inhibited in new interpersonal situations because of feelings of inadequacy
    o views self as socially inept, personally unappealing, or inferior to others
    o is unusually reluctant to take personal risks or to engage in any new activities because they might prove embarrassing
• treatment: exposure-based psychotherapy

B.) Dependent personality disorder: pervasive and excessive need to be taken care of that leads to submissive and clinging behavior, and fears of separation
• presentation:
  • difficulty ending abusive relationships
  • excessive reliance on others and trying to get others to be responsible for healthcare
  • asks many questions to avoid ending the visit
  • brings family members or friends to the visit and inappropriately asks them to provide answers or decisions
  • comorbid anxiety or mood disorder
• investigation:
  • differential: histrionic personality disorder
  • DSM-IV criteria: 5+ of the following
o has difficulty making everyday decisions without an excessive amount of advice and reassurance from others
o needs others to assume responsibility for most major areas of their life
o has difficulty expressing disagreement with others because of fear of loss of support or approval
o has difficulty initiating projects or doing things on their own due to lack of self confidence
o goes to excessive lengths to obtain nurturance and support from others, to the point of volunteering to do things that are unpleasant
o feels uncomfortable or helpless when alone because of exaggerated fears of being unable to care for themselves
o urgently seeks another relationship as a source of care and support when a close relationship ends
o is unrealistically preoccupied with fears of being left to take care of themselves

C.) Obsessive compulsive personality disorder: pervasive pattern of preoccupation with orderliness, perfectionism, and mental and interpersonal control at the expense of flexibility, openness, and efficiency

- presentation:
  - perfectionism and preoccupation with the “right way”
  - facts are preferable to emotions
  - responds negatively to clinicians being late
  - keeps detailed notes to track illness
  - seeks opinions from multiple clinical sources
  - comorbid depression, anxiety, or OCD

- investigation:
  - differential: obsessive compulsive disorder
  - DSM-IV criteria: 4+ of the following
    o preoccupation with details, rules, lists, order, organization, or schedules to the extent that the major point of the activity is lost
    o perfectionism that interferes with task completion
    o excessive devotion to work and productivity to the exclusion of leisure activities and friendships
    o overconscientious, scrupulous, or inflexible about matters of morality, ethics, or values that is not accounted for the cultural or religious identification
    o inability to discard worn-out, worthless objects even when they have no sentimental value
    o reluctant to delegate tasks or work to others unless they submit to exactly their way of doing things
    o adopts a miserly spending style towards both self and others and views money as something to be hoarded for future catastrophes
    o rigidity and stubbornness

3.7 Psychotic Disorders

3.7.1 Psychosis

- a severe breakdown of mental functioning with impaired contact with reality
- Elements of psychosis:
  o disturbed thought processes:
    - tangentiality: mental condition in which one tends to digress from the topic under discussion, especially by word association
    - loosening of associations: a disorder of thinking in which associations of ideas become so shortened, fragmented, and disturbed as to lack logical relationship
    - poverty of thought: a global reduction in the quantity of thought and thought perseverance where a person keeps returning to the same limited set of ideas
- thought blocking: when a person's speech is suddenly interrupted by silences that may last a few seconds to a minute or longer
  - abnormal speech:
    - poverty of speech (alogia): a general lack of additional, unprompted content seen in normal speech
    - mutism: Unwillingness or refusal to speak, arising from psychological causes such as depression or trauma
    - neologisms: making up words
    - clang associations: a mode of speech characterized by association of words based upon sound rather than concepts
    - verbigeration: An obsessive repetition of meaningless words and phrases, especially as a symptom of mental illness
- perceptual disturbances
  - illusion: stimulus is real but is misinterpreted
  - hallucination: manufacturing a stimulus that is not really present
    - auditory: typical of schizophrenia
    - visual or tactile: suggests organic etiology
      - o tactile very common with alcohol and opiate withdrawal
  - olfactory: associated with temporal lobe pathology
  - gustatory:
    - paranoia: a thought process believed to be heavily influenced by anxiety or fear, often to the point of irrationality and delusion
    - general mistrust or suspicion
    - o beliefs are plausible but false
    - o elaborate delusional systems
  - delusions: fixed, bizarre unrealistic beliefs not subject to rational argument and not accounted for by accepted cultural or religious beliefs
    - patient may conceal these thoughts
    - ex. pseudocyesis (delusion of being pregnant), being followed, being watched, putting foil on windows to block out government spy waves
    - many types:
      - o paranoid delusions: general mistrust or suspiciousness
      - o grandiose delusions: individual is convinced he has special powers, talents, or
      - o religious delusions:
      - o nihilistic delusions: a false belief that one does not exist or has become deceased
      - o somatic delusions: A delusion whose content pertains to bodily functioning, bodily sensations, or physical appearance
- abnormalities of behavior
  - stereotypies (automatisms): persistent repetition of bizarre movements
  - catatonia: a state of immobility and stupor
    - may be in bizarre positions that are causing bodily harm
  - abnormalities of affect
    - blunted or flat
    - bizarre
    - incongruent with content: laughing at inappropriate times, etc.
- emotions
- integration of mental functions

