



EXCEPTIONAL CARE. WITHOUT EXCEPTION.



School of Medicine



Clinical Addiction Research and Education

Principles of Addiction

Definitions, Public Health and Treatment

May 2013

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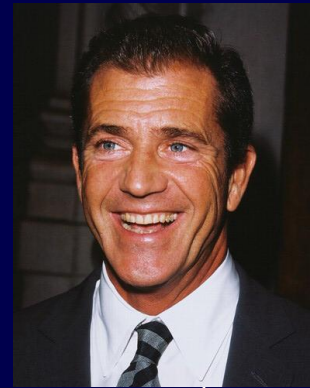
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CARE Unit

**Ray
Charles**



Mel Gibson



Betty Ford



**Whitney
Houston**

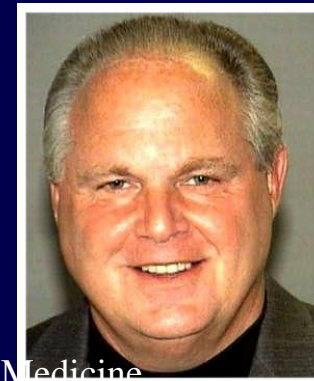


?

**Franklin D
Roosevelt**



**Rush
Limbaugh**



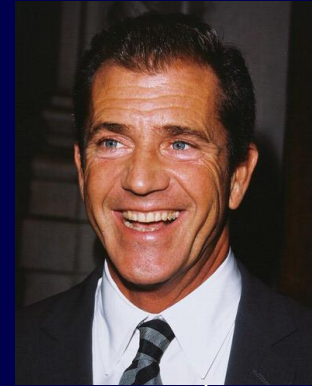
**Lindsay
Lohan**



**Ray
Charles**



Mel Gibson



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Houston**

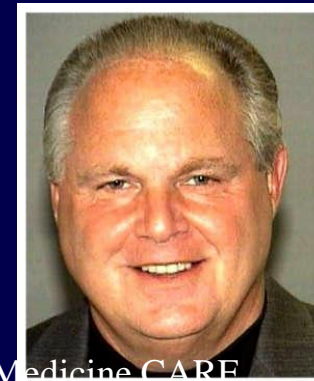


Addiction

**Franklin D
Roosevelt**



**Rush
Limbaugh**



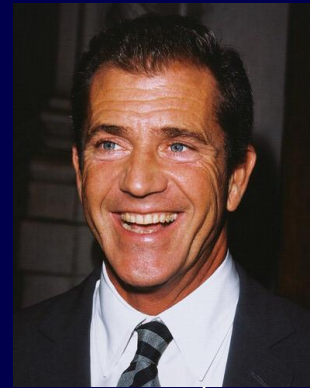
**Lindsay
Lohan**



Heroin



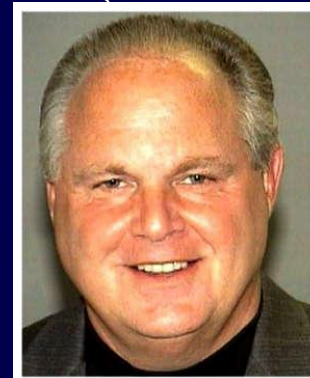
Alcohol



Alcohol



**Prescription
Opioids**



**Multiple
substances**



Tobacco



**Multiple
substances**



Addiction

Overview

- Definitions
- Public health perspective
- Treatment principles

Addiction Medicine is both:

- **Fascinating clinically**
- **Critically relevant to individuals and to public health**



Case Presentation

- Mr. CB, 42 y/o male, presented to ED with chief complaint “belly pain.”
- Moderately severe mid-abdominal pain increasing over 3 weeks



Hospitalization

1 month prior to current admission

-42 y/o male

- Addiction
 - Injection drug use (IDU) for 10 years
 - Heroin withdrawal symptoms
 - Vague alcohol use
- Endocarditis
 - LVEF 75%, mitral valve vegetation
 - Antibiotics for 6 weeks
- Abdominal pain onset during hospitalization
 - CT abd & KUB unremarkable
 - Dx: constipation
 - Rx: laxatives & manual disimpaction



Initial Evaluation

(current admission)

-42 y/o male
1 mo. prior
-endocarditis
-LVEF 75%
-c/c-"abd
pain"

- "Cramping" pain, constipation, poor PO intake
- Intranasal heroin use "to treat abdominal pain" past 10 days
- No recent IDU
- Smoked 10 cigarettes/day



