Psychology 188
Impulse Control Disorders

Dr. George F. Koob

Winter 2010
Tuesdays and Thursdays 11:00 a.m. – 12:20 p.m.
Price Center Auditorium
**Syllabus**  
Psychology 188  
Winter 2010

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<td>Addiction Model of Self-Regulation Failure</td>
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<td>Brain Mechanisms of Self-Regulation Failure and Stress</td>
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**Required Reading:** There is a course reader available for download on the course website. Also, you will be required to read the first two chapters from the book “Losing Control”, which is available on the course website and the book is on reserve at the Geisel Library. Additional reading materials may be given in class and will be available on the course website.

**Grading Procedure:** Exams consist of multiple-choice questions. The final will be cumulative with emphasis on the last half of the course. Grading is straight letter grades: A, B, C, D, and F. No pluses or minuses will be given.

Midterm = 40% of final grade, Final Exam = 60% of final grade.

**Office Hours:**

George F. Koob – Tuesday 12:30 -1:30 p.m. Mandler Hall 3515-A – gkoob@ucsd.edu  
Cara Buck – Thursday 12:30 – 1:30 p.m. Mandler B590 (in the basement) – cbuck@ucsd.edu  
Mary D. Mullane – Friday 11:00 a.m. – 12:00 p.m. McGill 3326 md.mullane.ucsd@gmail.com  
Sarah Dufek – Tuesday 9:30 – 10:30 a.m. 3324 McGill Hall sdufek@ucsd.edu
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</table>
I. What is Self Regulation? Any effort by a human being to alter its own responses
   A. Homeostasis
      1. Dynamic state of frequent adjustments
      2. Opponent processes
   B. Self-control
      1. Humans regulate actions and inner states using more than steady state outcome
         a. Ideals
         b. Long-range goals
         c. Other’s expectations
         d. Standards
   C. Self-regulation can be any number of responses
      1. Actions
      2. Thoughts
      3. Feelings
      4. Desires
      5. Performances

II. Importance of Self Regulation
   A. Failure linked to many social problems of contemporary society
      1. Failure to control money
      2. Failure to control weight
      3. Failure to control emotions
      4. Failure to control drinking and drugs
      5. Failure to control sexual impulses
   B. Raising self esteem is not the answer
   C. Value of self-regulation
      1. Lessen social ills such as divorce rate: One important predictor of marital break-up
         was husband’s impulse control, e.g. husband deficient at self-regulation
      2. Aid healthy development:
         a. Children who showed a high capacity to resist immediate temptation and choose
            delayed gratifications while still preschoolers, later became more successful and
            well-adjusted adolescents
         b. 10 years later the adolescents who had been the most self-controlled students were
            superior in school performance, social competence, and coping abilities (Mischel,
      3. A most important generalization about crime is that it arises from lack of self-control.
   D. Two types of control
      1. Primary control: direct effort to change the environment in order to suit the self
      2. Secondary control: changing the self to fit in to the environment, e.g., self-regulation

III. Essential nature of self-regulation
   A. Overriding: the concept of overriding encompasses starting, stopping or changing a
      process even substituting one outcome or response for another
      1. There are multiple processes or levels of action- one process interrupts or overrides
         another.
      2. However, the most basic form of overriding is self-stopping
IV. Basic ingredients of self-regulation
   A. Hierarchy of multiple processes
   B. Feedback loops: **TOTE** loops (Test-Operate-Test-Exit)
      1. Standards (thermostat set to a particular target temperature)
      2. Monitoring (paying attention to what one is doing, gaining knowledge of responses)
      3. Means of operating on oneself (Strength)
         a. Strength-responses in the hierarchy carry enough strength to override lower tendencies
         b. Resembles “will-power” (to resist temptation)
         c. Factors that deplete or decrease self-regulatory strength may increase the likelihood of self-regulation failure.
Psychology 188
Mechanisms of Self-Regulation Failure

I. Two categories of self-regulation failure
   A. Underregulation: failure to exert control over oneself
   B. Misregulation: exerting control in a way that fails to bring about the desired result

II. Basic Ingredients of self-regulation failure: Not engaging in active efforts of self-regulation
   A. Lack of or Conflicting Standards
      1. Complete lack of standards
      2. Multiple standards that are in conflict or otherwise incompatible
         a. Conflicting goals lead to one becoming unable to manage oneself
         b. Leads to paralysis, confusion, and dysfunctional behavioral patterns
      3. False consensus effect
         a. Overestimation of number of people involved in a behavior
         b. Examples: cigarette smokers and gamblers
   B. Reduction of monitoring- Monitoring is evaluating self and action against relevant standards
      1. De-individualization- Losing self-awareness & evaluation apprehension
         a. Loss of self-awareness; loss of monitoring of self
         b. People cease to attend to what they are doing and cease to evaluate their actions against their own personal standards
         c. Behavior may reflect impulses and feeling that would normally be in check
         d. “Lynch mob” mentality
      2. Disinhibition
         a. Direct drug effects
         b. Alcohol reduces cognitive processing in relation to the self
      3. Renegade Attention
         a. Stimuli capturing attention and generating psychological reactions, such as impulses and desires
         b. Attending to the relevant stimulus and managing attention are the most common and most effective techniques or self-regulation
         c. Best strategy may be to avoid temptation rather than resist it
   C. Inadequate Strength- Strength is the power of the self-regulatory mechanism to interrupt that response (impulse) and prevent action
      1. The inability to make oneself conform to the relevant standard
      2. Self-stopping- involvement of both mental and physical resources to override and impulse, habit, or tendency
      3. Three main reasons for inadequate strength
         a. Chronic weakness
            i. Person is weak or lacks will power
            ii. Person lacks ego control- unable to control impulses, wishes, desires
            iii. Person is very susceptible to peer pressure
         b. Temporary weakness
            i. Depletion of strength
            ii. Strength is a managed resource
            iii. Negative affective state
         c. Externally-mediated weakness
            i. Impulse is extremely strong
            ii. Unlimited access (shopping, internet, “all you can eat” buffet)
D. Psychological Inertia- The longer someone is doing something, the more difficult it may be to get them to stop
   1. Zeigarnik effect
      a. Difficult to interrupt a response sequence in the middle
      b. Self-regulation is most effective when it overrides a response as early as possible
      c. Examples include binge eating, illicit sex
   2. Implication is that self-regulation can be achieved most effectively if instigated as early as possible

III. Misregulation- Engaging in active efforts of self-regulation but to do so in a way that is nonoptimal and counterproductive; essence of misregulation is that the subject tries to engage in self-regulation and knows what effect is wanted, but the regulatory methods produce the wrong effect. (A misguided attempt to address a critical problem). Misregulation is often “set up” by underregulation

A. Overgeneralization: Assumption that what works for one problem will work for another
   1. Starts with deficiency in knowledge, especially in self-knowledge (which is underregulation)
   2. People feel better indulging in drugs, but some drugs can narrow attention, so the subject ends up focusing on the problem and feeling worse. (When depressed individuals drink heavily to feel better, they end more depressed)

B. Painful self-awareness
   1. Distortions in self awareness (or self-knowledge)
   2. People set exceptionally high standards
   3. People fail to meet those standards (misguided attempt to address a critical problem)
   4. Leads to feelings of failure, low self-esteem, anxiety and depression. All of these effects are extremely painful (painful self-awareness)

C. Transcendence Failure
   1. Inability to see beyond the immediate stimulus environment
      a. Involves cognitive shifts that reject meaningful patterns of thought in favor of attending to immediate concrete stimuli
      b. Transcendence facilitates self-regulation
   2. To escape from emotional distress, people may shift toward more immediate and less meaningful styles of thinking
   3. Negative self-appraisals lead to “cognitive narrowing”. Cognitive narrowing creates disinhibition and prevents consideration of longer term consequences of an action, i.e. transcendence failure

D. Misguided focusing: focusing on the wrong aspect of behavior
   1. Trying to control things that are not inherently controllable; subjects focus on things that they can not control (e.g., subject trying to be thin like a fashion model)
   2. Focusing particularly on controlling one’s emotions rather than on controlling whatever is the primary concern
      a. Subject takes drugs to feel better in the short-term instead of focusing on the fact that taking the drug in excess is bad for them and can even exaggerate the negative emotional state during withdrawal (negative emotional states are associated with most lapses in tobacco addiction, for example)
b. Subjects may withdraw from a task to protect their feelings from the danger of failure (and thus avoid emotional distress), but they might be better off in the long run to focus on self-regulatory efforts on making themselves persist in order to perform better (prepare for exams properly, for example)

IV. Time course and development of self-regulation failure- Lapse-activated causal patterns: an initial lapse is quickly followed by a large-scale indulgence, or the process by which first lapse in self-regulation can “snowball” into a major binge and spiraling distress; “rolling the snowball” is equivalent to a lapse-activated causal pattern.

A. Zero tolerance beliefs
   1. “Just Say No” strategy has value if it works
   2. Violation of “Just Say No” strategy may increase the likelihood of a major binge because can apply an immense amount of guilt to a minor lapse and thus may lead to further self-regulation failure

B. Abstinence Violation Effects
   1. Zero tolerance beliefs change the meaning and significance of a violation of abstinence
   2. Initial lapse causes emotional distress
      a. Violation of standards leads to negative affect
      b. Negative affect leads to loss of self-awareness and reduction of monitoring
      c. Negative affect leads to inadequate strength
      d. Self-regulation failures result in further violation of standards (as well as the development of faulty beliefs)
      e. The negative affect following repeated binges is hypothesized to become greater (opponent process theory) and thus sets up a greater probability of self-regulation failure
      f. Negative affect can lead to misregulation where the subject attempts to “misregulate” the negative mood state with the very indulgence that caused the negative mood state
   3. Initial lapse lead to pleasure, joy, or relaxation
      a. Violation of standards leads to immediate sensory pleasure
      b. These sensations lead to a reduction in monitoring
      c. Some violations directly reduce monitoring & strength (e.g., alcohol)
   4. Spiraling distress- A combination of underregulation and misregulation can lead to a vicious cycle where each violations of one’s standards brings negative affect, which makes it unpleasant to be self-aware, so the person avoids monitoring his or her own behavior, which makes further violations possible, and then the person places undue emphasis on regulating their emotions (misregulation). The short-term efforts to overcome distress cause the person to neglect other self-regulatory efforts and this neglect in turn leads to more distress as self-control breaks down more and more.

C. Acquiescence- consciously abandoning self-regulation
   1. Often the person has to perform a series of behaviors in order to violate one’s standards
      a. Subject will say that “the impulse takes on overwhelming power”
      b. Sensory indulgence
   2. Subject bears some responsibility for the results of his or her actions
I. Introduction
   A. Classes of drugs that are abused
      1. Alcohol and sedative hypnotics
      2. Amphetamine-like drugs
      3. Opiates (Opiods)
      4. Nicotine
      5. Phencyclidine (Angel Dust)
      6. Inhalants
      7. Steroids
   B. History of definitions - World Health Organization
      1. Physical dependence
      2. Psychic dependence
   C. Concept of addiction - chronic compulsive, uncontrollable drug use - defining concept is LOSS OF CONTROL
   D. Diagnostic Criteria - American Psychiatric Association Diagnostic and Statistical Manual of Mental Disorders IV
      1. Drug Abuse (Substance Abuse) - the essential feature of Substance Abuse is a maladaptive pattern of substance use manifested by recurrent and significant adverse consequences related to repeated use of substances
      2. Drug Dependence (Substance Dependence) - the essential feature of Substance Dependence is a cluster of cognitive, behavioral, and physiological symptoms indicating that the individual continues use of the substance despite significant substance-related problems. There is a pattern of repeated self-administration that usually results in tolerance, withdrawal, and compulsive drug-taking behavior
   E. World Health Organization - International Classification of Diseases
      1. Harmful Use - A pattern of psychoactive substance use that is causing damage to health
      2. Dependence Syndrome - Essential characteristic of the dependence syndrome is that either psychoactive substance taking or a desire to take a particular substance should be present. The subjective awareness of compulsion to use drugs is most commonly seen during attempts to stop substance use
   F. Addiction frequency in US population – 22.2 million Americans, more than 10% of the population, experienced abuse or dependence on alcohol or an illicit drug within the prior 12 months (SAMHSA, 2006, tables G.29, G.30)
      1. Alcohol: Approximately 18 million
      2. Heroin: approximately 0.5 million
      3. Cocaine: approximately 1.5 million
      4. Nicotine: approximately 37 million