Presentation of psychosis:
- acute psychosis: disorganized, delusional, bizarre
- covert psychosis: guarded, concealing paranoid delusions
  - o may take some time to figure this out with open-ended, non-directive questions
- psychosis + depression

Treatment of acute psychosis:
- give a benzodiazepine
  - lorazepam is most commonly used
• IM, IV, oral
• onset within 30 min
• better tolerated than haloperidol
• alternatives:
  o typical antipsychotics:
    • haloperidol can reduce agitation without excessive sedation or hypotension, and helps treat underlying psychiatric disorder
      • IM, IV, oral
      • lots of side effects: extrapyramidal symptoms, lower seizure threshold, QT prolongation, torsades de pointes
  o haloperidol + lorazepam:
    • demonstrated to have superior efficacy over monotherapy, with lower risk of extrapyramidal effects
  o atypical antipsychotics:
    • comparable effects to haloperidol or lorazepam alone
    • ziprasidone is an option for acute agitation in schizophrenia, less risk of CV effects
    • olanzapine: can’t administer in same syringe as lorazepam
    • aripiprazole

3.7.2 Schizophrenia
• a chronic, often severely disabling, lifelong primary psychotic illness
• Causes:
  • abnormal neuronal organization in the hippocampus
  • hypofrontality on PET scan
  • genetics?
  • pre or perinatal insult
  • birth in late winter or early spring
• Affects 1% of the population worldwide
• Equally affects men and women
• Typical onset in late teens to 20’s
• Reduces life expectancy by 20%
• multiple medical comorbidities: suicidal ideation, smoking
• Presentation:
  • downward drift from high-functioning, affluent background to lower SES
  • family dysfunction in response to illness
  • problems with work and school
  • on disability income or needs financial guardianship
  • tendency towards homelessness
• Schneider’s first-rank symptoms: psychotic symptoms thought to distinguish schizophrenia from other psychotic disorders, as developed by Kurt Schneider in the early 20th century
  o thought insertion: believing that another thinks through the mind of the patient, and the patient sometimes is unable to distinguish between their own thoughts and those inserted into their minds
  o thought withdrawal: the delusion that thoughts have been ‘taken out’ of the patient’s mind by an outside agency
  o thought broadcasting: the belief that personal thoughts are made available to others
  o ability to read others’ thoughts
  o ideas of reference: interpretation of things in the environment as pertaining to you or having a special meaning for you
• delusions
• hallucinations: commonly auditory and visual
  o commonly hear voices arguing or commenting on patient’s behavior
• Investigation:
• differential: must rule out these conditions, especially general medical conditions causing the psychosis
  o substance-induced psychosis: alcohol intox or withdrawal, cocaine or methamphetamine intox, benzo withdrawal, hallucinogens, phencyclidine, steroids (anabolic or cortico), anticholinergics
  o psychosis due to general medical conditions: encephalitis, CNS lupus, brain tumor, porphyria, complex partial status epilepticus, delirium, neuro issue
  o primary psychiatric disorders:
    ▪ mood disorders with psychotic features: waxing/waning psychosis vs schizophrenia which is consistent psychosis
    ▪ schizoaffective disorder
    ▪ PTSD: flashbacks, hallucinations, hypervigilance resembling paranoia but not involving organized delusions
    ▪ transient psychosis of borderline personality disorder
    ▪ delirium or dementia: disorientation and memory impairment, tactile and visual hallucinations, can have other psychotic features
      • Alzheimers: paranoid delusions, misidentification delusions, hallucinations
      • psychosis is very prominent in the Lewy body variety of dementia!
    ▪ brief psychotic disorder = interim term until we figure out what it really is/was
      • lasts 1 day to < 1 month
      • often in response to severe stressor
      • more common in people with personality disorder and limited coping abilities
      • followed by full return to premorbid thinking
    ▪ delusional disorder: non-bizarre delusions, may have hallucinations
      • must never have met criteria for schizophrenia
    ▪ schizophreniform disorder: schizophrenic features but < 6 months duration
      • probably has schizophrenia but not quite ready to dx yet
      • most will go on to fulfill criteria for schizophrenia
    ▪ schizoaffective disorder: at the border between mood disorder and schizophrenia
      • psychotic symptoms occur during major mood episodes and persist during extended periods outside of the mood episodes
• get extra history from the family!
• DSM-IV criteria:
  o 2+ during a 1 month period: delusions, hallucinations, disorganized speech, grossly disorganized or catatonic behavior, negative symptoms
    ▪ hallucinations consist of a voice keeping up a running commentary on the person’s behavior or thoughts, or two or more voices conversing with each other
  o social or occupational dysfunction
  o duration of at least 6 months
  o not due to schizoaffective, mood, or substance abuse disorder or general medical condition
• Prognosis:
  • full recovery in 25%
  • significant improvement with treatment but persisting symptoms and functional impairment in 50%
  • chronic, severe impairment in 25%
  • increased risk of violent behavior, but this is usually due to concomitant substance abuse disorders
    ▪ high risk with acute episodes