Physical Exam

- Pleasant male NAD
- P: 95, R: 18, weight: 120 lbs, afebrile
- Nodes: bilateral cervical and axillary adenopathy
- CV: III/VI holosystolic murmur RUSB radiating to axilla
- Abd: tender RLQ and LLQ without rebound
- Rectal: no focal tenderness; stool brown guaiac negative
- WBC: 5.1, Hct: 26, Plts: 267K

-42 y/o male

1 mo. prior
-endocarditis
-LVEF 75%

-c/c-"abd
pain"

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Definitions

- DSM IV
 - Drug/alcohol abuse
 - Drug/alcohol dependence
- Addiction
- DSM-5
 - Substance use disorder

Addiction

Addiction is a primary, chronic disease of brain reward, motivation, memory and related circuitry. Dysfunction in these circuits leads to characteristic biological, psychological, social and spiritual manifestations. This is reflected in an individual pathologically pursuing reward and/or relief by substance use and other behaviors.

Addiction is characterized by inability to consistently abstain, impairment in behavioral control, craving, diminished recognition of significant problems with one's behaviors and interpersonal relationships, and a dysfunctional emotional response. Like other chronic diseases, addiction often involves cycles of relapse and remission. Without treatment or engagement in recovery activities, addiction is progressive and can result in disability or premature death.

-American Society of Addiction Medicine

DSM-5 Criteria

Substance Abuse Disorder

2 or more of the following in a year:

- ✓ Recurrent use resulting in failure to fulfill major role obligations
- ✓ Recurrent use in hazardous situations
- ✓ Continued use despite social or interpersonal problems caused or exacerbated by drugs
- ✓ Continued use despite physical or psychological problems
- ✓ Tolerance
- ✓ Withdrawal
- ✓ Use in larger amounts or duration than intended
- ✓ Persistent desire to cut down
- ✓ Giving up interests to use substance
- ✓ Great deal of time spent obtaining, using, or recovering from substance
- ✓ Feel such strong desire to drink yet couldn't resist it or think of anything else

DSM-5 Criteria

Substance Abuse Disorder (SUD)

Tentative SUD Severity Levels:^{*}

0-1 symptoms – no diagnosis

2-3 symptoms – mild SUD

4-5 symptoms – moderate SUD

≥ 6 symptoms – severe SUD

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Those previously diagnosed under DSM-IV will need to be categorized according to the new DSM-5 criteria[†]

^{*} National Council on Alcoholism and Drug Dependence, Inc. Press release. Accessed March 29, 2013 from: <http://www.ncadd.org/index.php/get-help/addiction-medicine/482-dsm-5-coming-may-2013>

[†] Dawson, Goldstein and Grant. *Alcohol Clin Exp Res*. 2013; 37 Suppl 1:E305-13.