II. Drugs as Reinforcers
   A. Sources of reinforcement: Reinforcement - Process by which an event increases the probability of a given response
      1. Positive reinforcement: PRESENTATION of an event increases the probability of a response
      2. Negative reinforcement: TERMINATION or OMISSION of an event increases the probability of a response
   B. Why Are Drugs Used?
      1. To produce positive feelings or to reduce anxiety
2. To mask causes of psychological distress such as fears, impulses, and wishes to escape from responsibility
3. To allow the acting out of a role or behavior pattern that might not otherwise be part of the user’s lifestyle and which the user might find personally and socially unacceptable
4. To gain attention, acceptance, or affection from people the user values (as symbols of fellowship)
5. To help with expression of emotions and feelings
6. As a guide in searching for meaning and independence
7. As a way of showing rebellion and defiance against authority or society
8. To help find a deeper meaning in life; to expand consciousness & creativity
9. To experience the risk and excitement in procuring drugs as well as using
10. To alleviate curiosity and boredom

C. Determinants of drug reinforcement efficacy
1. Hedonic properties of drugs
   a. Produce a “pleasant” state
   b. Alleviate an “unpleasant” state
2. Route of administration
   a. Oral
   b. Intravenous
   c. Inhaled
3. Dose
4. Schedule of reinforcement
5. History of the organism
   a. Sensitization
   b. Dependence

III. Conditioned Reinforcing Properties of Drugs
A. Conditioned stimuli can be associated with positive reinforcing properties of drugs
   1. Resistance to Extinction
   2. Blockage of Withdrawal
   3. Relapse
B. Conditioned stimuli can be associated with negative reinforcing properties of drug withdrawal
   1. Conditioned Withdrawal
   2. Motivational State
   3. Relapse

IV. Addiction Cycle- DSMIV Criteria
A. Preoccupation/ Anticipation
   1. A great deal of time is spent in activities necessary to obtain the substance
   2. Continued use despite persistent physical and/or psychological problems
B. Binge/ Intoxication
   1. Substance taken in larger amounts than was intended
   2. Social, occupational, or recreational activities compromised
C. Withdrawal/ Negative Affect
   1. Tolerance
   2. Withdrawal

V. Addiction as self-regulation failure
A. Preoccupation/ Anticipation
   1. Monitoring failure
   2. Attentional failure
3. Distortion of self-knowledge
4. False beliefs

B. Binge/ Intoxication
   1. Strength failure
   2. Psychological inertia

C. Withdrawal/ Negative Affect
   1. Strength failure-Stress
   2. Misregulation of emotions
<table>
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<th>DSM-IV</th>
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<tr>
<td>1. Tolerance</td>
<td>iv. Tolerance</td>
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<tr>
<td>2. Withdrawal</td>
<td>iii. Withdrawal</td>
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<td>3. The substance is often taken in large amounts or over a longer period than was intended</td>
<td>ii. Difficulties in controlling substance-taking behavior in terms of its onset, termination, or levels of use</td>
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<td>4. Any unsuccessful effort or a persistent desire to cut down or control substance use</td>
<td>No corresponding category</td>
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<td>5. A great deal of time is spent in activities necessary to obtain the substance or recover from its effects</td>
<td>v. Progressive neglect of alternative pleasures or interests; increased amounts of time necessary to obtain or take the substance or recover from its effects.</td>
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<td>6. Important social, occupational, or recreational activities given up or reduced because of substance use</td>
<td>vi. Persisting with substance use despite clear evidence of overly harmful consequences</td>
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<td>7. Continued substance use despite knowledge of having had a persistent or recurrent physical or psychological problem that is likely to be caused or exacerbated by the substance</td>
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<td>No corresponding category</td>
<td>i. A strong desire or sense of compulsion to take the substance</td>
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<td>Three or more symptoms occurring during the last year</td>
<td>Same</td>
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Self-regulation failure can lead to spiralling distress

Model of spiralling distress with respect to addiction criteria
I. Introduction
   A. Alcohol as a drug
      1. Sources
      2. Blood alcohol levels: gram % versus milligram %
      3. Relationship of blood alcohol level to amount ingested
   B. Behavioral effects of alcohol
      1. Euphoria 0.05 gm%
      2. Disinhibition 0.05-0.08 gm%
      3. Ataxia 0.08-0.2 gm%
      4. Impairment in judgment 0.08-0.2 gm%
      5. Memory impairment 0.2 gm%
      6. Coma 0.3 gm%
      7. Death 0.4 gm%
   C. Alcohol Abuse and Alcoholism
      1. Epidemiology
         b. Of those who drank in the last year, 8% (18.6 million) met criteria for DSM-IV Substance Abuse or Dependence on Alcohol.
      2. Tolerance and withdrawal
      3. Chronic relapsing disorder
      4. Treatment
   D. Toxic effects of alcohol
      1. Behavioral toxicity
         a. Driving under the influence
         b. Impairment in social functioning
         c. Impairment in occupational functioning
      2. Physical toxicity
         a. Cirrhosis of the liver
         b. Pancreatitis
         c. Wernicke’s/ Korsakoff’s syndrome
         d. Fetal alcohol syndrome

II. Alcohol Abuse and Alcoholism- Although alcohol is an important aspect of normal social interactions, it is the root of many of our societal problems (violence, illness/injury, disenfranchisement, homelessness, unprotected sex). Alcohol dependence (Alcoholism) is typically defined based on both physiological effects (i.e., tolerance and dependence) as well as LOSS OF CONTROL. Failure to self-regulate can occur in both the initiation of drinking and in the maintenance of drinking
   A. Initiation of drinking
      1. Underregulation
         a. Standards
            i. False Consensus Effect- assuming everyone else is drinking
            ii. Conflicting standards- the standards of wanting to drink and wanting to abstain change in salience over time with respect to environmental and internal cues
            iii. Strength
               1. Chronic weakness- Lack of will power, susceptible to peer pressure
2. Temporary weakness - Exhaustion and negative affective state (stress)
3. Externally-mediated weakness - Impulse is strong, access is unlimited
   1. Misregulation
      b. Faulty beliefs that lead to misguided efforts to self-regulate
         i. Expectancy that alcohol only has positive effects
         ii. Assumption that drinking is an effective means to regulate affective states
         iii. Believing alcohol will combat stress
      c. Distortions in self-knowledge that lead to misguided efforts to self-regulate
         i. Misplaced self-confidence that one can “handle” a large amount of alcohol
B. Drinking a great deal (Rolling the Snowball) - This is the stage where true self-regulation failure occurs. The factors that prompt people to initiate drinking also can lead to further drinking. However, additional factors contribute to habitual drinking.
   1. Underregulation
      a. Zero-tolerance beliefs (for example, “just say no”) - Not allowed to have a lapse
         i. Issue of standards
         ii. Assumes self-control has already failed following an initial indulgence
         iii. May undermine self-regulation and increase the likelihood of further indulgences because the cause is already lost
         iv. Moderation more healthy??
      b. Abstinence Violation Effects: “Can’t deal with a lapse”
         i. Creates a strength problem
         ii. Many treatment programs (for example, AA) emphasize abstinence
         iii. When minor transgressions are viewed as catastrophic and attributed to personal weaknesses, they can lead to snowballing
      c. Reduction of Monitoring
         i. Alcohol reduces self-awareness
         ii. Alcohol appears to decrease memory consolidation (negative consequences are often not remembered)
         iii. Alcohol myopia - Narrowed focus to cues that encourage alcohol consumption
         iv. Attention-grabbing, pro-drinking cues prevalent in bars, sporting events, etc.
      d. Psychological inertia
         i. Drinking becomes progressively harder to stop especially in heavy drinkers

3. Misregulation
   a. Overgeneralization based on faulty beliefs
      i. The reasons for drinking will multiply. Initially may be because of social norms and peer pressure but will generalize to regular drinking to relax and unwind and then is associated with any emotional distress
      ii. Any form of negative distress, or any unpleasant internal sensation become labeled as the effect of absence from alcohol and the person may drinking in response to any negative feelings
   b. Misguided mood regulation
      i. Drinking for mood control can backfire as opponent processes are recruited
      ii. Vicious cycle where bad moods prompt alcohol consumption, which is followed by a worsening of mood, which leads to further drinking

D. Spiraling Distress
   1. A combination of underregulation and misregulation can lead to a vicious cycle consisting of:
      a. Preoccupation/ Anticipation
b. Binge/ Intoxication  
c. Withdrawal/ Negative Affect

### Alcohol Ingested and Blood Alcohol Levels (BAL)

#### Table 3. Blood alcohol level (gm%) estimations for men and women.

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<tr>
<th>Drinks</th>
<th>100</th>
<th>120</th>
<th>140</th>
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### Subtext:
- Subtext 0.015% gm% for each 40 min of drinking.
- 1 drink = 1.25 ounce 80 Proof liquor, 12 ounce beer, or 5 ounce wine.

[1.](http://www.alcohol.vt.edu/Students/alcoholEffects/estimatingBAC/)
Nicotine

I. Nicotine Toxicity
   A. Smoking toxicity - ≈400,000 premature deaths per year
      1. Cardiac disease - 170,000 premature deaths per year
      2. Lung disease - 62,000 premature deaths per year
      3. Cancer (including lung cancer) - 129,000 premature deaths per year
   B. Other disorders
      1. Pregnancy - low birth weight
      2. Spontaneous abortions - 1.5-2 times higher in smokers

II. Nicotine as a Reinforcer
   A. Recent cigarette smoking trends (SAMHSA, 2009)
      1. Past month overall population 12 and older: 23.9% (59.8 million)
      2. Past month college students: 27.2%
      3. Daily use:
         a. Aged 12 and older: 14.7% (36.9 million)
   B. Effective Doses
      1. Cigarettes deliver 0.5-2.5 mg nicotine (average 1.1 mg)
      2. Cigarettes delivering less than 0.3 mg do not sell well and generally do not maintain dependence
      3. Cigarette smokers maintain and titrate blood levels
         a. Lower nicotine levels increase puff size and frequency of puffing
         b. Nicotine receptor antagonists increase puff size and frequency of puffing
   C. Behavioral effects of nicotine
      1. Euphoria
      2. Stimulant actions
      3. Anxiety reduction/ Muscle relaxation
      4. Facilitation of performance (physical and mental)
      5. Memory enhancement
      6. Increase in pain threshold (Analgesia)
      7. Hunger reduction

III. Initiation of Smoking
   A. Underregulation
      1. Standards
         a. Adolescents are more likely to smoke if parent(s) or friends are smokers
         b. False consensus effect- Overestimation of the number of smokers
      2. Monitoring
         a. Cues for smoking all around (although this has changed with no TV ads and limited smoking areas)
         b. Transcendence failure- Not seeing the obvious and severe health consequences of smoking
      3. Strength
         a. Social pressure
         b. Chronic weakness in impulse control (rebellious and antisocial personality) associated with initiation of smoking in adolescents
   B. Misregulation
      1. Distortion in self-knowledge
a. Smoking in the belief that cigarette smoking enhances one's self-image
b. In reality, smoking makes one less attractive, not more attractive

2. Faulty beliefs
   a. Trying to control body weight by smoking
      i. Percent of women smokers now equals males
      ii. 40% of women smokers use cigarette smoking to control weight
   b. Nicotine is an appetite suppressant, but the health risks

IV. Failure in Regulation of Smoking (Rolling the Snowball)
   A. Patterns of smoking
      1. Continuous self-administration during waking hours
         a. Harder to give up smoking than heroin or cocaine
         b. Average smoker smokes 1 pack per day
      2. Decreasing the nicotine content changes the pattern of smoking
         a. Smoking more cigarettes
         b. Filter ventilation blocking
   B. Boundary Model of Smoking
      1. Physiological range
         a. Symptoms of overindulgence (nicotine levels too high) or withdrawal (nicotine levels too low)
         b. Smoking regulated by physiological cues
      2. Zone of biological indifference
         a. Smoking regulating by psychosocial cues
         b. This zone gets shifted upward as dependence proceeds
   C. Spiraling distress
      1. Underregulation
         a. Monitoring
            i. Large zone of indifference leads to enhanced role of psychosocial cues
            ii. Alcohol causes disinhibition and leads to smoking
         b. Psychological inertia
            i. Cigarette smoking behavior becomes automatic
         c. Strength
            i. Smoking is associated with negative emotional states
            ii. Stress leads to increased smoking
      2. Misregulation
         a. Distortion in self-knowledge leads to smokers feeling personally invulnerable
         b. Faulty beliefs that cigarette smoking can appropriately control weight and stress
            i. Smoking because of fear of weight gain
            ii. Smoking to cope with stress
            iii. Overgeneralization - Smoking to cope with all unpleasant states