3.7.3 Treatment of Schizophrenia
• Goals of treatment:
initial response: positive subjective reaction from patient immediately following therapy predicts potential benefit of meds
7 day goals: decrease agitation, hostility, aggression, and anxiety, normalize sleeping and eating patterns, titrate meds to effective dose
2-3 week goals: increase socialization, self-care habits, and mood, reach and maintain target med dose
  o hospitalization if suicidal, homicidal, severely agitated or disorganized, or acutely psychotic
Education of patient and family about illness and treatment
Supportive psychotherapy: acceptance of illness, setting realistic goals, medication compliance
Coping and life skills training to manage stress and enhance function in society
Abstinence from drugs and alcohol
Reduce exposure to expressed emotion
Financial planning and guardianship of funds
Pharmacological treatment:
  dosing:
    o optimal dose of 1st gen antipsychotics is usually at the extrapyramidal symptom threshold
    o optimal dose of 2nd gen antipsychotics is given by manufacturer
    o no initial dose is too low
    o high doses are less effective
    o slow taper over 3-9 months before d/c
  choosing a treatment:
    o acute exacerbation:
      ▪ give IV or IM 2nd gen antipsychotic
      ▪ consider d/c antidepressants as they can sustain or exacerbate psychotic symptoms
      ▪ adjunctive therapy:
        o mood stabilizers and beta-blockers helpful in reducing hostility and aggression
        o benzodiazepines helpful for managing anxiety and agitation
    o first episode of schizophrenia: treat for 12 months
      ▪ trial of single 2nd gen antipsychotic: aripiprazole, olanzapine, quetiapine, risperidone, ziprasidone
        o needs to be 4-6 weeks
      ▪ if only partial or nonresponse try a different 2nd gen antipsychotic or a 1st gen antipsychotic
      ▪ if still not adequate response consider clozapine
      ▪ if still not adequate response add a 1st gen, 2nd gen, or electroconvulsive therapy on top of clozapine
      ▪ if still not adequate response try a 1st or 2nd gen antipsychotic not already tried
      ▪ if still not adequate response combination therapy
    o multiple episodes despite adherence: same algorithm, treat for 5 years
    o multiple episodes due to nonadherence: consider long-acting injectable antipsychotics
  drug options:
    o typical antipsychotics (1st gen antipsychotics): nonselective antagonists of dopamine receptors in all 4 dopamine tracts increased risk of extrapyramidal side effects with high potency typical antipsychotics
      ▪ haloperidol:
      ▪ fluphenazine:
      ▪ perphenazine:
      ▪ thioridazine:
      ▪ chlorpromazine:
      ▪ benefits:
• “positive” symptoms respond well: hallucinations, delusions, disorganized speech and behavior, agitation
• side effects: extrapyramidal symptoms, anhedonia, sedation, moderate weight gain, temperature dysregulation, hyperprolactinemia & ↓ sexual function, postural hypotension, sunburn, prolonged QT interval, arrhythmia, may worsen negative symptoms
  o atypical antipsychotics (2nd gen antipsychotics): block postsynaptic dopamine-R, block serotonin-R, variable effect on histaminic and cholinergic receptors
    ▪ aripiprazole:
    ▪ asenapine: no different than other atypicals, costs a lot of $$ but available as a sublingual tablet
    ▪ olanzapine:
      ▪ moderate to severe weight gain
      ▪ available as an injectable, but causes post-injection delirium so it must be given at a healthcare facility and monitored for 3 hours afterwards
    ▪ quetiapine:
    ▪ risperidone:
      ▪ least amount of side effects
      ▪ side effects: increased risk of ↑ prolactin
    ▪ ziprasidone:
    ▪ clozapine: the only atypical antipsychotic shown to be effective for the treatment of schizophrenia, but use is limited to treatment resistant cases due to side effects
      ▪ resistance = failure of trial of at least 3 different antipsychotics from 2 different classes, h/o poor social functioning for past 5 years
      ▪ side effects: moderate to severe weight gain, seizures, nocturnal salivation, agranulocytosis, myocarditis, lens opacities
    ▪ iloperidone: new drug that costs a lot of $$ shown to have no benefit over other atypicals
    ▪ lurasidone: best choice for reducing adverse metabolic effects
    ▪ paliperidone: new drug shown to be no different from risperidone, but is available as an injectable
    ▪ benefits:
      ▪ “negative” symptoms respond well: avolition (lack of drive to pursue meaningful goals), withdrawal/autism, anhedonia, blunted affect, poverty of speech
      ▪ less risk of extrapyramidal symptoms and hyperprolactinemia
      ▪ side effects: weight gain, DM, ↑ cholesterol, sedation, movement disorder,
      ▪ hypotension = need to monitor weight, BP, fasting glucose, fasting lipids

