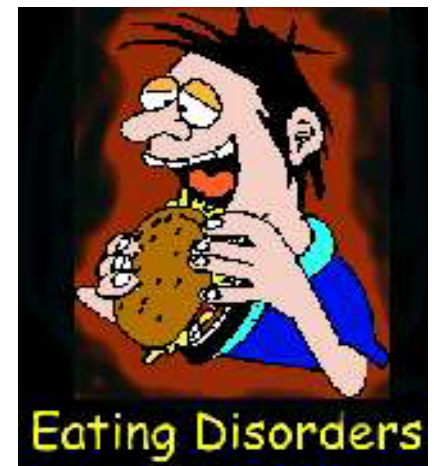


Eating Disorders and Impulse-Control Disorders

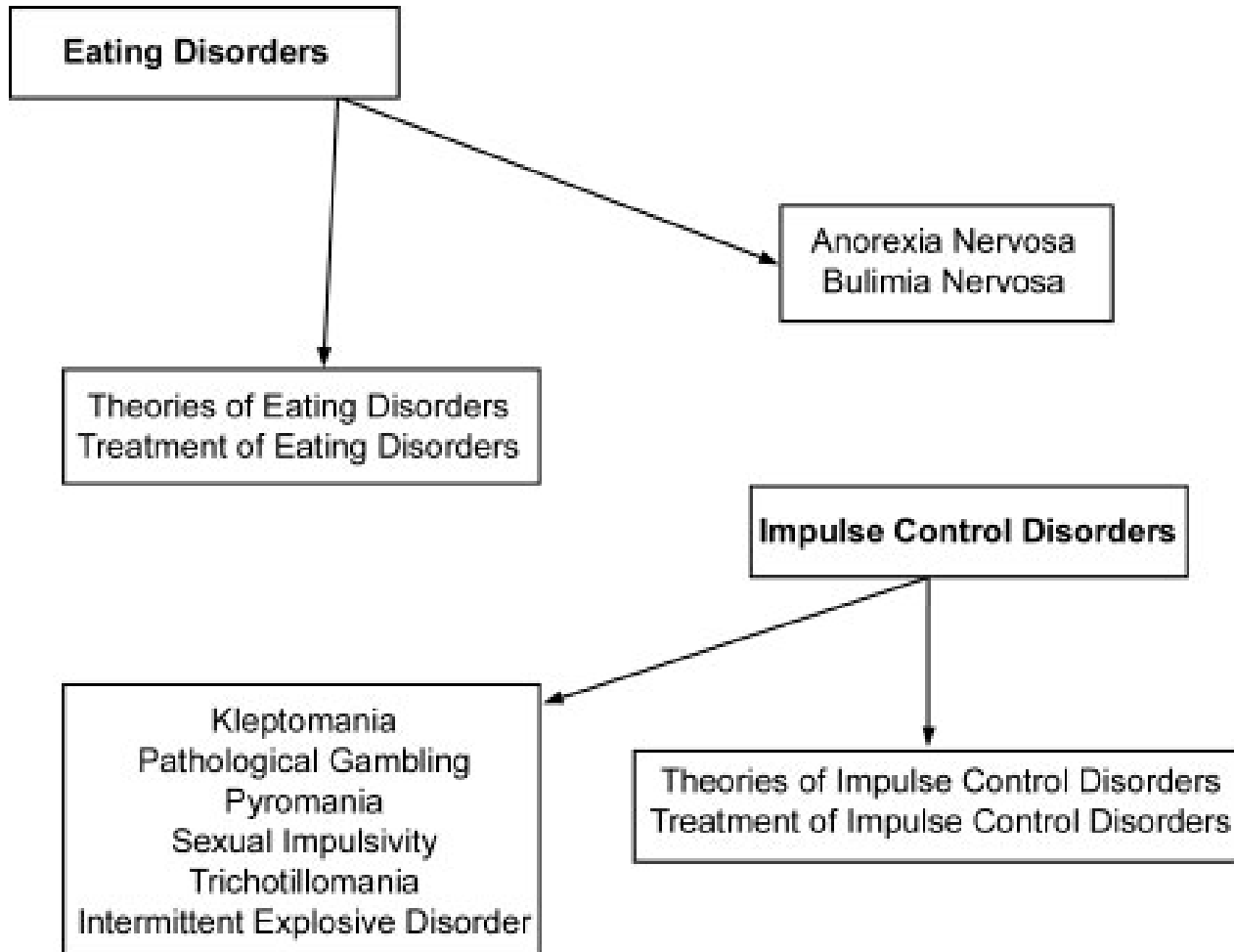
Chapter 14:



CHAPTER

EATING DISORDERS AND IMPULSE-CONTROL DISORDERS







Eating Disorders



Anorexia Nervosa

- Eating disorder characterized by an inability to maintain normal weight, an intense fear of gaining weight, and distorted body perception.



**I'm really fine mom,
all my friends diet too.**

Anorexia Nervosa

- Refuse/unable to maintain 85 % of expected weight for frame, height.
- Intense fear of gaining weight, though underweight.
- Distorted perception of weight or body shape.
- Amenorrhoea.

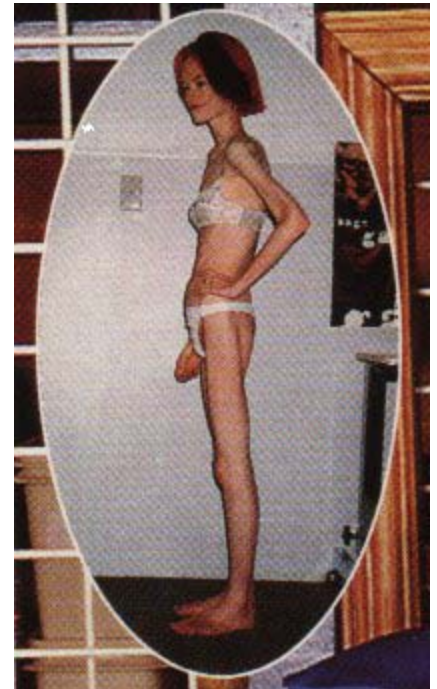


Effects of **Anorexia Nervosa**

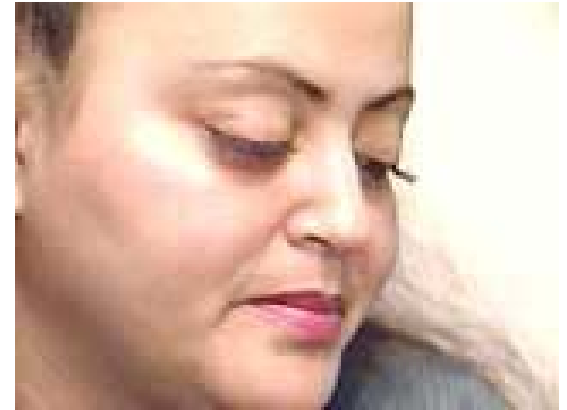
As self-starvation continues, bodily signs of physical disturbance become more evident.

