

Chapter 65: The Patient with a Substance-Related Disorder

Presented by
Laura A. Smith, BA, BS, RDH



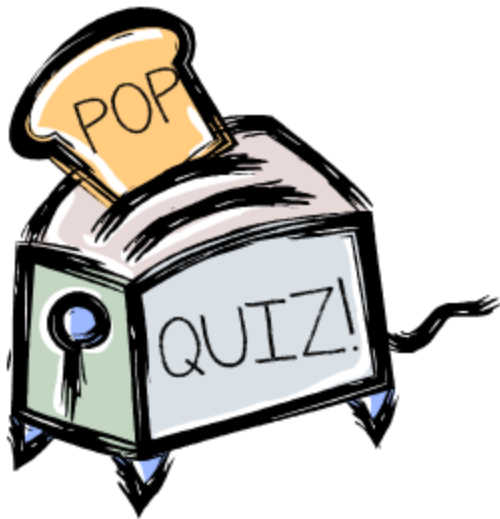
An Epidemic in a Pandemic: The Opioid Crisis During the COVID-19 Pandemic

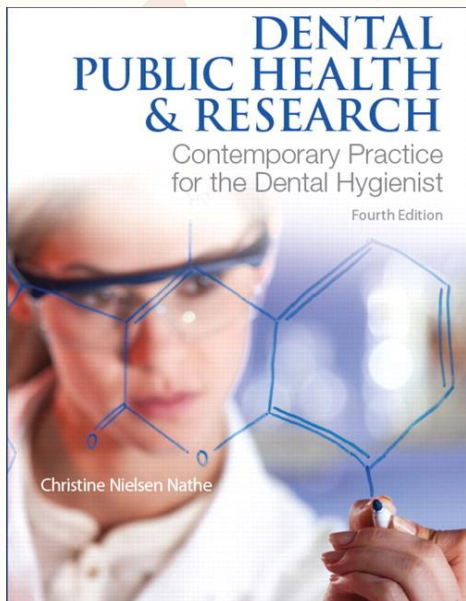
<https://www.youtube.com/watch?v=AlblMrz2TOw&t=67s>

POP QUIZ?

Don't stress- just for fun to help review for boards! Remember all your courses tie together!

**What is the difference in definition between the terms
EPIDEMIC & PANDEMIC?**





What is the difference in definition between EPIDEMIC and PANDEMIC?

CHAPTER 18 • ORAL EPIDEMIOLOGY 235

Table 18-1 Commonly Used Epidemiologic Terms and Examples

Term	Definition	Example
Endemic	Usual presence of disease in a particular geographic region	Malaria continues to be a constant concern in parts of Africa.
Epidemic	Occurrence of an illness or condition in excess of normal expectance in a community or region, usually occurring suddenly and spreading rapidly	Nine (9) cases of measles occurred in Tarrant County, TX, in August 2013 compared to the normal rate of 0 to 2 each year.
Pandemic	Epidemic in which the disease may cross international borders to affect several countries or continents	Over 20 million people worldwide died from influenza in 1918–1919.

Opioid Crisis



COVID-19



Terms will be learned in DHYG 207- Public Health

Pg 235 in your Public Health Text

OBJECTIVES

After studying this chapter, the student will be able to:

1. Explain key terms and concepts related to metabolism, intoxication effects, use patterns of alcohol.
2. Identify physical health hazards, medical effects, oral manifestations associated with alcohol other drug abuse.
3. List the names of the most commonly abused drugs and describe their intoxication effects and methods of use.
4. Describe methods for clinical assessment of potential substance abuse.
5. Support patients who have a substance related disorder and tailor dental hygiene process of care to their needs.



What is the
difference between
the terms

"Substance Abuse"
and

"Substance Use
Disorder"

Introduction:
WHY as dental hygienists are we
learning this?

WHAT do we need to know?

- Drug & alcohol dependence- usually go together
- Complex interaction/ multifactorial
- Spectrum from recreational use to use disorder
- Hard to spot- no classic cultural, socioeconomic or education profile for abuser
- IMPORTANT to do a throughout Medical history/dental history. Is it asked about? Might a patient “premed” because they are nervous/scared/anxious?
- Dependence and tolerance
- Forms of alcohol: Ethanol, methyl, isopropyl

See a Star?
That
means its
important!



Make sure to review key words in box 65-1



Box 65-1

Page 1087



BOX 65-1 KEY WORDS: Alcoholism and Drug Abuse

Abstinence: refrain from use; complete abstinence from alcohol is the objective of a recovering alcoholic.

Abuse: substance abuse; with respect to alcohol abuse involves persistent patterns of heavy alcohol intake associated with health consequences and/or impairment in social functioning.

Acne rosacea: facial skin condition usually characterized by a flushed appearance; often accompanied by puffiness and a "spider-web" effect of broken capillaries.

Addiction: habitual psychologic and physiologic dependence on a substance or practice that is beyond voluntary control.

Alcohol intoxication: results from recent ingestion of excessive amounts of alcohol; characterized by behavioral changes that alter the usual behavior of the individual.

Alcoholism: a chronic progressive behavioral disorder characterized by a strong urge to consume ethanol and inability to limit the amount despite adverse consequences.

Amnesia: impairment of long- and/or short-term memory.

Anterograde amnesia: difficulty in recalling new information.

Retrograde amnesia: difficulty in remembering old information.

Amethystic agents: a class of substances capable of counteracting the acute effects of alcohol on the central nervous system.

Analgesia: loss of sensibility to pain without loss of consciousness.