3.8 Sleep Disorders

3.8.1 Insomnia

• Background:
  ▪ insomnia is different from sleep deprivation, where ability to sleep is adequate and only opportunity is lacking
  ▪ prevalence: 10-20% of general population, and half of all patients under clinical care
  ▪ linked to other comorbidities: psychiatric disorders, other illnesses, meds, other sleep disorders
    ▪ temporal association: insomnia worsens as comorbidity worsens
    ▪ insomnia is an independent risk factor for suicide in depressed patients
    ▪ insomnia is the most frequent residual symptom in antidepressant treatment responders
    □ increased risk of relapse
- insomnia increases pain severity

Presentation:
- 1+ of the following: difficulty initiating sleep, maintaining sleep, waking up too early, or sleep that is chronically nonrestorative or poor in quality
  - occurs despite adequate opportunity and circumstances for sleep
- 1+ of the following daytime impairments: fatigue, malaise, attention/concentration/memory impairment, social or vocational dysfunction, poor school performance, mood disturbance/irritability, daytime sleepiness, motivation/energy/initiative reduction, prone to errors at work or while driving, tension headaches, GI symptoms in response to sleep loss, concerns or worries about sleep
- frequently there are other psychiatric comorbidities: anxiety disorder, major depressive disorder, substance abuse

Investigation:
- can’t do polysomnogram: only 30-sec chunks of data are recorded, and only some patients meeting insomnia criteria have signification test abnormalities
- only indicated in insomnia with concomitant sleep apnea or periodic limb movements of sleep, or where diagnosis is uncertain or usual treatment fails
- diagnosis based on self-report