Medical Record Review

-42 y/o male

1 mo. prior
-endocarditis
-LVEF 75%

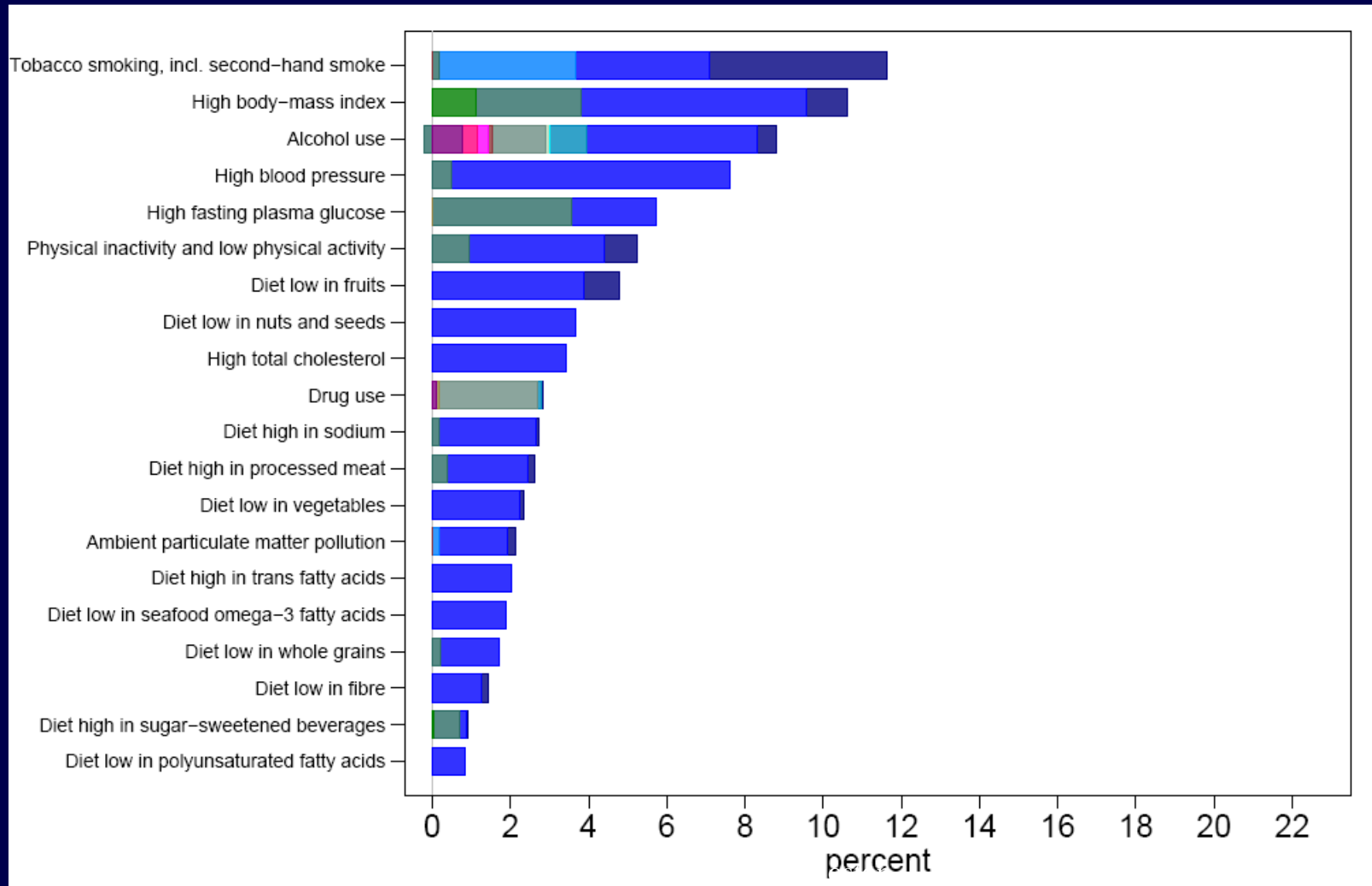
-c/c-"abd
pain"

- Several urgent care and ED visits over past 10 years
- No prior primary care
- No mention of alcohol or drug abuse