V. Smoking Relapse
   A. Relapse pattern
      1. 80% of smokers relapse within 6 months
      2. Craving and other withdrawal symptoms are greatest in the first two weeks of abstinence
      3. Some ex-smokers report cravings for up to 9 years
   B. High risk situations
      1. Smoking cues
         a. Other smokers
         b. Non-supportive friends and family
c. Stimuli associated with smoking

2. Emotional distress (Most important trigger for smoking urges)
   a. Negative emotional states responsible for half of all relapses
   b. States include boredom, frustration, fatigue, anger, anxiety, and depression
   c. Misattribution of negative mood states to smoking withdrawal

3. Alcohol
   a. Alcohol disinhibits smoking
   b. Social correlates of drinking also promote smoking
   c. Alcohol may interfere with remembering effective coping strategies

4. Minor lapses lead to full relapses
Compulsive Gambling

I. Introduction
   A. Majority of Americans participate in some form of gambling
   B. Gambling origins in religious rituals
   C. Social Gamblers
      1. No self-esteem is tied to winning or losing
      2. Other aspects of life are more important and rewarding
      3. A “big win” is rarely experienced
   D. Pathological gambling
      1. First introduced as a diagnosable mental disorder in 1980
      2. Classified as a disorder of impulse control
      3. Definition: A chronic and progressive failure to resist the impulse to gamble
      4. Synonymous with compulsive gambling

II. Pathological gambling- Intoxication- Winning Phase
   A. “The Action”
   B. Stimulation- Euphoria
   C. Pain and stress relieving
   D. Tranquilizing

III. Pathological gambling- Withdrawal- Losing Phase
   A. Stress and tension
   B. Inadequacy and unimportance
   C. Loss of self-esteem
   D. Loss of control

IV. Characteristics of Pathological Gamblers
   A. Workaholic-like
   B. Risk takers

V. Demographics and Incidence
   A. Average onset from gambling to loss of control: ~5 years (conversion)
   B. Incidence
      1. pathological gamblers: 0.5% - 1% (Petry et al., J Clin Psychiatry, 2005)
      2. problem gamblers: 5% (Shaffer et al., Am J Public Health, 1999)
      3. Extrapolation to all of United States: 1.3-2.6 million pathological gamblers; 12.5 million problem gamblers
   C. Demographics

VI. Developmental Phases
   A. Winning Phase
      1. Gambling begins with small bets, usually in adolescence
      2. “Gambler’s luck” is replaced by skillful betting
      3. Winning leads to more and more excitement
      4. Gambler plays more frequently and for higher stakes
**** separation of social from pathological gambling

5. Pathological gambler begins to believe he or she is an exceptional better/player
6. Big win occurs

B. Losing Phase
1. Begins to gamble alone
2. Amount of bet escalates
3. Losing streak develops
4. “The Chase”
5. Irrational optimism
6. Legal borrowing
7. Impairment in social and occupational functioning
8. Serious debt, partial confession, and bail-out

C. Desperation Phase
1. More bail-outs
2. All of Losing Phase is worse
3. State of panic
4. Psychiatric signs
5. Crash
6. Depression

VII. Sources of Self-Regulation Failure
A. Underregulation
1. Strength
   a. Failure to set time and access limits
   b. Negative affective states
   c. Unlimited access
2. Reduction of Monitoring
   a. Attention is systematically directed to immediate cues
      i. Attention is kept away from anything that would facilitate monitoring
      ii. Plenty of noise and confusion
   b. Disinhibition
3. Psychological Inertia
   a. Development of automatic behaviors

B. Misregulation
1. Irrational or Faulty Beliefs
   a. Gamblers view chance outcomes as partially controllable
   b. “Gamblers fallacy” - Misperception of chance events; the belief that one can predict future chance events from knowing the outcome of past ones, because future and past outcomes must add up to a definite score
2. Distortion in self-knowledge
   a. Misplaced self-confidence (belief that one is an expert gambler)
   b. Investment of self-value into winning or losing
3. Transcendence failure

C. Spiraling Distress- Combination of underregulation and misregulation leading to a vicious cycle
1. Money problems
2. History of “big win”
3. Chasing
4. Financial ruin
VIII. Addictive Disease Model
   A. DSM IV criteria
   B. Addiction model
      1. Dependence on “The Action” of gambling
      2. Similarities to dependence on mood-altering drugs
   C. Advantages of the medical, disease model
      1. Common signs and symptoms to establish diagnosis
      2. Lifts great burden of guilt
      3. Encourages development of resources for help to families and education of health professionals
      4. Encourages research
      5. Provides a framework for enlightened public policy
      6. Provides a framework for treatment- Gamblers Anonymous

IX. Diagnostic criteria for 312.31 Pathological Gambling
   A. Persistent and recurrent maladaptive gambling behavior as indicated by five (or more) of the following:
      1. is preoccupied with gambling (e.g., preoccupied with reliving past gambling experiences, handicapping, or planning the next venture, or thinking of ways to get money with which to gamble)
      2. needs to gamble with increasing amounts of money in order to achieve the desired excitement
      3. has repeated unsuccessful efforts to control, cut back, or stop gambling
      4. is restless or irritable when attempting to cut down or stop gambling
      5. gambles as a way of escaping from problems or of relieving a dysphoric mood (e.g., helplessness, guilt, anxiety, depression)
      6. after losing money gambling, often returns another day to get even (“chasing” one’s losses)
      7. lies to family members, therapist, or others to conceal the extent of involvement with gambling
      8. has committed illegal acts, such as forgery, fraud, theft, or embezzlement to finance gambling
      9. has jeopardized or lost a significant relationship, job, or educational or career opportunity because of gambling
      10. relies on other to provide money to relieve a desperate financial situation caused by gambling
   B. The gambling behavior is not better accounted for by a Manic episode
Psychology 188
Compulsive Sexual Behavior

I. History and Background
   A. Sexual dysfunction- Focus on inhibition of response and sexual desire
   B. Frequent sexual activity
      1. Nymphomania- Insatiable impulse of a woman to engage in an abnormal number of sexual
         contacts with an abnormal number of partners with no deep emotional involvement
      2. Satyriasis- Excessive, uncontrollable sexual activity by a man with little or no emotional
         involvement
   C. Sexual Compulsivity
      1. Focus has been sexist, largely on women
      2. “Promiscuity”
      3. Characterological complex- low self-esteem, self-esteem tied to sexual encounters
      4. Frequency of normal sexual behaviors on a continuum

II. Sexual Disorders- Behavioral
   A. Paraphilia- Recurrent, intense sexual urges and sexually arousing fantasies generally involving
      either:
      1. Non-human objects
      2. Suffering or humiliation of oneself or one’s partner (non-simulated)
      3. Children or other non-consenting partners
   B. Examples of paraphilias
      1. Exhibitionism
      2. Fetishism
      3. Frotteurism
      4. Pedophilia
      5. Sexual Masochism
      6. Sexual Sadism
      7. Voyeurism
      8. Transvestite Fetishism
   C. Nonparaphilic sexual addictions- Culturally accepted sexual interests and behaviors that
      increase in frequency or intensity so as to significantly interfere with the desired capacity for a
      sustained intimate sexual relationship
      1. DSM III Sexual Disorder Not Otherwise Specified (NOS)
      2. Includes compulsive masturbation
      3. Dependence on anonymous sexual outlets, like pornography or telephone sex
      4. Repetitive promiscuity using people as sexual objects
   D. Alternative labeling- Atypical Impulse Control Disorder (DSM III)- Impulse Control Disorder
      NOS (DSM IV). The essential features of disorder of impulse control are:
      1. Failure to resist an impulse, drive, or temptation to perform some act that is harmful to the
         person or others. There may or may not be conscious resistance to the impulse. The act
         may or may not be premeditated or planned.
      2. An increasing sense of tension or arousal before committing the act (Preoccupation/
         Anticipation)
      3. An experience of either pleasure, gratification, or release at the time of committing the act.
         The act is ego-syntonic in that it is consonant with the immediate conscious wish of the
         individual. Immediately following the act there may or may not be genuine regret, self-
         reproach, or guilt.

III. Compulsive Sexual Behavior
A. Relationship in which sex occurs or number of different partners is not so important
B. Lack of control over one’s sexual behavior
C. Anxiety based
D. Examples of compulsive sexual behavior
   1. Cheers episode with Sam Malone
   2. “Del” from The Sexual Addiction
   3. “Carrie” from The Sexual Addiction
   4. What is not “addictive”: “Don” from The Sexual Addiction

IV. Dose
A. Normal sexual behavior- males
   1. Kinsey Sexual Behavior in Human Male (1948): average was 2 orgasms/week
   2. Reading and [West Arch. Sex Behav. 13(1984) 69-83:3]: 3 orgasms/week
   3. Hypersexual Activity: 7 or more orgasms/week for a minimum of 12 weeks, after age 15 years
   4. Nonparaphilic sexual addiction: 8.4 orgasms/week

V. Characteristics- Sexually Compulsive Men
A. Frequency and type of sexual behavior
B. Fewer long-term relationships
C. Fewer positive feelings prior to sex
D. Not neurotic (dysthymic)
E. Greater use of drugs
F. No greater sex drive
G. Loss of control over sexual behavior

VI. Toxic effects- Compulsive Sexual Behavior
A. AIDS-HIV and other STDs
B. Disruption of social and occupational functioning
C. Progression to Paraphilia- gateway hypothesis
D. Progression to violent sexual behavior and psychopathy

VII. Addiction cycle (4 stages)
A. Preoccupation/Anticipation
B. Ritualization
C. Compulsive sexual behavior
D. Despair

VIII. Sources of Self-Regulation Failure-Compulsive Sexual Behavior
A. Underregulation
   1. Strength
      a. Chronic weakness- Can’t control impulses and desires (lack of will power)
      b. Temporary weakness- Negative affective states
      c. Externally-mediated weakness- Unlimited access
   2. Reduction of Monitoring
      a. Attention is directed to immediate cues
         i. Preoccupation Stage- Focus is on the “Chase”
         ii. Ritualization Stage- Same automatic behaviors help the “Trance”
         iii. Transcendence Failure
         iv. Disinhibition
3. Psychological Inertia
   a. “A body undressing stays undressing”
   b. Development of automatic behaviors
B. Misregulation
   1. Irrational or Faulty Beliefs
      a. Mislabeling of relationships as “In love”
      b. Sexually obsessive filter
   2. Distortion in Self-Knowledge
      a. Misplaced self-confidence
      b. Investment of self-value into short-term conquests

IX. Ten Signs of Sexual Addiction
   A. A pattern of out of control sexual behavior
   B. Severe consequences due to sexual behavior
   C. Inability to stop despite adverse consequences
   D. Persistent pursuit of self-destructive or high-risk behavior
   E. On-going desire or effort to limit sexual behavior
   F. Sexual obsession and fantasy as a primary coping strategy
   G. Increasing amounts of sexual experiences because the current level of activity is no longer sufficient
   H. Sever mood changes around sexual activity
   I. Inordinate amounts of time spent in obtaining sex, being sexual, or recovering from sexual experience
   J. Neglect of important social, occupational, or recreational activities because of sexual behaviors
Psychology 188
Compulsive Shopping

I. Introduction
   A. Consumer Behavior - Normal part of everyday routine
      1. Only unusual purchases stand out
      2. Fanatical consumption by enthusiasts
   B. Overpowering urge to buy
      1. Irresistible urge to buy
      2. Form of tension relief or gratification
      3. Severe consequences

II. Characteristics of Compulsive Shopping
   A. Shopping binge
      1. Irresistible urges, uncontrollable needs or mounting tension that can only be relieved by buying
      2. Urges last approximately 1 hour and occur episodically
      3. Average 7-8 hours/week
   B. Intoxication
   C. Loss of Control
   D. Items purchased
      1. Products associated with physical appearance
      2. Items often not used
   E. Withdrawal Syndrome
      1. Relief after shopping episode short-lived
      2. Followed by negative feelings

III. Antecedents to Compulsive Shopping
   A. Need
   B. Negative emotional state
   C. Stress
   D. Positive emotions

IV. Incidence
   A. Onset - Mean age 18 years (range 6-30 years)
   B. Age of realization of a problem
   C. Predominately female
   D. Estimated prevalence - 2%