For example:

- Yellowing of the skin.
- Impaired organ functioning.
- Death (1 in 10).



Bulimia Nervosa



- Eating disorder involving alternation between eating large amounts of food in a short time, then compensating by vomiting or other extreme actions to avoid weight gain

Bulimia Nervosa

BINGES:

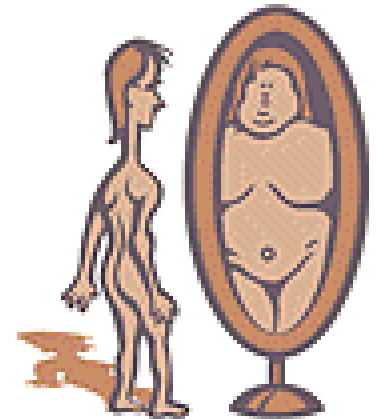
Episodes of eating large amounts of food, characterized by:

1. in a 2-hour period, eating an amount much greater than others would eat;
2. feeling a lack of control over what or how much is being eaten.



Bulimia Nervosa

- Compensating behaviors
- Purging type – try to force out of their bodies what they've just eaten by
 - vomiting
 - administering enemas
 - taking laxatives or diuretics
- Nonpurging type – try to compensate by fasting or overexercising.



Effects of Bulimia Nervosa

- Ipecac Syrup, if used regularly to induce vomiting, has toxic effects.
- Dental decay.
- Enlarged salivary glands.
- Skin calluses on hands that brush against teeth in the vomiting process.
- Menstrual irregularity is common.
- Laxatives, Diuretics, and Diet Pills also have toxic effects over time.
- Gastrointestinal damage may be permanent.



ANOREXIA AND BULIMIA

- **Prevalence:** Anorexia - .5 to 3.7 percent of women; Bulimia - 5 to 15 percent girls and young women
- **Differences:** Anorexics have distorted body image, bulimics have accurate body image; anorexics significantly below normal weight, bulimic's weight is average or above-average
- **Medical complications:** Life-threatening purging complications; menstrual irregularity, dehydration, metabolic imbalance, gastrointestinal damage

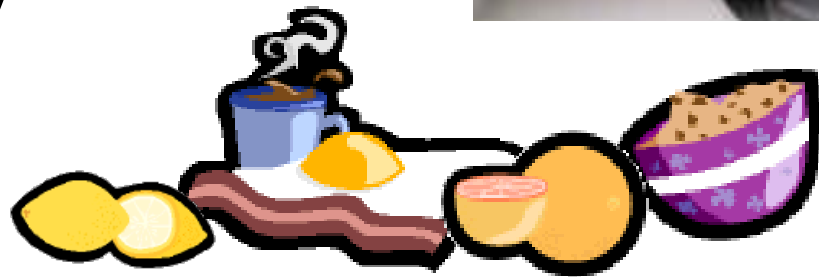
Theories of Eating Disorders

- **Biological** - Imbalance in serotonin and norepinephrine neurotransmitter systems.
- **Psychological** - Turn to food to escape inner turmoil and pain; from cognitive standpoint, over time get trapped in eating patterns.
- **Sociocultural** - Dysfunctional family functioning and societal obsession with food.



Treatment of Eating Disorders

- Combination of approaches
- Medication
- Psychotherapy
 - Cognitive/Behavioral
 - Interpersonal Therapy
 - Family Therapy



TREATMENT OF EATING DISORDERS

- Therapists have found **multifamily therapy** to be particularly effective.
- Several families participate in group sessions together.



Body Image Program Reduces Onset Of Obesity And Eating Disorders

- ScienceDaily (Apr. 30, 2008) — Oregon Research Institute scientist Eric Stice, Ph.D. and his colleagues have found that their obesity prevention program reduced the risk for onset of eating disorders by 61 percent and obesity by 55 percent in young women. These effects continued for as long as 3 years after the program ended. In their research on eating disorders, Oregon Research Institute (ORI) scientists help young women reduce the influence of the "thin ideal," which is described as associating success and happiness with being thin.
- Oregon Research Institute (2008, April 30). Body Image Program Reduces Onset Of Obesity And Eating Disorders. *ScienceDaily*. Retrieved May 5, 2008, from <http://www.sciencedaily.com/releases/2008/04/080429151134.htm>

Family-Based Treatment and Supportive Psychotherapy for Adolescent Bulimia Nervosa

- Daniel le Grange, PhD; Ross D. Crosby, PhD; Paul J. Rathouz, PhD; Bennett L. Leventhal, MD
- *Arch Gen Psychiatry*. 2007;64:1049-1056.
- **Context** Evidenced-based treatment trials for adolescents with bulimia nervosa are largely absent. **Objective** To evaluate the relative efficacy of family-based treatment (FBT) and supportive psychotherapy (SPT) for adolescents with bulimia nervosa.
- **Design** Randomized controlled trial.
- **Setting** The University of Chicago from April 1, 2001, through June 30, 2006.
- **Participants** Eighty patients, aged 12 to 19 years, with a *DSM-IV* diagnosis of bulimia nervosa or a strict definition of partial bulimia nervosa.
- **Interventions** Twenty outpatient visits over 6 months of FBT or SPT. Participants were followed up at 6 months posttreatment.

Family-Based Treatment and Supportive Psychotherapy for Adolescent Bulimia Nervosa

- **Main Outcome Measures** Abstinence from binge-and-purge episodes as measured by the Eating Disorder Examination. Secondary outcome measures were Eating Disorder Examination binge-and-purge frequency and Eating Disorder Examination subscale scores.
- **Results** Forty-one patients were assigned to FBT and 39 to SPT. Categorical outcomes at posttreatment demonstrated that significantly more patients receiving FBT (16 [39%]) were binge-and-purge abstinent compared with those receiving SPT (7 [18%]) ($P = .049$). Somewhat fewer patients were abstinent at the 6-month follow-up; however, the difference was statistically in favor of FBT vs SPT (12 patients [29%] vs 4 patients [10%]; $P = .05$). Secondary outcome assessment, based on random regression analysis, revealed main effects in favor of FBT on all measures of eating pathological features ($P = .003$ to $P = .03$ for all).
- **Conclusions** Family-based treatment showed a clinical and statistical advantage over SPT at posttreatment and at 6-month follow-up. Reduction in core bulimic symptoms was also more immediate for patients receiving FBT vs SPT.



Impulse- Control Disorders

IMPULSE-CONTROL DISORDERS

These disorders involve disturbances in the ability to regulate specific impulses not attributable to other *DSM-IV* diagnoses.



IMPULSE CONTROL DISORDERS

- **GENERAL CHARACTERISTICS** -
Repeatedly engage in harmful behaviors,
unable to stop, feel desperate if they can't
carry out behavior

Kleptomania



An impulse-control disorder that involves the persistent urge to steal.