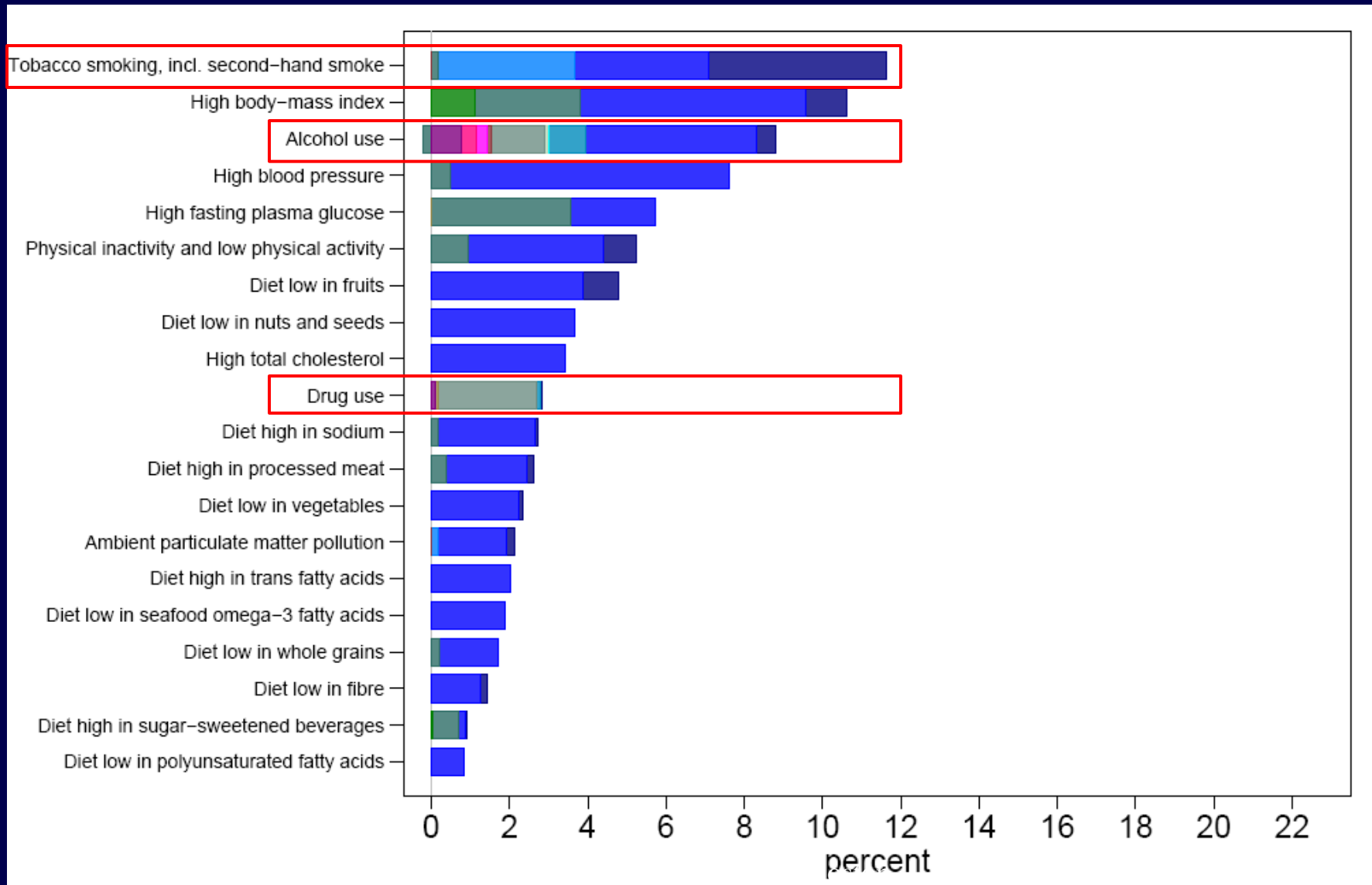
Overview

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Percent of High-income North America Disability-Adjusted Life-Years (DALYs), 2010



Percent of High-income North America Disability-Adjusted Life-Years (DALYs), 2010



Estimated Economic Costs of Excessive Alcohol Consumption in the U.S., 2006 (in billions)

Health care expenditures (e.g., Specialty treatment, prevention, research, and medical consequences)		\$24.5
Productivity losses		\$161.3
Other effects (e.g., criminal justice, property)		\$37.6
Total costs		\$223.4

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Estimated Economic Costs of Illicit Drug Abuse in the U.S., 2011 (in billions)

Health care expenditures (e.g., Specialty treatment, prevention, research, and medical consequences)		\$11.4
Productivity losses		\$120.3
Other effects (e.g., criminal justice, property)		\$61.3
Total costs		\$193.0

U.S. Department of Justice, National Drug Intelligence Center. 2011. The Economic Impact of Illicit Drug use on American Society. <http://www.justice.gov/archive/ndic/pubs44/44731/44731p.pdf>



Week 1—Hospitalization

-42 y/o male

-1 mo. prior:
endocarditis
LVEF 75%

-c/c-"abd
pain"

- Blood cultures negative
- Methadone
- Pain medications
- Abd w/: surg consult, imaging studies UGI SBFT
 - “Focal area of small bowel dilatation and loss of mucosal folds within the mid to distal ileum. Differential diagnosis includes a small bowel lymphoma, however, inflammatory bowel disease and mastocytosis can also be considered.”
- Cardiac Echo LVEF 70%; vegetation no longer visible



Week 2—Hospitalization

-42 y/o male
-1 mo. prior:
endocarditis
LVEF 75%
-c/c-"abd
pain"
-UGI-
abnormal

- Abd pain and poor PO intake persisted
- HBsAg⁻, HBCAb⁺ (past Hepatitis B, resolved)
- HCV Ab⁺ (Hepatitis C)
- HIV⁺, CD4 503, HVL 15,085



Mr. CB

-42 y/o male

-1 mo. prior:
endocarditis
LVEF 75%

-c/c-"abd
pain"

-UGI-
abnormal

-HIV⁺, HCV⁺
CD4 503

- What is your leading diagnosis?
- What is your next diagnostic test?