V. Characteristics of Compulsive Shoppers
   A. Absence of stable internal self-image
   B. Decrease in self-esteem
   C. Psychiatric characteristics

VI. Compulsive Shopping Binge Cycle
   A. Compelling urge to obtain items
   B. Loss of Control
   C. Intoxication
   D. Depression
VII. Toxicity
A. Debt
1. Average of $10000 debt (*Time, Money* magazines)
2. 50% of household income used to pay debt
B. Disruption of daily life
1. Loss of social and occupational functioning
2. Criminal activities to pay bills

VIII. Sources of Self-Regulation Failure
A. Underregulation
1. Strength
   a. Chronic weakness- Can’t control impulses
   b. Temporary weakness- Impulse purchase while experiencing negative affective states
   c. Externally-mediated weakness- Impulse is extremely strong and there is unlimited access
2. Reduction of Monitoring
   a. Attention is directed by encountering the item
      i. Preoccupation stage- Subjects report being hypnotized or mesmerized by object
      ii. Automatic stage- Lost in a world of shopping and sometimes do not even realize what they are buying (loss of self-awareness)
   b. Sets up transcendence failure
B. Misregulation
1. Irrational or Faulty Beliefs
   a. Compulsive shoppers fantasize a great amount... about owning things
   b. Spend much time imagining what it would be like to have more money and to be able to purchase whatever they like
   c. Creates a false reference point, so that individuals feel deprived in comparison to most people
2. Distortion in Self-Knowledge
   a. Low self-esteem
   b. Compulsive shoppers pride themselves on being “good shoppers”
   c. Interactions with sales staff
      i. Sales person dotes on compulsive shopper; shopper gets an uplift from the positive comments paid to them
      ii. Compulsive shoppers make purchases to please the sales people
3. Transcendence failure
C. Spiraling Distress
1. Lapse-activated causal pattern- People shop as a means of escape or in an effort to improve their mood
   a. Temporary increase in positive mood is short-lived and soon feelings of regret, shame, and remorse surface
   b. Acting in an impulsive manner has definite toxic consequences: financial problems, alienation of family, disappointment with self
   c. To escape from these negative moods, the person once again goes shopping, and the cycle starts over again
2. Acquiescence
   a. Making a purchase in a store requires a series of acts that could almost certainly be restricted
   b. Leads to a description of an overwhelming power of the impulse
Preoccupation
Urges, Intoxication

Negative Affective State

Shopping Binge
Relief of tension, Intoxication

Withdrawal
Psychology 188
Compulsive Computer Use- Computer Addiction, Computerism, Internet Addictive Disorder, Cyberaddiction

I. Introduction
   A. Normal computer use
      1. Computer use is part of the workplace
      2. Computer use by enthusiasts is a source of information, curiosity, adventure, games, and social interaction
      3. Number of users on line estimated at 1.1 billion (January 2006)
   B. Development of excessive computer use
      1. Starts with use of e-mail or Internet for research
      2. Begins to be associated with tension relief or gratification
      3. Users start increasing their on-line time
      4. Users become isolated and ignore other aspects of their lives
      5. Can lead to severe consequences

II. Characteristics of Compulsive Computer Use
   A. Binge or Intoxication
      1. Psychostimulant-like effects (cocaine-like rush)
      2. Calming effects of electronic conversations
      3. Mind-expanding characteristics of computer use
   B. Dose
      1. Average use of Internet was 19 hours per week in one survey (first 90 days of the Internet Usage Survey)
      2. Another survey in England of computer dependent individuals: 23.6 hours per week, representing 56% of spare time available at home
   C. Loss of Control
      1. Tolerance-Individuals show a large increase in the number of messages they post and begin to log-in in the middle of the night
      2. Users become obsessed, get nasty on-line and lose all sense of decorum
   D. Withdrawal Syndrome
      1. Individuals find it difficult to stop thinking about the Internet if they have not logged on in a while
      2. Individuals feel empty, depressed or irritable when not at a computer
      3. Individuals crave computer use- They attempt to spend less time connected, but are unable to cut back
      4. Suicide has been reported for a user banned from computer use for non-payment of thousands of dollars of on-line bills
   E. Negative Consequences
      1. Individuals continue to spend hours on-line despite physical injuries
         a. Repetitive strain to body
         b. Carpal tunnel syndrome
         c. Migraine headaches
         d. Sleep disturbances
      2. Complaints from family members and fellow employees/employers

III. Characteristics of Compulsive Computer Users
   A. Personality
      1. Shy, bright individuals most vulnerable
2. People who are easily bored, lonely, and depressed are vulnerable
3. Individuals may rely on the computer to solve personal problems or meet needs of companionship, belonging or even sexual fulfillment

B. Demographics
1. 3:1 male to female (but may reflect predominant computer use by males in general)
2. Average respondent of survey was 34 years old and had 15 years education

IV. Antecedents to Computer Addiction
A. Personality - Shy, introverted, intellectual
B. Reaction to problems of early childhood

V. Compulsive Computer Use Addiction Cycle
A. Preoccupation with thoughts about computer
B. Binge- Loss of control over use
C. Depression

VI. Toxicity
A. Debt
1. Dependent computer users spend twice as much on computers for home than non-dependent users
2. Financial problems can result from computer use
B. Disruption of daily life
1. Loss of social and occupational functioning
2. Denial of how much time and money they are spending on computer

VII. Sources of Self-Regulation Failure - Compulsive Computer Use
A. Underregulation
1. Strength
   a. Temporary weakness-Negative affective states
      i. Mood regulation could be an important determinant of on-line activity
      ii. Computing experience described as particularly exciting, even thrilling
   b. Externally-mediated weakness
      i. Impulse is extremely strong
      ii. Access is unlimited
2. Reduction of Monitoring
   a. Loss of self-awareness
   b. Renegade attention
      i. Individual hypnotized or mesmerized by computing
      ii. Individual lost in the world of computing and loses sense of reality
   c. Transcendence Failure
3. Psychological Inertia
   a. Difficult to stop when in the middle of an on-line chat or in the middle of a search
   b. Behaviors become automatic
B. Misregulation
1. Distortion in self-knowledge
   a. Low self-esteem or shy
   b. Computer users pride themselves for being experts
2. Irrational or Faulty Beliefs
   a. Virtual reality on the computer becomes more attractive than reality
b. Could create a false reference point in that the user feels deprived when they are not logged on

C. Acquiescence
   1. Connecting on-line can require a series of acts that could certainly be resisted
   2. The impulse to log on takes on an overwhelming power
   3. Sensory indulgence

D. Spiraling Distress
   1. Lapse-activated causal pattern- People compute as a means of escape or as an effort to improve their mood
   2. Increase in mood is short-lived and soon feelings of regret, depression and remorse surface
   3. Acting in an impulse manner has definite toxic consequences: Financial problems, alienation of family, and disappointment with self
   4. To escape from these negative moods, the person once again turns to computing, and the cycle begins again
Internet Addiction Disorder

As the incidence and prevalence of Internet Addiction Disorder (IAD) has been increasing exponentially, a support group, The Internet Addiction Support Group (IASG) has been established. Below are the official criteria for the diagnosis of IAD and subscription information for the IASG.

Internet Addiction Disorder (IAD) - Diagnostic Criteria

A maladaptive pattern of Internet use, leading to clinically significant impairment or distress as manifested by three (or more) of the following, occurring at any time in the same 12-month period:

(I) Tolerance, as defined by either of the following:
   (A) A need for markedly increased amounts of time on Internet to achieve satisfaction
   (B) Markedly diminished effect with continued use of the same amount of time on Internet

(II) Withdrawal, as manifested by either of the following
   (A) The characteristic withdrawal syndrome
      (1) Cessation of (or reduction) in Internet use that has been heavy and prolonged.
      (2) Two (or more) of the following, developing within several days to a month after Criterion 1:
         (a) Psychomotor agitation
         (b) Anxiety
         (c) Obsessive thinking about what is happening on Internet
         (d) Fantasies or dreams about Internet
         (e) Voluntary or involuntary typing movements of the fingers
      (3) The symptoms in Criterion B cause distress or impairment in social, occupational or other important other area of functioning
   (B) Use of Internet or a similar on-line service is engaged in to relieve or avoid withdrawal symptoms

(III) Internet is often accessed more often or for longer periods of time than was intended

(IV) There is a persistent desire or unsuccessful efforts to cut down or control Internet use

(V) A great deal of time is spent in activities related to Internet use (e.g., buying Internet books, trying out new WWW browsers, researching Internet vendors, organizing files of downloaded materials

(VI) Important social, occupational, or recreational activities are given up or reduced because of Internet use.

(VII) Internet use is continued despite knowledge of having a persistent or recurrent physical, social, occupational, or psychological problem that is likely to been caused or exacerbated by Internet use (sleep deprivation, marital difficulties, lateness for early morning appointments, neglect of occupational duties, or feelings of abandonment in significant others)

Subscribe to the Internet Addiction Support Group by e-mail:
Address: listserv@netcom.com
Subject: (leave blank)
Message: Subscribe internet-addiction-support-group
The Twelve Steps of Internet Anonymous…

Doctor M's assistant has put together a programme to help you give up the Net. The idea is to work your way through the steps one at a time, only moving on to the next step when you have successfully accomplished one. As you achieve each aim, you will be able to say each of the following:

1. Admitted we were powerless over our computer
2. Came to believe that a power outside our monitor could restore us to sanity
3. Made a decision to turn our will and our lives over to the care of HTML re-programming as we understood it
4. Made a searching and fearless moral inventory of ourselves via Yahoo, Netscape or the favourite browser of our choice
5. Admitted to our hard-drive, our mailing list, the attendees in various chatrooms and ourselves, the exact nature of our technical ineptitude
6. Were entirely ready to be HTML re-programmed to remove all these technical ineptitudes
7. Humbly asked our cyber-sponsor (see advertising at the bottom of this page for certified sponsors) to remove our ineptitude
8. Made a list of all cyberpals we had harmed and became willing to make amends to them all
9. Made direct amends to such cyberpals (via chatrooms, e-mail, Honorary websites, signature subliminals, cyber-poetry, etc.) wherever possible, except when to do so would injure them or others (or our modems!)
10. Continued to take personal inventory of our ineptitude, and when we were wrong, promptly blamed our software, hard-drive, manuals, friends, cyberspace, the phone company, etc. etc.
11. Sought through prayer and meditation to improve our conscious contact with HTML, as we understood (or lacked thereof) HTML, praying only for the knowledge of HTML and the power (and aptitude) to carry that out
12. Having had a technical awakening as the result of these steps, we tried to carry this message to other Internet Addicts (furthering our addiction and creating a need to work these steps) and to practice these principles in all our electronic correspondence!
How do I know if I have a problem with my Internet or Computer use?

Internet Abuse Test

1. You find yourself spending an excessive amount of time in online chat rooms, particularly in the rooms having to do with sex or sexuality, or in private rooms engaged in sexual conversations and/or cybersex. You may also find yourself spending a lot of time in general chat rooms as well.

2. You tend to find yourself gravitating towards one or more individuals with whom you have regularly scheduled, or unscheduled, but desired contacts with.

3. You find yourself becoming more depressed or lonely as you spend more time online.

4. You have made numerous attempts to have contact with individuals on the Net, either by phone, in writing, or meeting in person.

5. You find yourself hiding information from your spouse, significant other, friends, or family, regarding the amount of time and/or your activities on the Internet. In other words, you find yourself being secretive about the nature and the extent of your use.

6. You initially find yourself excited when accidentally you come upon a stimulating situation on the Internet, but now actively seek it out each time you log onto the Net.

7. You find yourself constantly having thoughts about using the Internet for purposes of making sexual connections and/or fulfilling your social and interpersonal needs.

8. You find the anonymity of online interactions to be more stimulating and satisfying than your real-time relationships.

9. You find it difficult to stop logging onto the Internet and feel compelled to do so on a daily basis.

10. You experience guilt or shame about your use of the Internet.

11. You engage in masturbation fantasy or active masturbation while on line, perhaps to the exclusion of sex with your partner or spouse.

12. You find that those significant individuals in your life, including spouse, friends or family are becoming troubled with the amount of time and/or energy you are devoting to the Internet. For example your husband, wife, or children, or other significant persons in your life are complaining about your absence due to the excessive amount of time you're spending on the Net.