The act of stealing excites them. The object stolen is not particularly desired.

Stealing releases tension, although the urge feels unpleasant, senseless.

Kleptomania

The lack of interest in the stolen item is the main feature that differentiates a kleptomaniac from a typical shoplifter or burglar.



Pathological Gambling

An impulse-control disorder involving the persistent urge to gamble.



Pathological Gambling

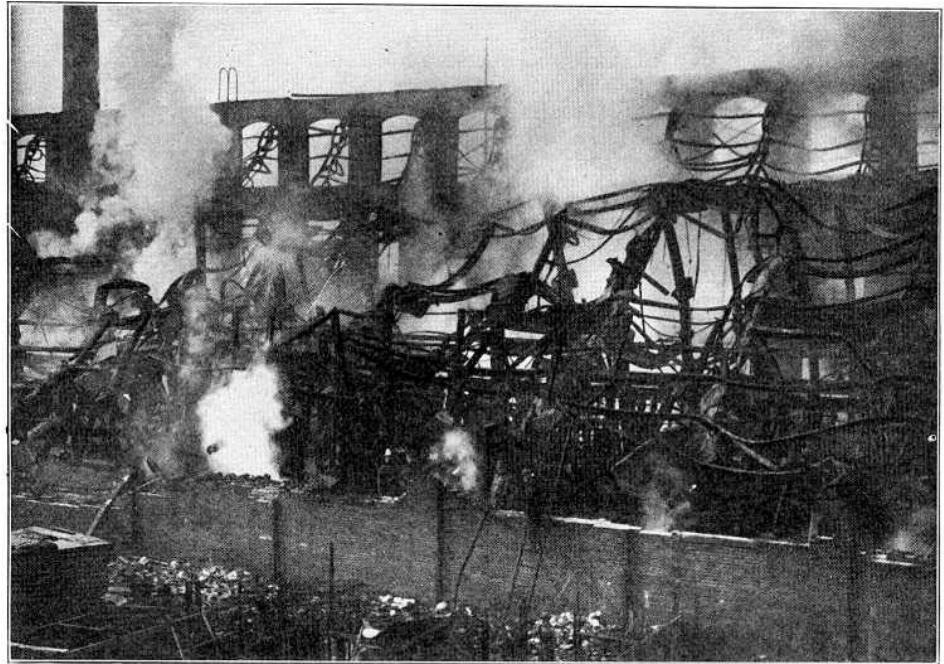
- Seriously aggravated by the internet.



http://blog.taragana.com/wp-content/uploads/2009/06/online-gambling_228x219.jpg 7/30/2009

Pyromania

Urge to prepare, set, watch fires for fun (unlike arsonists motivated by greed or revenge).



An impulse-control disorder involving the persistent and compelling urge to start fires.

PYROMANIA

- Intense urge to prepare, set, watch fires for fun (unlike arsonists motivated by greed or revenge)
- Intense pleasure, gratification, relief when fire starts
- Rooted in childhood problems
- Adults often have substance abuse and interpersonal problems
- Behavioral, cognitive, and psychodynamic therapy may help
- Pyromaniacs at risk for arrest for arson

Sexual Impulsivity

Although this is not an official *DSM-IV* diagnosis, symptoms of sexually impulsive people are similar to those of impulse-control disorders.

Clinicians have seen growing numbers of clients looking for help to contain uncontrollable sexuality.



SEXUAL IMPULSIVITY

- Driven to engage in frequent, indiscriminate sex.
- Often feel bad after they engage in sex.
- May extend into violent deviance, like rape, rape/murders, serial killing.
- Usually also have substance abuse disorder and depression; some may have dissociative symptoms.



SEXUAL IMPULSIVITY

- Driven to engage in frequent, indiscriminate sex
- Usually feel bad after they engage in sex
- May extend into violent deviance, like rape, rape/murders, serial killing
- Usually also have substance abuse disorder and depression; some may have dissociative symptoms
- Treatment -Aversive conditioning, behavioral contract, insight-oriented therapy; treat co-occurring disorders

Trichotillomania



The compulsion to pull out one's hair.

- Co-occurring disorders - depression, anxiety disorder, substance abuse, eating disorder.
- Biological base - Related to OCD (abnormalities in basal ganglia, motor control area).
- Behavioral base - Rooted in environmental cues, do it to relieve tension.
- Sociocultural - Child may feel abandoned, neglected, emotionally overburdened.

TRICHOTILLOMANIA

- Intense desire to pull out body hair (some may swallow it) when alone
- Co-occurring disorders - depression, anxiety disorder, substance abuse, eating disorder
- Biological base - Related to OCD (abnormalities in basal ganglia, motor control area)
- Behavioral base - Rooted in environmental cues, do it to relieve tension
- Sociocultural - Child may feel abandoned, neglected, emotionally overburdened

Intermittent Explosive Disorder

An impulse-control disorder involving an inability to hold back urges to express strong angry feelings and associated violent behaviors.

- Over 90 percent have co-occurring mood disorder.
- Other co-occurring disorders include substance problems and anxiety.

INTERMITTENT EXPLOSIVE DISORDER

- Inability to resist assault or other destructive acts
- May appear to be under a spell, like a seizure state; feel something about to happen
- Over 90 percent have co-occurring mood disorder
- Other co-occurring disorders - Substance use and anxiety

THEORIES - INTERMITTENT EXPLOSIVE DISORDER

- **BIOLOGICAL** - Abnormal serotonergic system functioning; alcohol complicates the picture
- **PSYCHOLOGICAL**- The fear they instill reinforces their behavior (operant conditioning)
- **SOCIOCULTURAL**- May have arisen as a result of family influence, but is used to control family and relationships
- **TREATMENT** - Medication and therapy

Internet Addiction

- An impulse control condition in which an individual feels irresistible need for Internet-based activities.
- Although not included in the DSM-IV-TR, Internet addiction shares characteristics of impulse-control disorders.



http://www.crunchgear.com/wp-content/photos/internet_addiction.jpg 7/30/2009

“Cyber-disorders”

An informal diagnostic term for clients whose primary clinical problem involves the Internet.



http://spyhunter007.com/Images/internet_addiction.jpg Friday, July 31, 2009

“Cyber-disorders”

Subtypes:

- cyber-sexual addiction
- cyber-relation addiction
- net compulsions (e.g., online gambling, shopping, trading)
- information overload
- compulsive online game playing