Week 2—Hospitalization

-42 y/o male

-1 mo. prior:
endocarditis
LVEF 75%

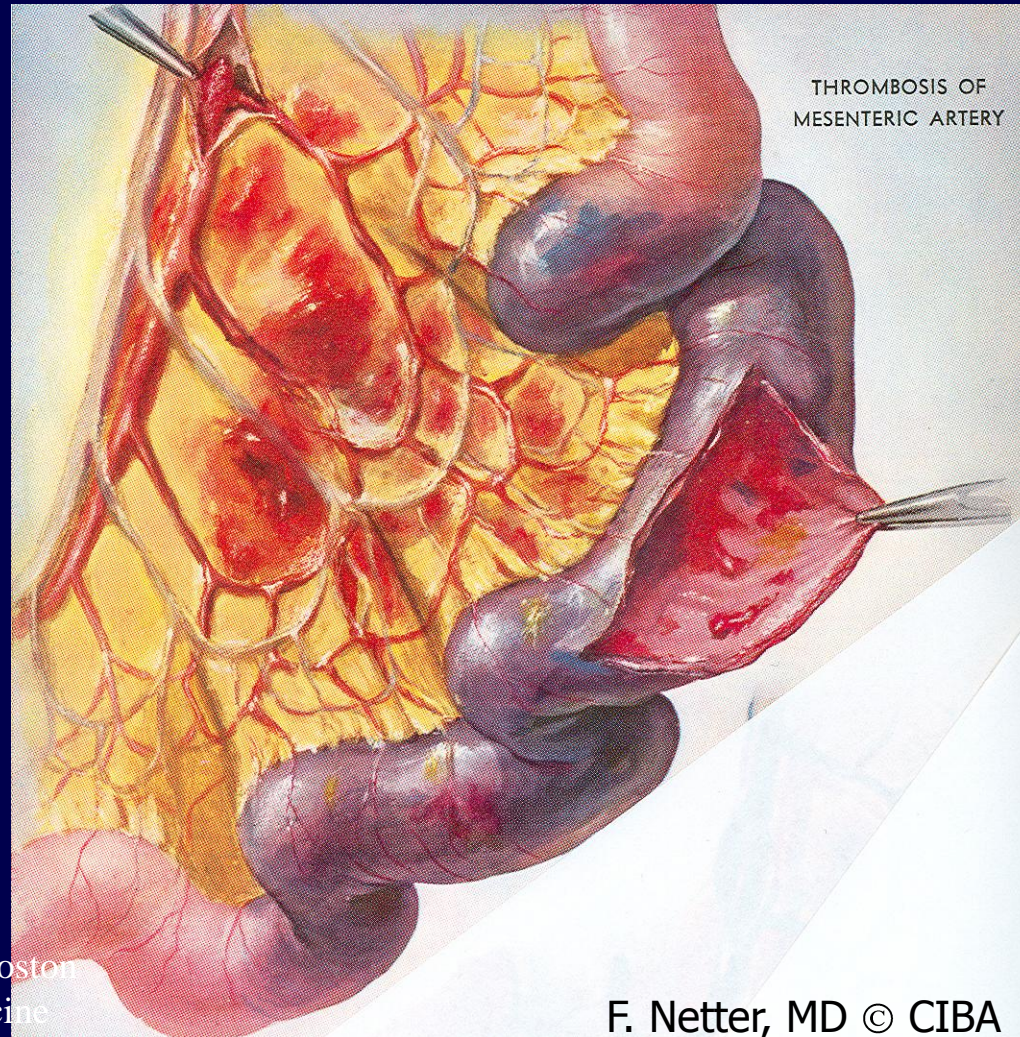
-c/c-"abd
pain"

-UGI-
abnormal

-HIV⁺, HCV⁺
CD4 503

- CT with angiogram
 - Superior Mesenteric Artery (SMA) occlusion possibly secondary to mitral valve vegetation embolus
 - Dx: ischemic colitis
 - Transferred to surgery for partial colectomy

Mesenteric Vascular Occlusion



Overview

- Definitions
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- **Treatment principles**