Score _____ (3 - 5 = warning; 6 or more = probable Internet abuse problem)
Psychology 188
Failure to Control Emotions and Mood

“The film begins by showing the mounting bad mood of the main character. He has been fired from his job because his knowledge and skills have become obsolete. His wife has left him and taken his child. Because of his economic situation, he is unable to make child support payments and therefore is not allowed to see his little girl on her birthday. He is stuck in an interminable traffic jam caused, he believes, by make-work projects invented by the highway crews to justify their outrageous budgets. He swelters in his car, but the air-conditioning is broken, and he cannot even open the window because the handle is defective. He tries to distract himself from his mounting anger over the traffic problem, but as he shifts his attention in various directions he is repeatedly reminded of his multiple dissatisfactions with the world. Finally he tries to escape the anger-producing situation by abandoning his care and heading off on foot. But in a convenience store he gets into a disagreement with the proprietor and ends up madder than ever. Seeking to recover his peace of mind by sitting alone and thinking through his situation, he is accosted by some teenagers who try to rob him, and so again he is unable to feel better. He tries at one point to stop the escalating hostility between him and the teenagers and speak in a friendly and rational manner, but this too is to no avail, and again violence is the outcome. Throughout the film, his efforts at emotional control meet with frustration and failure, and it is only though violent and aggressive outbursts that he ever gets what he wants.” (From the movie: Falling Down, starring Michael Douglas)

I. Introduction
A. Affect Regulation- Many people find it difficult to escape from aversive emotional states and bad moods
B. Six main types of emotion control tasks- person trying to get into, get out of or prolong either a good or bad mood
C. Most common attempt to control moods involves getting out of various bad moods
   1. Underregulation
   2. Misregulation

II. Underregulation and the myth of venting anger
A. Some people believe they never consciously attempt to control their emotions (4%)
   1. Lighter sentences are given for crimes of “passion” Belief that people cannot control their emotions and strong emotions make people unable to control their actions
   2. Belief that it is psychologically damaging to alter emotions
B. Venting
   1. Definition- Unrestrained expression of emotions ranging from the mere discloser of emotional states to outrageous or wildly inappropriate behavior stimulated by emotions
      a. Hydraulic view- Human psyche as a container of water; emotions are increases in water pressure
      b. Catharsis view (Freud)- Catharsis as a therapy technique, but Freud did not find it to be effective
   2. Venting is ineffective at decreasing or eliminating the mood state
      a. Venting actually prolongs the mood state
         i. Domestic violence often follows from the venting of anger between spouses
         ii. When one member of a couple angrily “vents” his or her negative feelings to the partner, the partner frequently responds in an angry fashion, leading to an escalation of angry exchanges that frequently ends in physical aggression
C. How venting is ineffective at decreasing or eliminating the mood state
   1. Venting is ineffective because the components of venting are incompatible with other self-regulatory responses
      a. Venting involves focusing on one’s feelings of anger or sadness- attentional failure
b. Distracting oneself from negative thoughts or emotions is an effective way of getting out of a mood but venting prevents people from distracting themselves

2. Emotional expressivity effect- When one expresses an emotion one is likely to experience that emotion
   a. Patterns of expressive behavior can be used in the management of emotion
   b. As old as Shakespeare’s Henry V
      *Then imitate the action of the tiger;*
      *Stiffen the sinews, summon up the blood,*
      *Disguise fair nature and hard-favour’d rage*
      *Then lend the eye a terrible aspect;*
      *Let it pry through the portage of the head,*
      *Like the brass cannon; let the brow o’erwhelm it.*
      *As fearfully, as doth a galled rock*
      *O’erhand and jutty his confounded base,*
      *Swill’d with the wild and wasteful ocean.*
      *Now set the teeth, and stretch the nostrils wide;*
      *Hold hard the breath, and bend up every spirit*
      *To his full height!* (Act III, Scene 1)
   c. Darwin
      “The free expression by outward signs of emotion intensifies it. On the other hand, the repression, as far as this is possible, of all outward signs softens our emotions. He who gives way to violent gestures will increase his rage; he who does not control the signs of fear will experience fear in a greater degree” (Darwin, 1872)
   d. James’ theory of emotion
      “Refuse to express an emotion and it dies... If we wish to conquer undesirable emotional tendencies in ourselves, we must assiduously, and in the first instance, go through the outward movements of those contrary dispositions which we prefer to cultivate” (James, 1890)

3. Venting increases arousal
   a. Relaxation and meditation have been shown to be effective techniques for reducing the high-arousal states associated with negative emotions and moods like fear and anger
   b. Large amount of data showing that venting, or outwardly expressing one’s anger, has been positively associated with greater heart rate and blood pressure reactivity
   c. May have long-term consequences

4. Silent seething
   a. Holding one’s anger in (as opposed to venting it) is positively associated with greater heart rate and blood pressure reactivity, coronary heart disease, and hypertension (see above)
   b. Individual differences probably critical- Anger held within may be worse in some individuals than anger vented
   c. What is really destructive is staying angry
      i. Venting one’s anger is likely to lead to staying angry, attending to the provocation, maintaining arousal, etc.
      ii. Refusing to vent one’s anger may lead to two quite different outcomes: Some people may stop feeling angry when they hold their tongues (possibly aided by relaxation or self-distraction techniques), Other people may simply continue to seethe with anger inwardly, which is not likely to be any better than venting

D. How to control anger?
   1. Cooling time period; no brooding and no escalation of anger
2. Rational discussion
3. Directly confront the problem and make instrumental progress at trying to change the state of affairs that led to negative affect or negative feelings

III. Underregulation and venting- sadness and depression
A. Venting sadness and other aversive mood states may parallel the underregulation proposed for anger
   1. Persistence of a bad mood is the problem
   2. Self-distraction may be much more effective than venting for escaping from sadness
B. Cognitive suppression
   1. Suppressing or avoiding unwanted thoughts or feelings is an ineffective method of reducing the unwanted feelings
   2. Actually suppression may cause a rebound effect
   3. One is less able to suppress thoughts under cognitive load or stress-strength failure
C. Ruminating- Perseveration
   1. Ruminating about a bad mood or brooding about what caused a bad mood is not likely to result in a mood change
   2. Rumination reduces time and energy for active problem solving thought and behaviors
   3. Rumination increases the accessibility of negative cognitions
D. Distracters that backfire
   1. The use of distractions to take one’s mind off of the distressing problems does appear to be a useful means of regulating cognitions and emotions
   2. However, if the distracter is distressing- one source of distress will be substituting another
   3. Reckless, dangerous or violent activities are ineffective
   4. Example of psychological inertia, e.g., mood state creates conditions that make it more difficult to escape from the mood
      a. Depression- Distraction attempts will employ negatively valence distracters, perpetuating the bad mood
      b. Anxiety makes fearful distracters more accessible, thus perpetuating the anxious mood
      c. Anger may make irritating distracters more salient, perpetuating the angry mood
E. Consumptive behaviors- eating, drinking, taking drugs to regulate affect
   1. Eating of favorite food is not effective
      a. May backfire (misregulation)
   2. Alcohol may intensity depressive symptoms
      a. Sets up a pattern which may be a vicious cycle
      b. Attentional problem with alcohol, including myopia and transcedence failure
      c. Similar problems with anger and alcohol
I. Bulimia Nervosa
   A. Diagnostic Criteria (DSM IV)
      1. Recurrent episodes of binge eating
         a. Rapid consumption of a large amount of food
         b. Lack of control over eating during episodes
      2. Recurrent inappropriate compensatory behavior in order to prevent weight gain
         a. Purging type- Use of vomiting, laxatives, diuretics, enemas
         b. Nonpurging type- Use of fasting, excessive exercise, diet pills
      3. These behaviors occur at least 2 times a week for at least 3 months
      4. Self-evaluation is unduly influenced by body shape and weight
   B. Characteristics
      1. Prevalence
      2. Male to female ratio
      3. Generally begins with dieting
      4. Sufferers usually have normal weight
      5. Negative consequences

II. Binge Eating Disorder
   A. Proposed Diagnostic Criteria
      1. Recurrent episodes of binge eating
         a. Rapid consumption of a large amount of food
         b. Lack of control over eating during episodes
      2. Three of the following experienced during binges:
         a. Eating more rapidly than usual
         b. Eating until feeling uncomfortably full
         c. Eating large amounts of food when not feeling hungry
         d. Eating alone because of embarrassment regarding how much one eats
         e. Feeling disgusted with oneself, depressed, or guilty after overeating
      3. Marked distress regarding binge eating is present
      4. The binge eating occurs, on average, at least 2 days a week for at least 6 months
      5. The binge eating is not associated with the regular use of inappropriate compensatory behaviors
   B. Characteristics
      1. Prevalence
      2. Male to female ratio
      3. Generally begins with binge eating
      4. Sufferers usually have overweight
      5. Negative consequences

III. Binge Eating Disorder
   A. Chronic dieting associated with both disorder
   B. Cognitive Behavioral Model
      1. Societal pressure for thinness
      2. Distorted attitude toward eating, body shape and weight
      3. Dietary restraint
      4. Binging
   C. Interpersonal Problems Model
1. Interpersonal problems
2. Low self-esteem/dysphoria
3. Food used to cope with negative feelings
4. Binging

IV. Self-Regulation Failure Associated with Compulsive Eating

A. Underregulation
1. Conflicting standards
   a. Standards- Abstract concepts of how things should be (social norms, personal goals, expectation of others)
   b. Conflict between eating highly desirable and pleasurable foods and worries about developing weight problems and the health issues associated with being overweight
2. Psychological Inertia
   a. Psychological Inertia- The longer someone is doing something, the more difficult it may be to get that person to stop
   b. Once eating has begun it is often difficult to stop. Seems especially true for foods high in fat, salt, and sugar
   c. The “what the heck” effect or “I’ve blown my diet, so I might as well continue to eat”
3. Reduction in monitoring
   a. Monitoring- Evaluating self and actions against the relevant standards
      i. It is difficult to regulate food intake in situations where there is ample food (especially in small portions) and many distracters
   b. Attention- Focusing on the matter at hand and keeping in mind the long-term ramifications of one’s actions
      i. Renegade attention- Chronic dieters are more sensitive to external cues related to eating (social cues, taste, smell, time of day)
4. Strength Failure
   a. Strength- The ability to overcome an impulse and interrupt the tendency to act on it
   b. Fatigue- Dieters are most likely to overeat late in the day
   c. Distress- Bad mood, sadness, boredom often lead to strength failure and trigger overeating

B. Misregulation
1. Inadequate or wrong knowledge
   a. Food intake not regulated around the physiological cues of hunger and satiety in chronic dieters, but rather around the external and cognitive factors
2. Trying to control the uncontrollable
   a. Most of the data on diets suggests that diets don’t work

C. Spiraling Distress
1. Diet spiral- Each dietary failure increase the need for additional dieting but reduces the likelihood of future success
2. Yo-yo dieting- Each dieting attempt thought to be associated with less efficient weight loss and increased weight gain (metabolic functioning slowed more and more with each spiral)
Bulimia Nervosa and Binge Eating as Addictions?