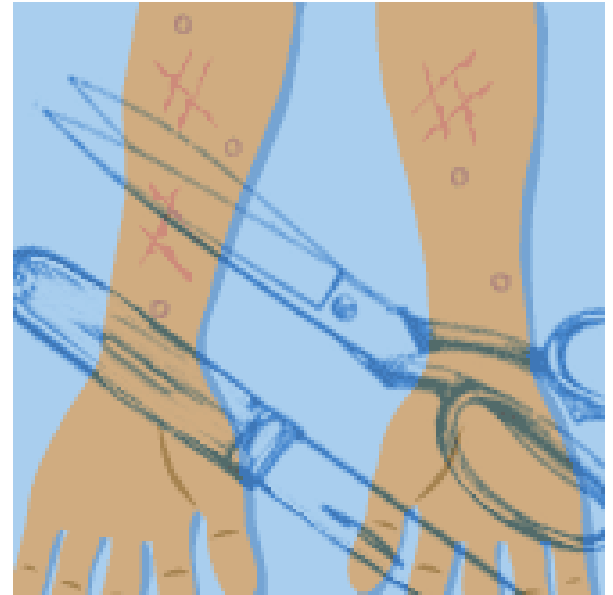


http://www.aphroditewomenshealth.com/news/img/internet_addiction2.jpg Friday, July 31, 2009

Eating Disorders and Impulse- Control Disorders: The Biopsychosocial Perspective

- These disorders involve people's struggles to control strong urges to act in ways that are destructive or detrimental to their existence.
- Experts have proposed they fall on an "affective spectrum" that includes other disorders with obsessive or compulsive qualities.

Cutting



Cutting

- **Self-Cutting (Self-harm)**
-
- General
- and Eating Disorders
- Hair Pulling and Skin Picking
- Physiology
- Treatment
-

Self-mutilation in clinical and general population samples: prevalence, correlates, and functions

- Of almost 1000 randomly selected, stratified US adults, the prevalence of self-injury in the general population, male and female, was 4%, and was 21% in a psychiatric clinic group. There was a strong correlation with childhood sexual or physical abuse. The practice reportedly reduced anger at self and others, fear, emptiness, hurt, loneliness and sadness.
- 1998 Am J Orthopsychiatry 68;4:609-20
- Briere, J. and Gil, E.

The coming of age of self-mutilation

- Review of diagnosis, symptoms, etiology and treatment. Self-mutilation refers to the "deliberate, direct destruction or alteration of body tissue without conscious suicidal intent", and is a "self-help effort providing rapid but temporary relief from feelings of depersonalization, guilt, rejection, boredom, hallucinations, sexual preoccupations, and chaotic thoughts."
- 1998 J Nerv Ment Dis 186;5:259-68
- Favazza, A. R.

The identification and management of self-mutilating patients in primary care

- Self-cutters describe a period of depersonalization leading to painless cutting, followed by relaxation and repersonalization after bleeding. Complications include social rejection due to the behavior as well as the resulting disfigurement. Primary care providers can identify and intervene by establishing a trusting relationship.
- 1997 Nurse Pract 22;5:151-3, 159-65
- Dallam, S. J.

Female habitual self-mutilators

- "Data are presented on 240 female habitual self-mutilators. The typical subject is a 28-year-old Caucasian who first deliberately harmed herself at age 14. Skin cutting is her usual practice, but she has used other methods such as skin burning and self-hitting, and she has injured herself on at least 50 occasions. Her decision to self-mutilate is impulsive and results in temporary relief from symptoms such as racing thoughts, depersonalization, and marked anxiety. She now has or has had an eating disorder, and may be concerned about her drinking. She has been a heavy utilizer of medical and mental health services, although treatment generally has been unsatisfactory. In desperation over her inability to control her self-mutilative behavior this typical subject has attempted suicide by a drug overdose."
- 1989 Acta Psychiatr Scand 79;3:283-9
- Favazza, A. R. and Conterio, K.

Coping and problem solving of self-mutilators

- Studies in male self-cutters showed they had less perceived control over their options, and used avoidance as a coping behavior.
- 1997 J Clin Psychol 53;2:177-86
- Haines, J. and Williams, C. L.

Reducing repeated deliberate self-harm

- Deliberate self-harm may be seen as a temporary escape from an intolerable situation or psychic or physical pain, a way of communicating distress or anger, or a way to try to influence the behavior of others. Many DSH patients have decreased problem-solving skills, so they can't think of an alternative solution. 60-70% are significantly depressed, and 20% have an alcohol dependency. 25% of suicide victims presented with an episode of DSH in the previous year.
- 2002 Practitioner 246;1632:164-6, 169-72
- Sinclair, J. M. and Hawton, K.

Self-cutting after rape

- Case report of three women who began cutting themselves after rape with subsequent post traumatic stress disorder. One of the women had been a bright, outgoing college student with no previous psych history, who had been threatened with death if she told anyone, and used cutting as a way to release unbearable tension due to rape-related flashbacks.
- 1989 Am J Psychiatry 146;6:789-90
- Greenspan, G. S. and Samuel, S. E.

Self-injurious behaviour. Psychopathological and nosological characteristics in subtypes of self-injurers

- Review of self-injurious behavior in a sample of 54 female psychiatric inpatients, in relation to impulsivity, eating disorders, personality and schizophrenia.
- 1995 Acta Psychiatr Scand 91;1:57-68
- Herpertz, S.
-
- 9245269 JA

Why patients mutilate themselves

- Discusses self-mutilation as the "deliberate destruction or alteration of body tissue without conscious suicidal intent" as a purposeful act of self-help, via interviews with patients.
- 1989 Hosp Community Psychiatry 40;2:137-45
- Favazza, A. R.
-
- 9740977 R,T

The functions of self-mutilation

- Review of literature and presentation of six possible etiologic models and treatments for this disorder.
- 1998 Clin Psychol Rev 18;5:531-54
- Suyemoto, K. L.
-
- 9029348 JA

Self-mutilation and eating disorders

- Discusses the correlation between eating disorders and self-mutilation, as a manifestation of an impulse control disorder.
- 1989 Suicide Life Threat Behav 19;4:352-61
- Favazza, A. R., DeRosear, L., and Conterio, K.

Self-injurious behavior in anorexia nervosa

- Of 236 patients with anorexia, over 60% reported some form of self-injurious behavior, including skin cutting/burning, hair pulling or severe nail biting, classified as either impulsive or compulsive. Childhood sexual abuse or anxiety significantly predicted impulsive self-injury, whereas obsessionality and younger age were associated with compulsive self-injury. Those with both impulsive and compulsive components had a 72% drop-out rate in treatment.
- 2000 J Nerv Ment Dis 188;8:537-42
- Favaro, A. and Santonastaso, P.

Self-mutilation, anorexia, and dysmenorrhea in obsessive compulsive disorder

- Article describes 19 female patients with a similar biphasic pattern, consisting of anorexia/amenorrhea followed by return of menses over time with subsequent bulimia, obsessive-compulsive disorder and self-mutilation. 70% reported childhood sexual abuse.
- 1995 Int J Eat Disord 17;1:33-8
- Yaryura-Tobias, J. A., Neziroglu, F. A., and Kaplan, S.