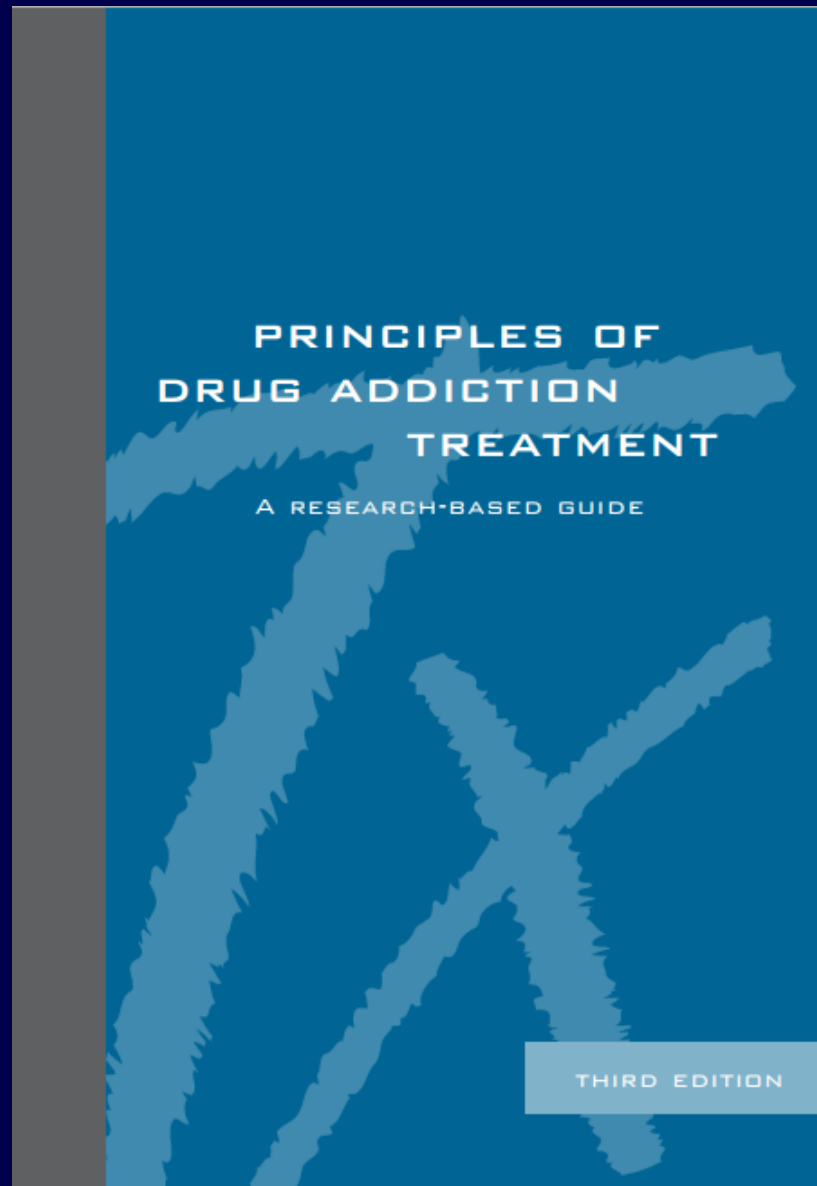
Treatment Effectiveness

- 50% to 80% return to previous pattern of substance use during the first year after treatment.
- Most important predictors of relapse:
 - Low socioeconomic status
 - Comorbid psychiatric conditions
 - Lack of family and social support

McLellan AT. Lewis DC. O'Brien CP. Kleber HD. Drug dependence, a chronic medical illness: implications for treatment, insurance, and outcomes evaluation. JAMA. 2000; 284:1689-1695.

The Most Effective Treatment Strategies Will Attend to All Aspects of Addiction:

- Biology
- Behavior
- Social Context



Principles of Effective Drug Addiction Treatment

National Institute on Drug Abuse (NIDA)

3rd Edition, 2012

1. Addiction is a complex but treatable disease that affects brain function and behavior.
2. No single treatment is appropriate for all individuals.
3. Treatment needs to be readily available.
4. Effective treatment attends to multiple needs of the individual, not just his or her drug use.
5. Remaining in treatment for an adequate period of time is critical for treatment effectiveness.

Principles of Effective Drug Addiction Treatment

National Institute on Drug Abuse (NIDA)

3rd Edition, 2012

6. Behavioral therapies—including individual, family, or group counseling—are the most commonly used forms of drug abuse treatment.
7. Medications are an important element of treatment for many patients, especially when combined with counseling and other behavioral therapies.
8. An individual's treatment and services plan must be assessed continually and modified as necessary to ensure that it meets his or her changing needs.
9. Many drug-addicted individuals also have other mental disorders.

Principles of Effective Drug Addiction Treatment

National Institute on Drug Abuse (NIDA)

3rd Edition, 2012

10. Medically assisted detoxification is only the first stage of addiction treatment and by itself does little to change long-term drug abuse.
11. Treatment does not need to be voluntary to be effective
12. Drug use during treatment must be monitored continuously, as lapses during treatment do occur.
13. Treatment programs should test patients for the presence of HIV/AIDS, hepatitis B and C, tuberculosis, and other infectious diseases as well as provide targeted risk-reduction counseling, linking patients to treatment if necessary.

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