Treatment:
- must treat both comorbidities and insomnia individually
  - just treating the underlying disease won’t necessarily treat the insomnia (and failing to treat the insomnia can cause a relapse of other comorbidities)
- sleep hygiene: limit caffeine, nicotine, exercise, light, noise
- stimulus control:
  - only get in bed when sleepy, don’t read, watch TV, or eat
  - if unable to sleep, move to another room until sleepy
  - awaken at the same time every morning regardless of total sleep time
  - do not nap
- sleep restriction: cutting bedtime to actual amount patient reports sleeping, but not < 4 hours per night
  - sleep is prohibited outside of these hours (except elderly get a 30 min nap)
  - lengthen sleep period by 15 minutes as time passes
- cognitive behavioral therapy: very effective
  - identification of dysfunctional attitudes and beliefs about sleep and replacement with more appropriate self-statements
  - relaxation techniques: removal of worrisome thoughts, writing down thoughts, ordering priorities for attention
- pharmaceutical therapy:
  - need to assess risks/benefits
  - periodic d/c trials: every 3 months
  - sleep promoting NTs: GABA, adenosine, galanin, melatonin
    - block with caffeine
    - enhanced GABA inhibition of arousal systems by benzodiazepines
      - ex. triazolam, flurazepam, temazepam, clonazepam, alprazolam, diazepam, lorazepam
    - non-benzos have essentially the same mechanism as benzos
      - ex. zolpidem, zaleplon, eszopiclone
    - side effects: cognitive impairment, psychomotor impairment, abuse potential, daytime sedation
    - melatonin receptor agonists: shift circadian rhythm but have little effect on sleep onset or maintenance
      - ex. ramelteon
    - wake promoting NTs: norep, histamine, serotonin
    - enhanced by amphetamines
    - blocked by antidepressants
• side effects: anticholinergic, orthostatic hypotension, weight gain, sexual
  • blocked by antipsychotics
• side effects: daytime sedation, weight gain, extrapyramidal and anticholinergic effects
  • blocked by antihistamines
• side effects: daytime sedation, anticholinergic

3.8.2 Restless Leg Syndrome
• delayed sleep onset due to intense restlessness and unpleasant sensations felt deep within the lower parts of the legs
• Background:
  • types:
    o primary RLS: idiopathic; associated with younger age of onset and FH
    o secondary RLS: associated with iron deficiency (limits dopamine synthesis), pregnancy, and ESRD
    o more common in women
  • risk increases with age
  • can be exacerbated by: SSRIs, TCAs, Li, mirtazapine, antihistamines, dopamine agonists, Ca channel blockers, caffeine, alcohol
• Presentation:
  • legs feel like electric shocks, creepy-crawly, or jittery
• Investigation:
  • polysomnography
    o periodic limb movements of sleep: frequent, involuntary, rhythmic muscular jerks during sleep
      • often involves dorsiflexion of the toes and flexion of the ankles, knees, and thighs
      • greater than 10 events per hour with arousal are associated with RLS
      • other associated conditions: insomnia, hypersomnia, narcolepsy, REM sleep behavior disorder, obstructive sleep apnea, alcohol dependency, essential HTN, ESRD, Fe deficiency
• Treatment:
  • dopamine agonists: pergolide, pramipexole, ropinirole
  • levodopa/carbidopa
  • opiates
  • carbamazepine
  • clonazepam
  • gabapentin
  • clonidine

3.8.3 Sleep Apnea
• the arrest of breathing for 10+ seconds during sleep
• Background:
  • clinical cutoff varies from 5-15 apneic events per hour of sleep
  • on a continuum with snoring
  • cause could be central (CNS) or obstruction (mechanical blockage of upper airway)
  • secondary causes: nocturnal emesis, HTN, polycythemia, impotence, depression, cardiac arrhythmias, cor pulmonale
  • more common in men
• Presentation:
• hypersomnolence or fatigue
• usually obese
• loud snoring
• morning headache
• morning dry mouth
• Investigation:
  • polysomnogram
• Treatment: weight loss, position training, treatment of COPD and allergies, surgical correction of anatomic defects, CPAP, dental appliances
  • modafinil is approved for residual daytime sleepiness even after using CPAP at night

3.8.4 Narcolepsy
• sleep disorder characterized by excessive sleepiness and sleep attacks at inappropriate times
• Background:
  • onset in teens
  • possible causes: genetic, autoimmune
• Presentation:
  • excessive daytime sleepiness that is restored by brief naps
  • cataplexy (sudden muscular weakness brought on by strong emotion)
  • sleep paralysis
  • hypnagogic/hypnopompic hallucinations (while transitioning to sleep)
• Investigation: sleep study followed by multiple sleep latency test
• Treatment:
  • timed naps
  • stimulants for daytime sleepiness
  • REM suppressant meds: clomipramine, SSRIs

3.8.5 Circadian Rhythm Disorders
• Includes delayed sleep phase syndrome, advanced sleep phase syndrome, irregular sleep phase, non-24 hour circadian rhythm, shift-work sleep disorder, and jet lag
• Treatments: light therapy, melatonin, behavioral modification