Depersonalization disorder and self-injurious behavior

- "Depersonalization is a subjective sense of unreality regarding various aspects of the self, experienced as disconnectedness from one's own body, mentations, feelings, or actions." This paper reviews depersonalization as a possible serotonin disorder, and its possible connection to self-injurious behaviors.
- 1995 J Clin Psychiatry 56 Suppl 4;36-9; discussion 40
- Simeon, D., Stein, D. J., and Hollander, E.
-
- 1734743 MCC

Hair Pulling and Skin Picking

Self-mutilation in personality disorders: psychological and biological correlates

- The degree of self-mutilatory behavior in 26 patients was significantly correlated with impulsivity, chronic anger, somatic anxiety, and a biochemical serotonin dysfunction.
- 1992 Am J Psychiatry 149;2:221-6
- Simeon, D., Stanley, B., Frances, A., Mann, J. J., Winchel, R., and Stanley, M.
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Clinical profile, comorbidity, and treatment history in 123 hair pullers: a survey study

- Trichotillomania, an irresistible urge to pull one's hair, typically begins about age 11, and usually involves the scalp. Most do not seek treatment.
- 1995 J Clin Psychiatry 56;7:319-26
- Cohen, L. J., Stein, D. J., Simeon, D., Spadaccini, E., Rosen, J., Aronowitz, B., and Hollander, E.

Comorbid self-injurious behaviors in 71 female hair-pullers: a survey study

- 54% of female hair pullers engaged in other self-injury behaviors, and that group had a more significant history of depression and suicidality.
- 1997 J Nerv Ment Dis 185;2:117-9
- Simeon, D., Cohen, L. J., Stein, D. J., Schmeidler, J., Spadaccini, E., and Hollander, E.

Trichotillomania and skin-picking: a phenomenological comparison

- Hair-pulling and skin picking share similar patient characteristics, and similar treatment may benefit both.
- 2002 *Depress Anxiety* 15;2:83-6
- Lochner, C., Simeon, D., Niehaus, D. J., and Stein, D. J.
-
- 9048705 JA

Trichotillomania and obsessive-compulsive disorder

- Review of hair-pulling in the context of an obsessive-compulsive disorder, versus an impulsive disorder.
- 1995 J Clin Psychiatry 56 Suppl 4;28-34; discussion 35
- Stein, D. J., Simeon, D., Cohen, L. J., and Hollander, E.
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Physiology

The psychophysiology of self-mutilation

- Physiologic data on self-cutters showed significant increases in heart rate, respiratory rate and skin resistance prior to an imagined act of self-harm, with all of these parameters dropping significantly during the act itself and subsequently. This was in contrast to the same group of self-cutters experiencing neutral or aggressive imagery, and to a group of non-self cutters experiencing self-harm imagery.
- 1995 J Abnorm Psychol 104;3:471-89
- Haines, J., Williams, C. L., Brain, K. L., and Wilson, G. V.

Self-mutilation in personality disorders: psychological and biological correlates

- The degree of self-mutilatory behavior in 26 patients was significantly correlated with impulsivity, chronic anger, somatic anxiety, and a biochemical serotonin dysfunction.
- 1992 Am J Psychiatry 149;2:221-6
- Simeon, D., Stanley, B., Frances, A., Mann, J. J., Winchel, R., and Stanley, M.

Treatment

The efficacy of problem-solving treatments after deliberate self-harm: meta-analysis of randomized controlled trials with respect to depression, hopelessness and improvement in problems

- Review of several trials showed that **brief problem-solving therapy significantly improved depression, hopelessness and treatment outcomes for deliberate self-harm patients.**
- 2001 Psychol Med 31;6:979-88
- Townsend, E., Hawton, K., Altman, D. G., Arensman, E., Gunnell, D., Hazell, P., House, A., and Van Heeringen, K.

Cognitive-behavior therapy for self-injurious skin picking. A case series

- Authors describe a successful **cognitive-behavioral therapy program of "habit reversal"** for patients with repetitive, ritualistic, or impulsive skin picking that leads to tissue damage.
- 2002 Behav Modif 26;3:361-77
- Deckersbach, T., Wilhelm, S., Keuthen, N. J., Baer, L., and Jenike, M. A.

Hypnosis with self-cutters

- Describes the **successful use of hypnosis via relaxation training and positive imagery with self-cutters**, helping them reduce anxiety and boost self-esteem and self-control.
- 1987 Am J Psychother 41;4:531-41
- Malon, D. W. and Berardi, D.

Coping by cutting

- Article describes a holistic program for self-cutters that includes music and art therapy, aromatherapy, physical exercise and relaxation techniques, as well as a **more tolerant view of why the injury takes place.**
- 1998 Nurs Stand 12;29:25-6
- Batty, D.

Self-mutilation: culture, contexts and nursing responses

- This paper discusses **negative nursing attitudes towards people who self-mutilate**, and suggests how to change perspective to a more collaborative approach.
- 1998 J Clin Nurs 7;2:129-37
- Clarke, L. and Whittaker, M.

Self-mutilating behavior

- Review of subtypes of self-mutilating behavior, how to identify at-risk adolescents, and appropriate nursing interventions.
- 1997 J Child Adolesc Psychiatr Nurs 10;3:35-40
- Kehrberg, C.

Psychosocial versus pharmacological treatments for deliberate self harm

- Review of studies on treatment of various self-harm problems shows **some help with psychotherapy as well as medication**, but due to the small number of inconsistently defined trials, specific recommendations are difficult.
- 2000 Cochrane Database Syst Rev2:CD001764
- Hawton, K., Townsend, E., Arensman, E., Gunnell, D., Hazell, P., House, A., and van Heeringen, K.

Self-injurious behaviour. Psychopathological and nosological characteristics in subtypes of self-injurers

- Review of self-injurious behavior in a sample of 54 female psychiatric inpatients, in relation to impulsivity, eating disorders, personality and schizophrenia.
- 1995 Acta Psychiatr Scand 91;1:57-68
- Herpertz, S.
-
- 9245269 JA

"Why don't you do it properly?" Young women who self-injure

- Interviews with four female teens who self-injure reveal that they consider this an adaptive alternative to suicide. Issues of communication and control are discussed.
- 1996 J Adolesc 19;2:111-9
- Solomon, Y. and Farrand, J.
-
- 11452679 R

Self-mutilation: review and case study

- Severe self-mutilation may occur when a person is under the delusional belief that a part of the body is causing trouble, is deformed, or needs to be sacrificed. Causes may include guilt, religious guilt, self-punishment, and gender dissatisfaction. An abrupt change in appearance (ie shaved head) may precede the injurious act.
- 2001 Int J Clin Pract 55;5:317-9
- Parrott, H. J. and Murray, B. J.
-
- 2729432 JA