<table>
<thead>
<tr>
<th>Criteria for Substance Dependence</th>
<th>Bulimia / Binge Eating</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>1. Tolerance</strong> (more substance required for desired effect)</td>
<td>More and more food needed for psychological satiety</td>
</tr>
<tr>
<td><strong>2. Withdrawal</strong> (distress upon removal of the substance; substance taken to alleviate this distress)</td>
<td>Depressed mood, guilt &amp; shame follow the binge; further bingeing to relieve these feelings</td>
</tr>
<tr>
<td><strong>3. Substance taken in larger amounts or over a longer period than intended</strong></td>
<td>Aware that behavior is excessive, but can’t control eating impulse</td>
</tr>
<tr>
<td><strong>4. Persistent desire or unsuccessful attempts to cut down or control substance use</strong></td>
<td>Attempts fasting and extreme or unusual dieting regimens</td>
</tr>
<tr>
<td><strong>5. Great deal of time in activities necessary to obtain substance</strong></td>
<td>May steal money for food or food itself, hoard, lie about and hide eating activities</td>
</tr>
<tr>
<td><strong>6. Important social, occupational, or recreational activities are given up or reduced because of substance abuse</strong></td>
<td>Sever obesity may impair ability to perform certain tasks; behavioral repertoire narrowed to those related to food</td>
</tr>
<tr>
<td><strong>7. Substance use is continued despite knowledge or having a persistent or recurrent physical or psychological</strong></td>
<td>The problems associated with obesity, binge eating, and bulimia</td>
</tr>
</tbody>
</table>

Spiraling Distress
I. Compulsive Exercise
   A. Potential Diagnostic Criteria
      1. Excessive exercise, more than 1 h per day, 7 days per wk exercising
      2. Dieting and self-inflicted weight loss
      3. Amenorrhea or diminished sexual interest
   B. Primary exercise dependence
      1. Exercise and dieting in order to improve performance
      2. Normal fear of fat
   C. Secondary exercise dependence
      1. Exercise and dieting to lose weight (anorexia) or to balance the intake of extra calories (bulimia)
      2. Morbid fear of fat
   D. Characteristics
      1. Personality characteristics
      2. Negative consequences
         a. Deterioration of personal relationships
         b. Social withdrawal
         c. Insomnia, depression and fatigue
         d. Muscular and skeletal injuries
         e. Amenorrhea, testosterone
         f. Increased risk for eating disorders

II. Commonalities
   A. Behavioral similarities
   B. Physiological similarities
   C. Personality similarities
   D. Cultural similarities

III. Compulsive Exercise as an Addictive Disorder
   A. See table

IV. Self Regulation Failure
   A. Underregulation
      1. Conflicting standards
         a. Standards: Abstract concepts of how things should be (social norms, personal goals, expectations of others
         b. Exercise: Conflict between stopping when fatigued or injured vs. going for the runner’s high, better performance at any cost
      2. Inertia
         a. Inertia: The longer someone is doing something, the more difficult it is to get that person to stop
         b. Exercise: Endorphins may mask the pain
      3. Reduction of monitoring
         a. Monitoring: Evaluating self and actions against relevant standards
            i. Exercise: Causes decreased pain sensitivity, can’t monitor well
b. Attention: Focusing on the matter at hand and keeping in mind the long-term consequences of ones actions
   i. Exercise: See exercise-related stimuli everywhere
B. Misregulation
   1. Inadequate or wrong knowledge
      a. Basing decisions on cognitive rather than physiological factors
      b. Exercise: To achieve physical success, one must suffer
C. Spiraling Distress
   1. See Figure
<table>
<thead>
<tr>
<th>Substance Dependence Criteria</th>
<th>Compulsive Exercise</th>
</tr>
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<tbody>
<tr>
<td><strong>1. TOLERANCE:</strong> Need to markedly increased amounts of a substance to achieve intoxication or desired effect; or markedly diminished effect with continued use of the same amount of the substance</td>
<td>Progressively more exercise needed for positive effects</td>
</tr>
<tr>
<td><strong>2. WITHDRAWAL:</strong> The characteristic withdrawal syndrome for a substance or use of a substance (or closely related substance) to relieve or avoid withdrawal symptoms</td>
<td>Depressed mood when exercise schedule is broken; using exercise to alleviate &quot;withdrawal&quot;</td>
</tr>
<tr>
<td><strong>3. LOSS OF CONTROL:</strong> Persistent desire or one of more unsuccessful efforts to cut down or control substance use</td>
<td>Compulsion or loss of control over exercise</td>
</tr>
<tr>
<td><strong>4. EXCESSIVE INTAKE:</strong> Substance used in larger amounts or for longer period than the person intended</td>
<td>Would like to slow down, but can't</td>
</tr>
<tr>
<td><strong>5. NARROWING OF BEHAVIOUR REPETOIRE:</strong> Important social, occupational, or recreational activities given up or reduced because of substance abuse</td>
<td>Narrowing of behavioral repertoire to that related to exercise</td>
</tr>
<tr>
<td><strong>6. NARROWING OF BEHAVIOUR REPETOIRE:</strong> A great deal of time spent in activities necessary to obtain, to use, or to recover from the effects of substance used</td>
<td>Sacrificing work, social life, and family life to spend time exercising</td>
</tr>
<tr>
<td><strong>7. CONSISTENT USE DESPITE PROBLEMS:</strong> Continued substance use despite knowledge of having a persistent or recurrent physical or psychological problem caused or exacerbated by use</td>
<td>Exercising despite injuries and illnesses</td>
</tr>
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</table>

**Figure:**
- **Preoccupation/Anticipation:**
  - Exercise: Narrowing of behavioral repertoire
  - Steroids: Obtaining, planning dosages, timing, exercise and diet obsessions
- **Withdrawal/Negative Affect:**
  - Exercise: Depressed mood
  - Steroids: Depressed mood, unmasking of pain after steroid use discontinued
- **Binge/Intoxication:**
  - Exercise: Compulsive exercise, strict diet
  - Steroids: Euphoria, Feeling of ultimate strength, less pain sensitivity
I. Introduction
   A. Essential feature of Impulse Control Disorder: The failure to resist an impulse or drive or temptation to perform an act that is harmful to the person or others
      1. Preoccupation: Individual feels an increasing sense of tension or arousal before committing the act
      2. Intoxication: Pleasure, gratification, or relief is felt at the time of committing the act
      3. Withdrawal: Following the act there may or may not be regret, self-reproach or guilt.

II. Types of Impulse Control Disorders
   A. Intermittent Explosive Disorder: Characterized by discrete episodes of failure to resist aggressive impulses resulting in serious assaults or destruction of property
   B. Kletomania: Characterized by recurrent failure to resist impulses to steal objects not needed for personal use or monetary value
   C. Pyromania: Characterized by a pattern of fire setting for pleasure, gratification, or relief of tension
   D. Pathological Gambling: Characterized by recurrent and persistent maladaptive gambling behavior
   E. Trichotillomania: Characterized by pulling out of one’s hair for pleasure, gratification, or relief of tension that results in noticeable hair loss

III. Kletomania: Derived from Greek, meaning “stealing madness”
   A. Essential features: Recurrent failure to resist impulses to steal objects not needed for personal use or monetary value
      1. Occasionally, subject may hoard objects or even return them without notice
      2. Not likely to steal when arrest is possible but will not preplan to avoid arrest
      3. Stealing is typically done without help from others
      4. Anxiety increases if the urge is resisted; tension is relieved when the act is completed
   B. Associated features
      1. Impulse to steal is experienced as ego dystonic (not consistent with conscious wish)
      2. Individual often has fears of being caught and feels depressed or guilty about thefts
      3. Disorder may cause legal, family, career and personal difficulties
      4. Has been hypothesized by some to be variant of Obsessive-Compulsive Disorder (OCD)
   C. Lobsterman case history
   D. Diagnostic Criteria: DSM IV
      1. Recurrent failure to resist impulses to steal objects that are not needed for personal use or for monetary value
      2. Increasing sense of tension immediately before committing the theft
      3. Pleasure, gratification, or relief at the time of the theft
      4. The stealing is not committed to express anger or vengeance and is not in response to a delusion of a hallucination
      5. The stealing is not better accounted for by Conduct Disorder, a Manic Episode, or Antisocial Personality Disorder
   E. Prevalence: Fewer than 5% of identified shoplifters, much more common in females
      1. 1991 study: 15/20 females; 43/56 overall
         a. Mean age: 36 years of age
         b. Duration of illness: 16 years
         c. Peak frequency of stealing: 27 episodes/month
2. 1991 study: Comorbidity with anxiety and affective disorders high

F. Course: Can go on for years
   1. Sporadic
   2. Episodic
   3. Chronic
   4. May appear in childhood and can continue into adulthood

G. Relationship to shoplifting: Argued to be different but may be a milder form of kleptomania in many cases
   1. Shoplifters rate high on inner tension before stealing and relief after stealing
   2. Similar descriptions of impulsivity in both groups

H. Failure to self-regulate
   1. Underregulation
      a. Strength- Temporary weakness (anxiety or stress)
      b. Strength- Externally mediated weakness deficit (goods are displayed to attract interest)
   2. Misregulation
      a. Inappropriate standards
      b. Kleptomania functioning as symptom relief (anxiety or depression)

IV. Pyromania
   A. Essential features: Presence of multiple episodes or deliberate and purposeful fire-setting
   B. Associated features
      1. Individuals may make considerable advance preparation for starting a fire
      2. Individuals may be indifferent to the consequences to life or property cause by the fire or they may derive satisfaction from the resulting property destruction
      3. Individual’s behavior may lead to property damage, legal consequences, or injury or less of life to the fire-setter or to others
   C. Brrrr: A case history
   D. Diagnostic Criteria: DSM IV
      1. Deliberate and purposeful fire setting on more than one occasion
      2. Tension or affective arousal before the act
      3. Fascination with, interest in, curiosity about, or attraction to fire, and its situational contexts (e.g., paraphernalia, uses, consequences)
      4. Pleasure, gratification, or relief from tension when setting fires or when witnessing or participating in aftermath
      5. The fire-setting is not done for monetary gain, as an expression or sociopolitical ideology, to conceal criminal activity, to express anger or vengeance, to improve one’s living circumstances, in response to a delusion or hallucination, or as a result of impaired judgment
      6. The fire-setting is not better accounted for by Conduct Disorder, or Antisocial Personality Disorder
   E. Prevalence: Rare for pyromania itself
      1. Fire-setting in children and adolescents usually associated with conduct disorders
      2. Pyromania occurs much more often in males than females: 85-89% of arsonists are male (6:1 ratio)
      3. 18% of arsonists met the criteria for pyromania
   F. Course
      1. Episodic: Fire-setting incidents wax and wane in frequency
      2. No established typical age of onset; no clear relationship between fire-setting in childhood and pyromania in adulthood
V. Trichotillomania: defined as “penchant (mania) for pulling one’s own hair”
   A. Essential features: Disorder of compulsive hair pulling that often results in alopecia (hair loss)
      1. Includes the pulling of hair from scalp, eyebrows, and eyelashes
      2. Some individuals experience an “itch-like” sensation in the scalp that is eased by the act of pulling hair
   B. Associated features
      1. Examining the hair root, twirling it off, pulling the strand between the teeth, or eating the hairs (trichophagia)
         a. One form of oral behavior (mouthing, chewing, ingestion) has been reported in 50% of patients
         b. Hair chewing or biting: 33%
         c. Complete ingestion: 10%
      2. Hair-pulling does not occur in the presence of other people (except immediate family members)
      3. Social situations may be avoided
      4. Individuals commonly deny their hair-pulling behavior and conceal or camouflage the hair loss
      5. Some individuals have urges to pull hairs from other people and may sometimes try to find opportunities to do so surreptitiously
      6. Individuals may also pull hairs from pets, dolls, or other fibrous materials (sweaters or carpets)
      7. Majority of patients pull hair from more than one site
   C. Hair: Mrs. A: Case histories
   D. Diagnostic Criteria: DSM IV
      1. Recurrent pulling out of one’s hair resulting in noticeable hair loss
      2. An increasing sense of tension immediately before pulling out the hair or when attempting to resist hair-pulling
      3. Pleasure, gratification, or relief from tension when pulling out hair
      4. The disturbance is not better accounted for by another mental disorder and is not due to a general medical condition (e.g., dermatological condition)
      5. The disturbance causes clinically significant distress or impairment in social, occupational, or other important areas of functioning
   E. Types of hair-pulling
      1. “Focused” (25%): Phenomenological similarities to compulsive rituals in OCD
         a. Associated with mounting tension before pulling or when one is resisting pulling, relief from tension after completion of pulling
         b. Attention is focused on the act of pulling, which distracts individual from attending to necessary tasks
      2. “Automatic” (75%)
         a. Not associated with prodromal urge or sensation
         b. Automatic pulling occurs during sedentary activities
   F. Physical Changes
      1. No inflammation of hair follicle but evidence of damaged follicles and evidence of short and broken hairs
      2. Patterns of hair loss highly variable
         a. Areas of complete hair loss common
         b. Areas of noticeably thinned hair density
         c. Sometimes a pattern of complete baldness except for a narrow perimeter around the scalp, particularly at the nape of the neck
d. Eyebrows and eyelashes may be completely absent
e. Eating of hair may result in hair balls that can lead to abdominal distress and even obstruction

G. Prevalence
1. Disorder is present in 0.6% of college students
2. Majority that seek treatment are female
3. If definition is broadened to include all repetitive hair pulling that results in visible hair loss, then prevalence is increased to 2.5%
   a. 3.4% female
   b. 1.5% male

H. Course
1. Age of onset before young adulthood: 5-16 years of age
2. Average: 13 years of age
3. Course can be continuous for many years, or episodic, going on for weeks, months, or years