Self-cutting after rape

- Case report of three women who began cutting themselves after rape with subsequent post traumatic stress disorder. One of the women had been a bright, outgoing college student with no previous psych history, who had been threatened with death if she told anyone, and used cutting as a way to release unbearable tension due to rape-related flashbacks.
- 1989 Am J Psychiatry 146;6:789-90
- Greenspan, G. S. and Samuel, S. E.
-
- 11060002 JA

Effect of death of Diana, princess of Wales on suicide and deliberate self-harm

- Following the death of Diana, princess of Wales, there was an increase in female deliberate self-harm of 65.1% in the following week, and increase in female suicides age 25-44 by 45.1% in the following month. Etiology was felt to be "amplification of personal losses or exacerbation of existing distress."
- 2000 Br J Psychiatry 177;463-6
- Hawton, K., Harriss, L., Simkin, S., Juszczak, E., Appleby, L., McDonnell, R., Amos, T., Kiernan, K., and Parrott, H.
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Many people think self-injury is just a form of attention-seeking

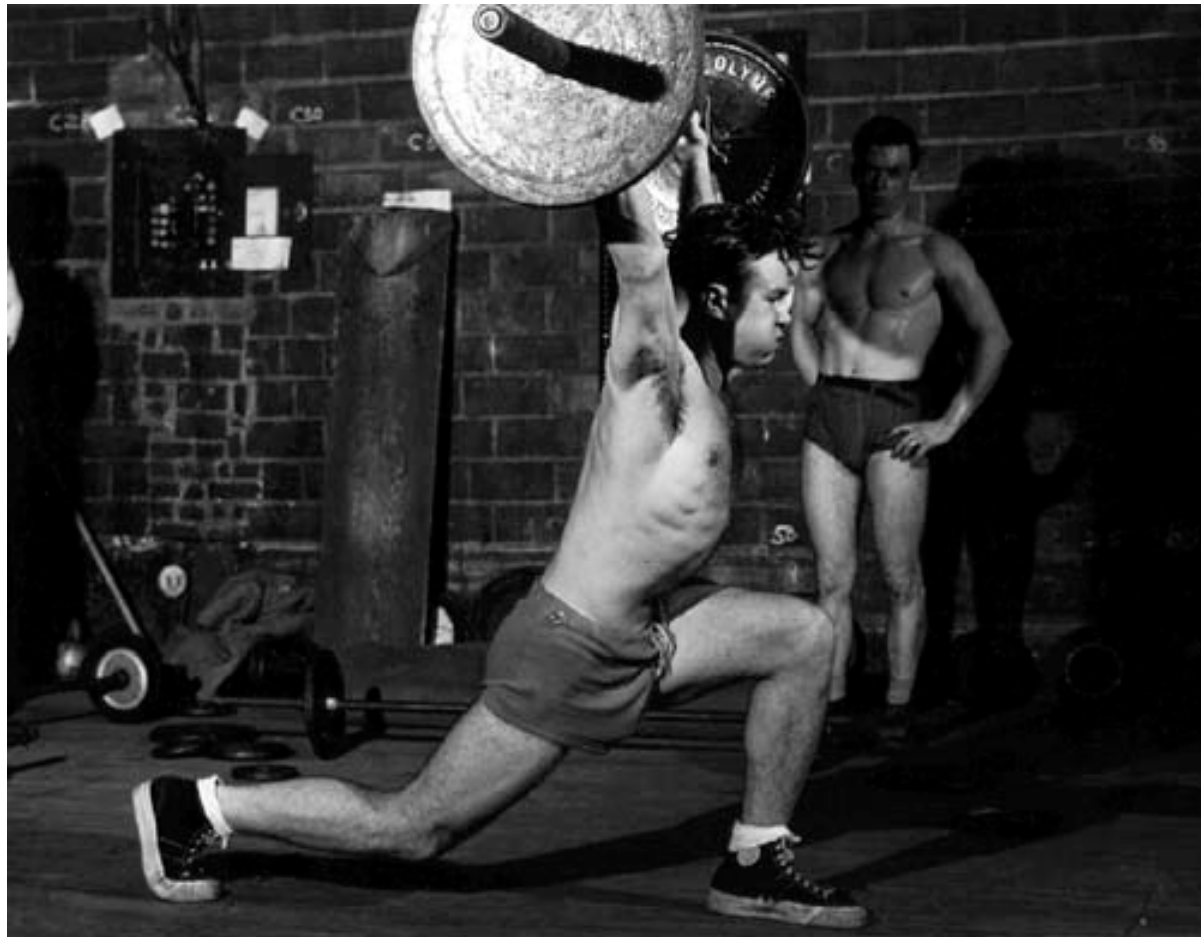
- A British nursing group who put together a holistic information pack on self-injury were inundated with requests from mental health workers, prisons, residential care, services for the homeless, schools and housing associations. They noted the extreme lack of readily available information, and started a global network with education conferences.
- 1998 Nurs Times 94;5:53
- Hogg, C. and Burke, M.
-
- 9355464 R,T

Weight Loss & Control



Eating Disorders

What do you know about D & E?



Key Concept

- Weight control is a balance.
- Calories taken in
- Calories expended.



Reasons for Weight Control

- Health
- Appearance
- Slightly different strategies for each



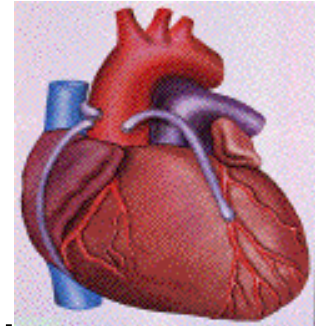
Extent of the Problem

- Estimated 97 million
- 50% of the population are overweight or obese.



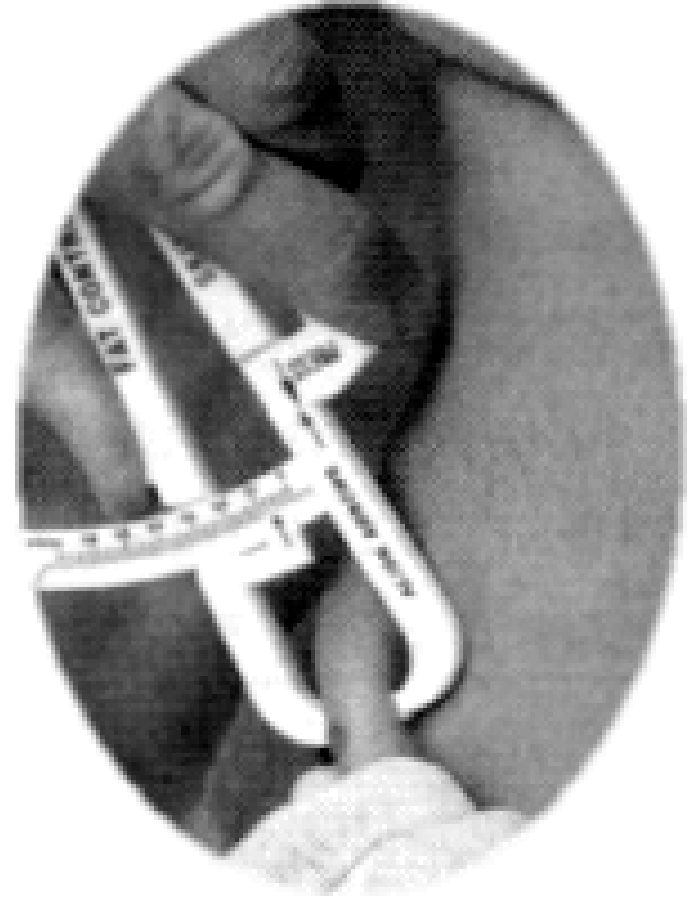
Health Consequences

- Hypertension
- Type 2 Diabetes
- Coronary Heart Disease
- Stroke
- Gallbladder Disease
- Osteoarthritis
- Sleep Apnea
- Respiratory Problems
- Cancer
 - Endometrial
 - Breast
 - Prostate
 - Colon
- Stigmatization
- Discrimination



Definitions

- Overweight = BMI 25-29.9
- Obese = BMI ≥ 30
- BMI = Body Mass Index
- BMI = $\text{weight (lb.)} / \text{height (in.)}^2 \times 703$



BMI

| Height | 60 | 61 | 62 | 63 | 64 | 65 | 66 | 67 | 68 | 69 | 70 | 71 | 72 | 73 | 74 | 75 | 76 | 77 | 78 | |
|--------|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|---|
| Weight | 80 | 16 | 15 | 15 | 14 | 14 | 13 | 13 | 13 | 12 | 12 | 11 | 11 | 11 | 11 | 10 | 10 | 10 | 9 | 9 |
| 85 | 17 | 16 | 16 | 15 | 15 | 14 | 14 | 13 | 13 | 13 | 12 | 12 | 12 | 11 | 11 | 11 | 10 | 10 | 10 | |
| 90 | 18 | 17 | 16 | 16 | 15 | 15 | 15 | 14 | 14 | 13 | 13 | 13 | 12 | 12 | 12 | 11 | 11 | 11 | 10 | |
| 95 | 19 | 18 | 17 | 17 | 16 | 16 | 15 | 15 | 14 | 14 | 14 | 13 | 13 | 13 | 12 | 12 | 12 | 11 | 11 | |
| 100 | 20 | 19 | 18 | 18 | 17 | 17 | 16 | 16 | 15 | 15 | 14 | 14 | 14 | 13 | 13 | 12 | 12 | 12 | 12 | |
| 105 | 21 | 20 | 19 | 19 | 18 | 17 | 17 | 16 | 16 | 16 | 15 | 15 | 14 | 14 | 13 | 13 | 13 | 12 | 12 | |
| 110 | 21 | 21 | 20 | 19 | 19 | 18 | 18 | 17 | 17 | 16 | 16 | 15 | 15 | 15 | 14 | 14 | 13 | 13 | 13 | |
| 115 | 22 | 22 | 21 | 20 | 20 | 19 | 19 | 18 | 17 | 17 | 16 | 16 | 16 | 15 | 15 | 14 | 14 | 14 | 13 | |
| 120 | 23 | 23 | 22 | 21 | 21 | 20 | 19 | 19 | 18 | 18 | 17 | 17 | 16 | 16 | 15 | 15 | 15 | 14 | 14 | |
| 125 | 24 | 24 | 23 | 22 | 21 | 21 | 20 | 20 | 19 | 18 | 18 | 17 | 17 | 16 | 16 | 16 | 15 | 15 | 14 | |
| 130 | 25 | 25 | 24 | 23 | 22 | 22 | 21 | 20 | 20 | 19 | 19 | 18 | 18 | 17 | 17 | 16 | 16 | 15 | 15 | |
| 135 | 26 | 26 | 25 | 24 | 23 | 22 | 22 | 21 | 21 | 20 | 19 | 19 | 18 | 18 | 17 | 17 | 16 | 16 | 16 | |
| 140 | 27 | 26 | 26 | 25 | 24 | 23 | 23 | 22 | 21 | 21 | 20 | 20 | 19 | 18 | 18 | 17 | 17 | 17 | 16 | |
| 145 | 28 | 27 | 27 | 26 | 25 | 24 | 23 | 23 | 22 | 21 | 21 | 20 | 20 | 19 | 19 | 18 | 18 | 17 | 17 | |
| 150 | 29 | 28 | 27 | 27 | 26 | 25 | 24 | 23 | 23 | 22 | 22 | 21 | 20 | 20 | 19 | 19 | 18 | 18 | 17 | |
| 155 | 30 | 29 | 28 | 27 | 27 | 26 | 25 | 24 | 24 | 23 | 22 | 22 | 21 | 20 | 20 | 19 | 19 | 18 | 18 | |
| 160 | 31 | 30 | 29 | 28 | 27 | 27 | 26 | 25 | 24 | 24 | 23 | 22 | 22 | 21 | 21 | 20 | 19 | 19 | 18 | |
| 165 | 32 | 31 | 30 | 29 | 28 | 27 | 27 | 26 | 25 | 24 | 24 | 23 | 22 | 22 | 21 | 21 | 20 | 20 | 19 | |
| 170 | 33 | 32 | 31 | 30 | 29 | 28 | 27 | 27 | 26 | 25 | 24 | 24 | 23 | 22 | 22 | 21 | 21 | 20 | 20 | |
| 175 | 34 | 33 | 32 | 31 | 30 | 29 | 28 | 27 | 27 | 26 | 25 | 24 | 24 | 23 | 22 | 22 | 21 | 21 | 20 | |
| 180 | 35 | 34 | 33 | 32 | 31 | 30 | 29 | 28 | 27 | 27 | 26 | 25 | 24 | 24 | 23 | 22 | 22 | 21 | 21 | |
| 185 | 36 | 35 | 34 | 33 | 32 | 31 | 30 | 29 | 28 | 27 | 27 | 26 | 25 | 24 | 24 | 23 | 23 | 22 | 21 | |
| 190 | 37 | 36 | 35 | 34 | 33 | 32 | 31 | 30 | 29 | 28 | 27 | 26 | 26 | 25 | 24 | 24 | 23 | 23 | 22 | |
| 195 | 38 | 37 | 36 | 35 | 33 | 32 | 31 | 31 | 30 | 29 | 28 | 27 | 26 | 26 | 25 | 24 | 24 | 23 | 23 | |
| 200 | 39 | 38 | 37 | 35 | 34 | 33 | 32 | 31 | 30 | 30 | 29 | 28 | 27 | 26 | 26 | 25 | 24 | 24 | 23 | |
| 205 | 40 | 39 | 37 | 36 | 35 | 34 | 33 | 32 | 31 | 30 | 29 | 29 | 28 | 27 | 26 | 26 | 25 | 24 | 24 | |
| 210 | 41 | 40 | 38 | 37 | 36 | 35 | 34 | 33 | 32 | 31 | 30 | 29 | 28 | 28 | 27 | 26 | 26 | 25 | 24 | |
| 215 | 42 | 41 | 39 | 38 | 37 | 36 | 35 | 34 | 33 | 32 | 31 | 30 | 29 | 28 | 28 | 27 | 26 | 25 | 25 | |
| 220 | 43 | 42 | 40 | 39 | 38 | 37 | 36 | 34 | 33 | 32 | 32 | 31 | 30 | 29 | 28 | 27 | 27 | 26 | 25 | |
| 225 | 44 | 43 | 41 | 40 | 39 | 37 | 36 | 35 | 34 | 33 | 32 | 31 | 31 | 30 | 29 | 28 | 27 | 27 | 26 | |
| 230 | 45 | 43 | 42 | 41 | 39 | 38 | 37 | 36 | 35 | 34 | 33 | 32 | 31 | 30 | 30 | 29 | 28 | 27 | 27 | |