I. Comorbidity
1. Highest prevalence is mood and anxiety disorders
2. Eating disorders and substance use less frequent
3. OCD rare

J. Sources of self-regulation failure
1. Underregulation
   a. Strength- Temporary weakness
      i. Hair pulling causes significant shame and humiliation
      ii. Stress causes vulnerability to relapse in hair-pulling, even after successful treatment
   b. Monitoring
      i. Successful treatment involves self-monitoring and relaxation training
      ii. Transcendence failure
   c. Inertia
      i. Interruption of hair pulling causes extreme anxiety
      ii. Hair pulling can become an automatic behavior similar to a habit
Psychology 188
Anti-Social Personality Disorder and Psychopathy

I. Anti-Social Personality Disorder
   A. Diagnostic Criteria DSM IV
      1. 18 years of age or older
      2. Conduct disorder (some delinquency) < 15 years of age
      3. Not associated necessarily with schizophrenia or a manic episode
      4. At least 3 of the following 7 characteristics
         a. Failure to conform to social norms (arrests)
         b. Irritability and aggressiveness (fights)
         c. Irresponsibility in work and financial matters
         d. Impulsivity (in actions) or failures to plan ahead
         e. Deceitfulness (cons, deceives)
         f. Reckless disregard for safety of self and others
         g. Lack of remorse, guilt, and indifference (absence of feelings)
   B. Prevalence
      1. Males: ~5%, females: ~1% (male: female ratio 5:1)
      2. After 20 years with antisocial personality disorder, 80% will no longer meet the criteria for this disorder
      3. 25-50% of children with conduct disorder will meet the criteria for antisocial personality disorder later in life

II. Psychopathy
   A. Diagnosis: The Hare Psychopathy checklist- revised (at least 30 points)
      1. Aggressive narcissism: Continual devaluation (aggressive) of others in order to pump up own self-esteem
         a. Characteristics include: Glibness, grandiose sense of self, pathological lying, conning and manipulating, lack of remorse, shallow affect, and lack of empathy and callousness (sadism)
      2. Chronic antisocial behavior: Long-term offensive, maybe criminal, behavior
         a. Characteristics: Need for stimulation, prone to boredom*, parasitic lifestyle, poor behavioral control, early behavioral problems, lack of realistic and long-term goals, impulsivity**, irresponsibility, juvenile delinquency, disordered thoughts, many short-term marital relationships, criminal versatility, promiscuous sexual behavior, revocation of conditional release (first to get out of prison, but first to get placed back in).
         *Due to chronic cortical under arousal as determined from decreased skin conductance, increased slow (theta) wave activity as measured in electroencephalograms (EEG), and decreased resting heart rate. At this time there is no known treatment for this under arousal (obviously the punishment of prison time does not rehabilitate psychopaths
         ** Even though clinicians often include “impulsivity” in their diagnosis of psychopaths, this is not always the case. Psychopaths tend to be very deliberate. Thus this condition is often not due to problems with underregulation (i.e., problems with monitoring, strength, etc.) but actually due to MISREGULATION

Psychopaths have abnormal standards

For example, normal relationships are based on affection, while for psychopaths relationships are based on power and domination
B. Prison statistics
   1. Medium to maximum security prison: 75% of men would meet criteria for antisocial personality disorder (1/3 are psychopathic)
   2. ~80% of non-psychopaths released from prison will still be out 4 years later, however ~20% of psychopaths will still be out 4 years later

III. Violence of Psychopaths
   A. Affective versus predatory violence

<table>
<thead>
<tr>
<th>Affective Violence</th>
<th>Predatory Violence</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intense autonomic nervous system arousal</td>
<td>Minimal or absent autonomic nervous system arousal</td>
</tr>
<tr>
<td>Subjective experience of conscious emotion</td>
<td>No conscious emotion</td>
</tr>
<tr>
<td>Reactive and immediate violence</td>
<td>Planned or purposeful violence</td>
</tr>
<tr>
<td>Internally or externally perceived threat</td>
<td>No or minimal perceived threat</td>
</tr>
<tr>
<td>Goal is threat reduction</td>
<td>Multi-determined and variable goals</td>
</tr>
<tr>
<td>Rapid displacement of target</td>
<td>No displacement of target</td>
</tr>
<tr>
<td>Time-limited behavioral sequence</td>
<td>No time limited behavioral sequence</td>
</tr>
<tr>
<td>Preceded by public ritual</td>
<td>Preceded by private ritual</td>
</tr>
<tr>
<td>Primarily emotional</td>
<td>Primarily cognitive-conative (acting purposefully)</td>
</tr>
<tr>
<td>Heightened and diffuse awareness</td>
<td>Heightened and focused awareness</td>
</tr>
</tbody>
</table>

B. Violence and psychopathy
   1. Commit more frequent and more violent crimes
   2. More likely to use a weapon
   3. More violent in prison
   4. Violence does not seem to decrease with age
   5. Commit violence directed toward material gain rather than emotional arousal
   6. Typically targets strangers
   7. Typically target males (except sexual homicides)
   8. Display a more predatory type of violence than the more standard violence
Psychology 188
Attention Deficit Hyperactivity Disorder

I. History
A. First description dates back to the 19th century
B. Hyperactivity was the most salient characteristic in early diagnosis
C. Treatment with stimulants used as early as the 1930s
D. Until recently thought to burn itself out by adolescence

II. Prevalence
A. 3-9% of children given the diagnosis in USA
B. Boys outnumber girls 5-10:1
C. 1/3 of children with ADHD continue to have symptoms
D. 1-3% of the adult population may have ADHD

III. Diagnostic Criteria: DSM IV
A. Three main symptom clusters
   1. Inattention/ Distractibility
      a. Tend to “space-out”
      b. Distracted by external or internal stimuli
      c. Get sidetracked/ can’t stay “on task”
      d. Poor follow through
      e. Don’t listen
      f. Poor memory
      g. Procrastinate
   2. Hyperactivity
      a. No longer a requirement for the diagnosis
      b. May even present as a reduced level (especially in females)
      c. Even when present in children, it is the symptom most likely to remit with age
   3. Impulsivity
      a. Difficult time tolerating anything that requires passive waiting
      b. Often have poor ability to inhibit behavior, speech, etc.
B. Mood disturbance (not an official criterion, but largely accepted)
C. Must have begun in childhood- not an acquired disorder
D. Symptoms cut across several domains of activity
E. Not better explained by another psychiatric or medical cause
F. Significant degree of impairment- underachievement relative to a person’s potential (still can be high functioning)
G. Present at all times- not episodic

IV. Co-morbid Conditions
A. In children
   1. Opposition defiant behavior (30-50%)
   2. Conduct disorder (30-50%)
B. In adults
   1. Substance/ alcohol abuse (25%)
   2. Antisocial personality disorder (25%)
C. In children and adults
   1. Mood disorders such as depression, bipolar disorder (15-75%)
   2. Learning disorders (10-90%)

50
3. Anxiety disorders (25%)
4. Tourette’s and obsessive compulsive disorder (?)

V. Causes - Most evidence points to a disturbance in brain function
   A. Genetics - 64% heritable
   B. Environmental - Especially prenatal (alcohol, smoking)
   C. Neurochemicals implicated - Dopamine and Noradrenalin
   D. Brain regions implicated - Frontal cortex, basal ganglia
   E. Function brain theories
      1. Disturbance of reward mechanisms
      2. Disturbance of impulse inhibition

VI. Treatment - The only effective treatment to date is medication
   A. Medication
      1. Psychostimulants are the mainstay
      2. Some other medication helpful (antidepressants and antihypertensives (?)
      3. Benefit - Usually dramatic and rapid improvements
      4. Drawbacks - Temporary control rather than a cure, requires continues medication throughout the day, socially controversial
   B. Other treatments (No scientific evidence of efficacy)
      1. Biofeedback
      2. Nutrition
      3. Herbal remedies
Psychology 188
Neuropsychiatric Disorders of Central Inhibition

I. Introduction
   A. Neuropsychiatric disorders involve deficient “gating” of cognitive, motor, and sensory information
   B. Examples include: Huntington’s disease (motor), Obsessive Compulsive Disorder (OCD, cognitive), Tourette’s Disorder (motor and sensory), Schizophrenia (sensory and cognitive)
   C. This “gating” of information involves the group of brain structures known as the basal ganglia. A disruption of function in this brain area can be associated with too much information getting through to consciousness

II. Obsessive Compulsive Disorder
   A. Diagnostic Criteria: DSM IV
   B. Obsessions = mental events (thoughts) accompanied by images which are unwanted and intrusive and not related to any real event.
   C. Compulsions = actions aimed at reducing the anxiety caused by obsessions
   D. Symmetry or exactness obsession (just right obsession) = feelings of physical discomfort if things aren’t perceived as “just right”
   E. OCD associated with very active basal ganglia structures. “Brain lock” = activity of basal ganglia correlated with activity of the cortex (“gate” not functioning properly- allowing too much information through)
   F. Treatment of OCD
      1. Cognitive-Behavioral Therapy: Relabel, reattribute, refocus, revalue
      2. Antidepressants- Only 1/3 reduction in symptoms
      3. Neurosurgery- Laser cut through faulty “gate”

III. Tourette’s Disorder
   A. Tourette’s disorder- Multiple motor, or one or more vocal tics
   B. Tic- A rapid involuntary movement, vocalization, or sensation that is recurrent and stereotyped. Simple (eye blink) or complex (obscene gesture)
   C. 1/700-1/1000 people have Tourette’s. 3:1 male:female, onset at ~7 years of age
   D. Tourette’s Disorder involves a different area of the basal ganglia than OCD, but again involves faulty “gating” of information
   E. Treatments of Tourette’s have ranged from drugs affecting the dopamine, adrenergic and serotonin systems as well as nicotine patches

IV. Huntington’s Disease (Angle’s disease, from video)
   A. Huntington’s Disease = Intrusive movements that patient is not really aware of. Impulse control problems arise early, depression later, then dementia
   B. This is an autosomal dominant genetic disorder
   C. It is caused by cell death in the basal ganglia leading to a loss of the information “gate”
300.3 Obsessive-Compulsive Disorder

A. Other obsessions or compulsions:

1. Obsessions as defined by (1), (2), (3), and (4):
   (1) recurrent and persistent thoughts, impulses, or images that are experienced, at some time during the disturbance, as intrusive and inappropriate and that cause marked anxiety or distress
   (2) the thoughts, impulses, or images are not simply excessive worries about real-life problems
   (3) the person attempts to ignore or suppress such thoughts, impulses, or images, or to neutralize them with some other thought or action
   (4) the person recognizes that the obsessional thoughts, impulses, or images are a product of his or her own mind (not imposed from without, as in thought insertion)

2. Compulsions as defined by (1) and (2):
   (1) repetitive behaviors (e.g., hand washing, checking, repeating words silently) that the person feels driven to perform in response to an obsession, or according to rules that must be applied rigorously

B. At some point during the course of the disorder, the person has recognized that the obsessions or compulsions are excessive or unreasonable. Note: This does not apply to children.

C. The obsessions or compulsions cause marked distress or significant impairment in social, occupational, or other important areas of functioning.

312.39 Trichotillomania

A. Recurrent pulling out of one's hair resulting in noticeable hair loss.

B. An increasing sense of tension immediately before pulling out the hair or when attempting to resist the behavior.

307.23 Tourette's Disorder

A. Multiple motor and vocal tics have been present for some time during the illness, although not necessarily concurrently. (A tic is a sudden, rapid, recurrent, nonverbal, stereotyped movement or vocalization.)

B. The tic occurs many times a day usually in bouts nearly every day or intermittently throughout a period of more than 1 year, and during this period there was never a tic-free period of more than 3 consecutive months.

C. The disturbance causes marked distress or significant impairment in social, occupational, or other important areas of functioning.

D. The onset is before age 18 years.

E. The disturbance is not due to the direct physiological effects of a substance (e.g., stimulants) or a general medical condition (e.g., Huntington's disease or post-viral encephalitis).
Keep the faculty of effort alive in you by a little gratuitous exercise every day. That is, be systematically heroic in little unnecessary points, do every day or two something for no other reason that its difficulty, so that, when the hour of dire need draws nigh, it may find you not unnerved or untrained to stand the test. Asceticism of this sort is like the insurance, which a man pays on his house and good. The tax does him no food at the time, and possibly may never bring him a return. But if the fire does come, his having paid it will be his salvation from ruin. So with the man who has daily inured himself to habits of concentrated attention, energetic volition, and self-denial in unnecessary things. He will stand like a tower when everything rocks around him, and his softer fellow-mortals are winnowed like chaff in the blast.