BMI

| | |
|-------------------------|----------|
| Weight (in pounds) = | 176 |
| Height (in inches) = | 76.5 |
| Body Mass Index (BMI) = | 21.14195 |

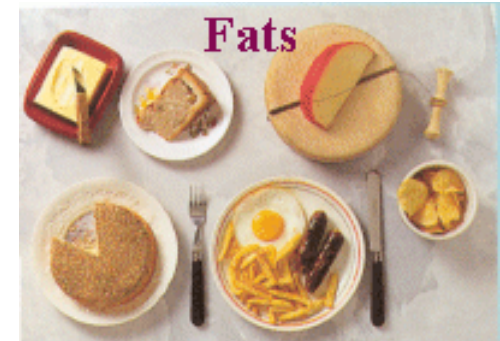
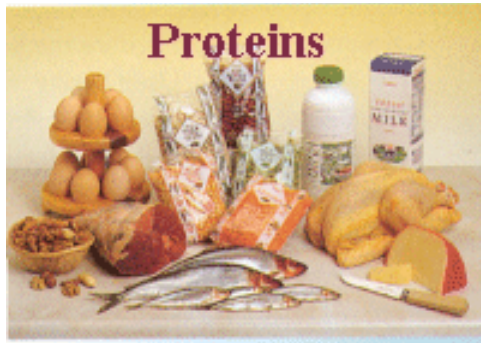


Strategies for Weight Control

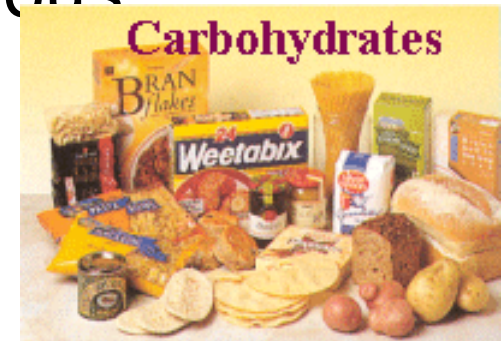
- Diet
- Exercise
- Behavioral Interventions
 - Self monitoring
 - Stimulus Control
 - Cognitive Restructuring
 - Stress Management
 - Social Support
 - Relapse Prevention



Diet



- Balanced diet is still the best bet
- Relatively low fat best
 - Eat more grams
 - Positive impact on health
- Deficit should be about 500-1000 Kcal/day
- Loss will be about 1.5 pounds/week
- Less than 800 Kcals/day is Dangerous
 - Not effective long-term
 - Develop gallstones



Diet

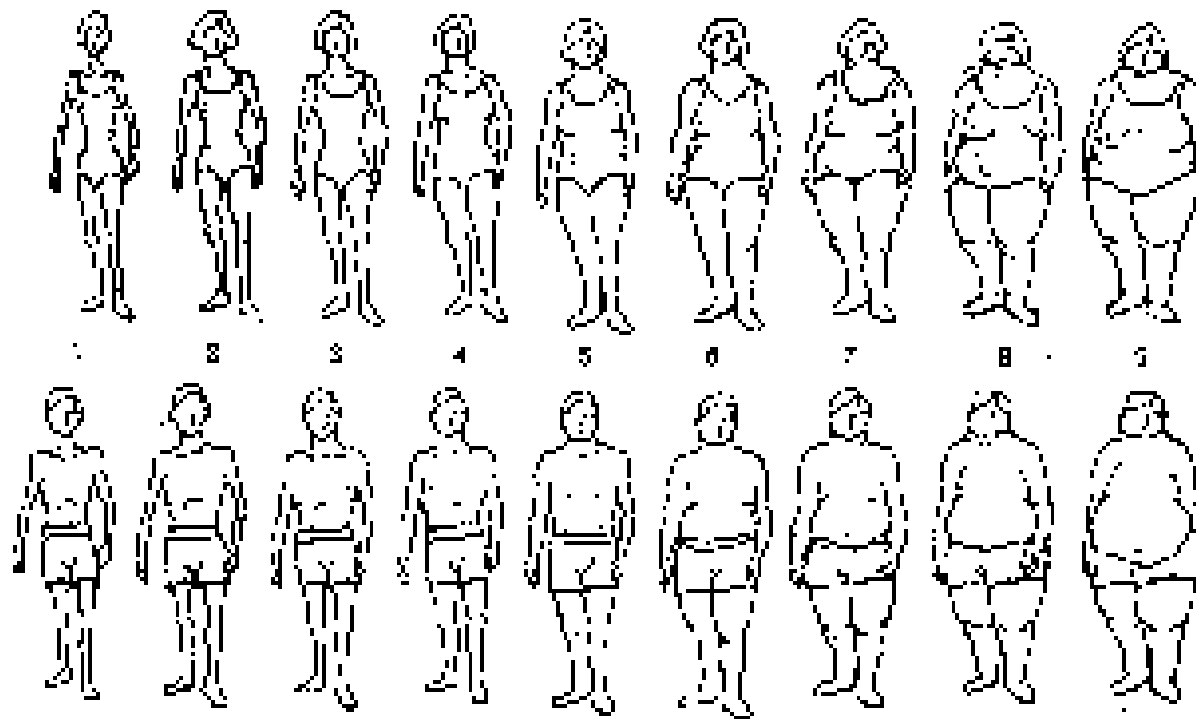
- Optimal Diet is
- 55% carbohydrates
- 15-20% protein
- No more than 25% fat



Future Diet Directions

- Research on leptin and other drugs
- Foods that are higher in satiation.
- Improvement in low fat & low calorie foods





BODY SIZE SURVEY

A. You are (gender):

1. Which number do you think is most attractive? _____

C. If you had to pick one of the other 28, which number is the most attractive to you? _____