William James, The Principles of Psychology

I. Improvement of Self-Control
   A. Standards
      1. Set very high standards and try to come as close as possible
      2. Set relatively low standards, surpass them frequently (and substantially)
      3. Setting rewards and punishment standards- judicious use of self-reward is probably a good aid to self-regulation
   B. Monitoring and attention
      1. Make use of external forms of monitoring such as social support
      2. Cultivate better control of attention
   C. Strength
      1. Effective exercise- small but frequent challenges
      2. Judicious allocation of strength
      3. External source of discipline
   D. Prevention of misregulation
      1. Pursuit of accurate self-knowledge

II. Prevention
   A. Parental influence as the single most important determinant of self-regulatory capacity
      1. Inculcation of self-control as the premier goal in child rearing
      2. Cultivation of self-esteem, creativity, obedience, scalability, or other goals may be secondary
      3. Context of current social trends work against this
         a. Rise in single parent households
         b. Dual career families
   B. Highly structured set of rules to which the child is held to conform and conferring a substantial and growing degree of autonomy on the child
      1. Firm rules with a rationality that is made clear to the child
      2. Child has some participation in setting rules
      3. Consistency of rules and consistency of enforcement are of paramount importance
   C. Instilling the capacity for delay in gratification
      1. Offer choices between immediate and delayed (but greater) rewards
      2. Delayed rewards NEED to be forthcoming
   D. Training attentional skills
      1. Activities that require vigilance, concentration, or the genesis of multiple possibilities or ideas should get priority
      2. Teaching transcendence- Teaching children to see beyond immediate stimuli
   E. Parenting behavior
1. Reward feats of self-control
2. Parental self-control
   a. Guidelines require vigilant and consistent behavior on the part of the parents
   b. Escalating of parental neglect and abuse may reflect a passing of poor self-control from one generation to the next

III. Non-drug Therapies for Excessive Behavior
   A. Treatment framework
      1. Phases
         a. Detoxification
         b. Short-term rehabilitation recovery therapy
         c. Long-term aftercare recovery
      2. Reinforcement framework
         a. Pleasure
         b. Self-medication
         c. Habit
   B. Twelve Step Program
      1. Different types
         a. Alcoholics Anonymous
         b. Cocaine Anonymous
         c. Gambler’s Anonymous
         d. Narcotics Anonymous
         e. Overeaters Anonymous
      2. Therapy grounded in concept of spiritual and medical disease that has the following assumptions
         a. Alcoholism is a chronic progressive illness with predictable symptoms and a predictable course
         b. Permanent loss of the capacity to control one’s drinking
         c. Alcoholism effects the alcoholic’s body, mind, spirit, and true recovery requires healing of all of these
         d. Only viable alternative is total abstinence
      3. Particular strength of AA
         a. Acceptance and understanding from a peer group
         b. Role models for recovery, hope for recovery, guides for temptations and problems
         c. Recovery program tailored to ameliorating the personality problems of alcoholic (Acceptance, Surrender, Moral inventory- removal of guilt)
   C. Motivational Enhancement Therapy
      1. Based on principles of motivation psychology
         a. Designed to produce rapid, internally-motivated change
         b. Patient not forced- motivational strategies employed to mobilize client’s own resources
      2. Stages of change
         a. Pre-contemplation
         b. Contemplation
         c. Determination
         d. Action
         e. Maintenance
         f. Relapse
      3. Framework of therapy- “FRAMES”
         a. Feedback of personal risk
b. Personal responsibility for change
c. Clear advice to change
d. Menu of alternatives and options
e. Therapist empathy
f. Facilitation of self-efficacy or optimism (non-confrontation)

D. Cognitive-Behavioral Therapy
   1. Based on principles of social learning theory - Drinking is functionally related to major health problems in person’s life
      a. Addresses broad spectrum rather than focusing on drinking
      b. Emphasis placed on overcoming skill deficits
      c. Emphasis placed on coping with high risk situations
   2. Primary goal - Master skills that will maintain abstinence from alcohol
      a. Managing thoughts about alcohol
      b. Problem solving
      c. Drink refusal skills
      d. Coping with high risk situations

E. Similarities between treatment for psychoactive substance dependence, eating disorders, and other compulsive disorders
   1. Education
   2. Medical evaluation
   3. Abstinence
   4. Individual and group therapy
   5. Family therapy
   6. Twelve-step programs

IV. Pharmacological Treatment of Excessive Behavior
A. Treatment focuses on:
   1. Intoxication
   2. Withdrawal - detoxification
   3. Relapse
B. Pharmacological treatments for intoxication
   1. Drug antagonists - block effect of drug; generally little effect in its own
      a. Rationale: Direct blockade of reinforcing action
      b. Problems: Competitive interaction, compliance, compensation
   2. Drug agonists - mimics drug
      a. Rationale: indirect, pharmacokinetic blockade of reinforcing action
      b. Problems: overdose and continued dependence
   3. Possible treatments
      a. Naltrexone (Trexane, ReVia, Vivitrol)
      b. Antidepressant medications
C. Pharmacological treatments for detoxification
   1. Drug-specific withdrawal treatments
      a. Alcohol (Benzodiazepines - Librium)
      b. Nicotine (gum and patch)
      c. Nicotine (Varenicline -Chantix)
   2. General withdrawal treatments
      a. Clonidine (Catapress)
      b. Antidepressant medications
D. Relapse
   1. Antabuse model
a. Disulfiram (Antabuse) and alcoholism
b. Issue of compliance

2. Anti-craving (decrease positive reinforcement)
   a. Alcohol- Naltrexone (ReVia)
   b. Excessive sexual behavior- Antidepressant medications

3. Anti-craving (decrease negative reinforcement)
   a. Acamprosate (Campral)
I. Neurotransmitters
   A. Central Nervous System
      1. Basic parts of the neuron- Cell body, dendrite, axon
      2. Synapse- presynaptic terminal, postsynaptic terminal, and receptor
   B. Neuropharmacology:
      1. Physiology of neurotransmission- Steps in synaptic transmission
         a. Action potential
         b. Transmitter release
         c. Receptor activation
         d. Neurotransmitter inactivation
      2. Sites of Rewarding Drug Action- Dopamine Synapse as Prototype
         a. Neurotransmitter release
         b. Neurotransmitter reuptake
         c. Receptor agonist or antagonist action

II. Neurochemistry of Drug Reward: Nicotine and Alcohol
   A. Mesolimbic dopamine system
      1. Ventral Tegmental Area (VTA)
      2. Nucleus Accumbens
   B. Opioid peptide system
      1. Ventral Tegmental Area (VTA)
      2. Nucleus Accumbens
      3. Amygdala

III. Neural Circuitry of Excessive Behavior
   A. Medial forebrain bundle
      1. Brain stimulation reward
      2. Drug effects and drug withdrawal effects
   B. Basal ganglia
      1. Involved in “gating” information traveling from the cortex to the thalamus and back up to cortical regions responsible for expressing thoughts, sensation, and movements
      2. Brain region implicated in ADHD, Huntington’s, OCD, and Tourette’s
   C. Extended amygdala
      1. Neural circuit of excessive behavior
      2. Brain region implicated in reinforcement
         a. Positive- Binge/ Intoxication
         b. Negative- Withdrawal/ Negative affect
         c. Conditioned- Preoccupation/ Anticipation

V. Stressors, Stress, and Homeostasis
   A. Stress
      1. The response to any common (nonspecific) demand on the body (Hans Selye)
      2. Alteration in psychological homeostatic processes (Susan Burchfield)
   B. Homeostasis
      1. State of equilibrium of the internal environment of the body that is maintained by dynamic processes of feedback and regulation
      2. Adaptation to chronic drug use
3. Hedonic adaptation- Opponent process theory
   a. “A” Process
   b. “B” Process
C. Allostasis
   1. Stability through change
   2. Altered set point

V. Biology of the Stress Response
   A. Adrenal gland- Corticosteroids
      1. Glucose metabolism
         a. Increases in blood sugar
         b. Increased storage of glycogen in liver
         c. Production of glucose from protein (gluconeogenesis)
         d. Decreased uptake of glucose into tissue
      2. Lipid metabolism
         a. Dramatic redistribution of body fat
         b. Breakdown of lipids
      3. Mineral and water balance- mineralcorticoids
         a. Reabsorption of sodium (Na+) by kidney
         b. Increase in body water
   B. Pituitary gland- Adrenocorticotropic (ACTH)
      1. ACTH stimulates the adrenal cortex to produce corticosteroids
      2. ACTH is released following stimulation by hypothalamic corticotropin releasing factor
   C. Hypothalamus, medulla, amygdala- CRF
      1. Hypothalamus
         a. Activation of endocrine (hormonal) stress response
         b. Stimulates the release of ACTH from pituitary
      2. Medulla
         a. Activation of sympathetic nervous system
         b. Stimulates nerve leading to the adrenal medulla
         c. Release of adrenaline
      3. Amygdala
         a. Important for coordinating behavioral responses to stressors
         b. May be important in aspects of self-regulation failure

VI. From Moderation to Spiraling Distress
   A. Within system neurochemical changes
      1. Dopamine decreases
      2. Opioid peptides decrease
   B. Between system neurochemical changes
      1. CRF increases
Table 1. Changes in Affect Before, During and After Each Stimulation (Self-dosing with opiates) for the first few experiences and after many experiences

<table>
<thead>
<tr>
<th>Period</th>
<th>First Few</th>
<th>After many</th>
</tr>
</thead>
<tbody>
<tr>
<td>Before</td>
<td>Resting state</td>
<td>Craving</td>
</tr>
<tr>
<td>During</td>
<td>Rush, euphoria</td>
<td>Contentment</td>
</tr>
<tr>
<td>After</td>
<td>Craving</td>
<td>Abstinence-agony</td>
</tr>
<tr>
<td></td>
<td>Resting state</td>
<td>Craving</td>
</tr>
</tbody>
</table>

Table 2. Changes in Affect Before, During and After Each Stimulation (Social attachment in ducklings) for the first few experiences and after many experiences

<table>
<thead>
<tr>
<th>Period</th>
<th>First Few</th>
<th>After many</th>
</tr>
</thead>
<tbody>
<tr>
<td>Before</td>
<td>Contentment</td>
<td>Some distress</td>
</tr>
<tr>
<td>During</td>
<td>Excitement</td>
<td>Following</td>
</tr>
<tr>
<td>After</td>
<td>Distress</td>
<td>Intense distress</td>
</tr>
<tr>
<td></td>
<td>Contentment</td>
<td>Some distress</td>
</tr>
</tbody>
</table>
1. Dopamine is made in the cell body

2. Dopamine is shipped down the axon

3. Dopamine is released from the terminal

4. Dopamine stimulates dopamine receptors
I saw Kazak out of the corner of my right eye. His eyes were pinwheels. His teeth were white daggers. His slobber was cyanide. His blood was nitroglycerine.

He was floating toward me like a zeppelin, hanging lazily in the air.

My eyes told my mind about him.

My mind sent a message to my hypothalamus, told it to release the hormone CRF into the short vessels connecting my hypothalamus and my pituitary gland.

The CRF inspired my pituitary gland to dump the hormone ACTH into my bloodstream. My pituitary had been making and storing ACTH for just an occasion. And nearer and nearer the zeppelin came.

And some of the ACTH in my bloodstream reached the outer shell of my adrenal gland, which had been making and storing glucocorticoids for emergencies. My adrenal gland added the glucocorticoids to my bloodstream. They went all over my body, changing glycogen into glucose. Glucose was muscle food. It would help me fight like a wildcat or run like a deer.

And nearer and nearer the zeppelin came.

My adrenal gland gave me a shot of adrenaline, too. I turned purple as my blood pressure skyrocketed. The adrenaline made my heart go like a burgler alarm. It also stood my hair on end. It also cause coagulants to pour into my bloodstream, so in case I was wounded, my vital juices wouldn’t drain away.

Everything my body had done so far fell within normal operating procedures for a human machine. But my body took one defensive measure which I am told was without precedent in medical history. It may have happened because some wire short-circuited or some gasket blew. At any rate, I also retracted my testicles into my abdominal cavity, pulled them into my fuselage like the landing gear of an airplane. And now they tell me that only surgery will bring them down again.

Kurt Vonnegut, Jr. Breakfast of Champions