Antabuse: brand name of the generic drug disulfiram; used to deter consumption of alcohol by persons being treated for alcohol dependency by inducing vomiting.

Blackout: temporary amnesia occurring during periods of intensive drinking; person is not unconscious.

DEA drug schedules: drugs, substances, and certain chemicals used to make drugs are classified by the U.S. Drug Enforcement Administration (DEA) into five (5) distinct categories or schedules depending upon the drug's acceptable medical use and the drug's abuse or dependency potential (see Box 65-5).

DEA registration number: assigned by DEA allowing health care providers to write prescriptions for controlled substances (drugs that have been assigned a DEA drug schedule category).

Delirium: extreme mental and usually motor excitement marked by a rapid succession of confused and unconnected ideas; often with illusions and hallucinations; may be accompanied by tremors.

Delirium tremens: "DTs"; a serious acute condition associated with the last stages of alcohol withdrawal.

Dementia: condition of deteriorated mentality characterized by a marked decline of intellectual functioning.

Dependence: drug or substance dependence; with respect to alcohol refers to a physical and psychological dependence on alcohol that results in impaired ability to control drinking behavior; dependence is differentiated from abuse by manifestations of craving tolerance and physical dependence, as well as an inability to exercise restraint over drinking.

Chemical dependence: the interaction between a drug and the individual when there is a compulsion to take the drug to obtain its effects and/or to avoid the discomforts of withdrawal.

Physical dependence: when a drug becomes necessary for continued body functioning. An altered physiologic state has developed from repeatedly increasing drug concentrations.

Polysubstance dependence: addiction to at least three categories of psychoactive substances (not including nicotine or caffeine) but in which no single psychoactive substance predominates.

Psychologic dependence: refers to the state of mind in which the individual believes the drug is required for maintaining well-being.

Detoxification: treatment designed to assist in recovery from the toxic effects of a drug; involves withdrawal and may include pharmacologic and/or nonpharmacologic treatment with psychotherapy and counseling.

Drug: a chemical substance used for diagnosis, prevention, or treatment of disease. Drugs are classified by biochemical action, physiological effect, or organ system involved.

Euphoria: feeling of well-being, elation; without fear or worry.

Hallucination: a sensory impression (sight, sound, touch, smell, or taste) that has no basis in external stimulation; may have psychological causes, or may result from the use of drugs, (including alcohol), a brain tumor, senility, or exhaustion.

Hyperthermia: body temperature higher than normal.

Illicit: illegal; not authorized, not sanctioned by law.

Micrognathia: abnormal smallness of the jaws, especially of the mandible.

Nystagmus: involuntary, rapid, rhythmic movements of the eyeball.

Opiate antagonist: examples include naltrexone and naloxone. These drugs have a high affinity for opiate receptors but do not activate them and block the effect of exogenously administered opioids (e.g., morphine, heroin, and methadone) or of endogenously released endorphins.

Opioid: synthetic narcotic that has opiate-like activities but is not derived from opium.

Psychotropic drug: a drug capable of modifying mental activity; used in the treatment of mental illness.

Recovering alcoholic: a person afflicted with the disease of alcoholism who is abstaining from the use of alcohol; recovering alcoholics prefer the term "recovering" to reformed, cured, or recovered because recovering implies an ongoing process.

Saddlenose deformity: a collapse of the nasal bridge.

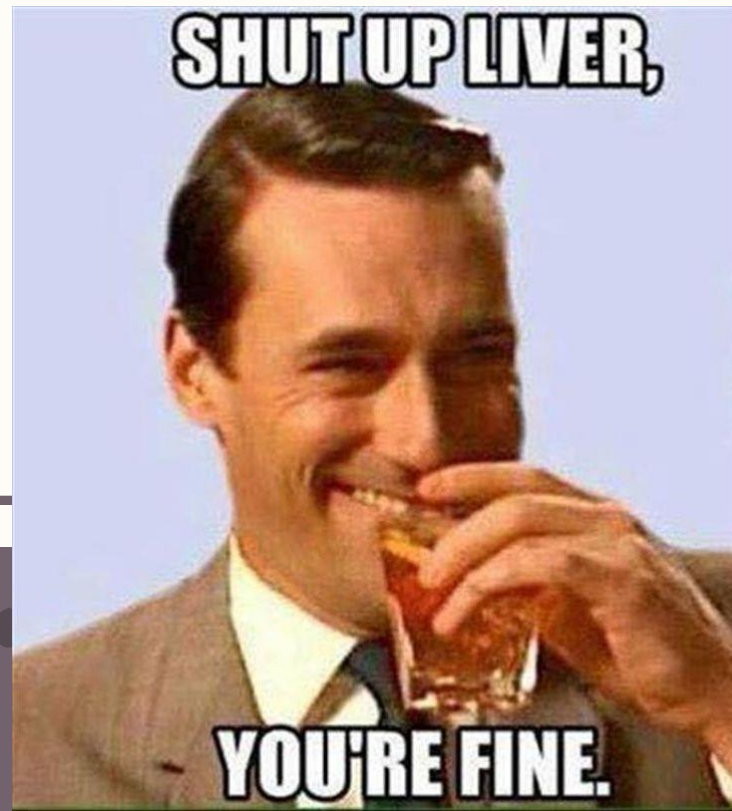
Substance abuse: The regular use of a drug for other than its accepted medical purpose or in dosages greater than those that are considered appropriate.

Tolerance: ability to endure without effect or injury, increased amount of the drug is needed to achieve the same effect.

Drug tolerance: the need for higher and higher dosages of a drug to achieve the same effect.

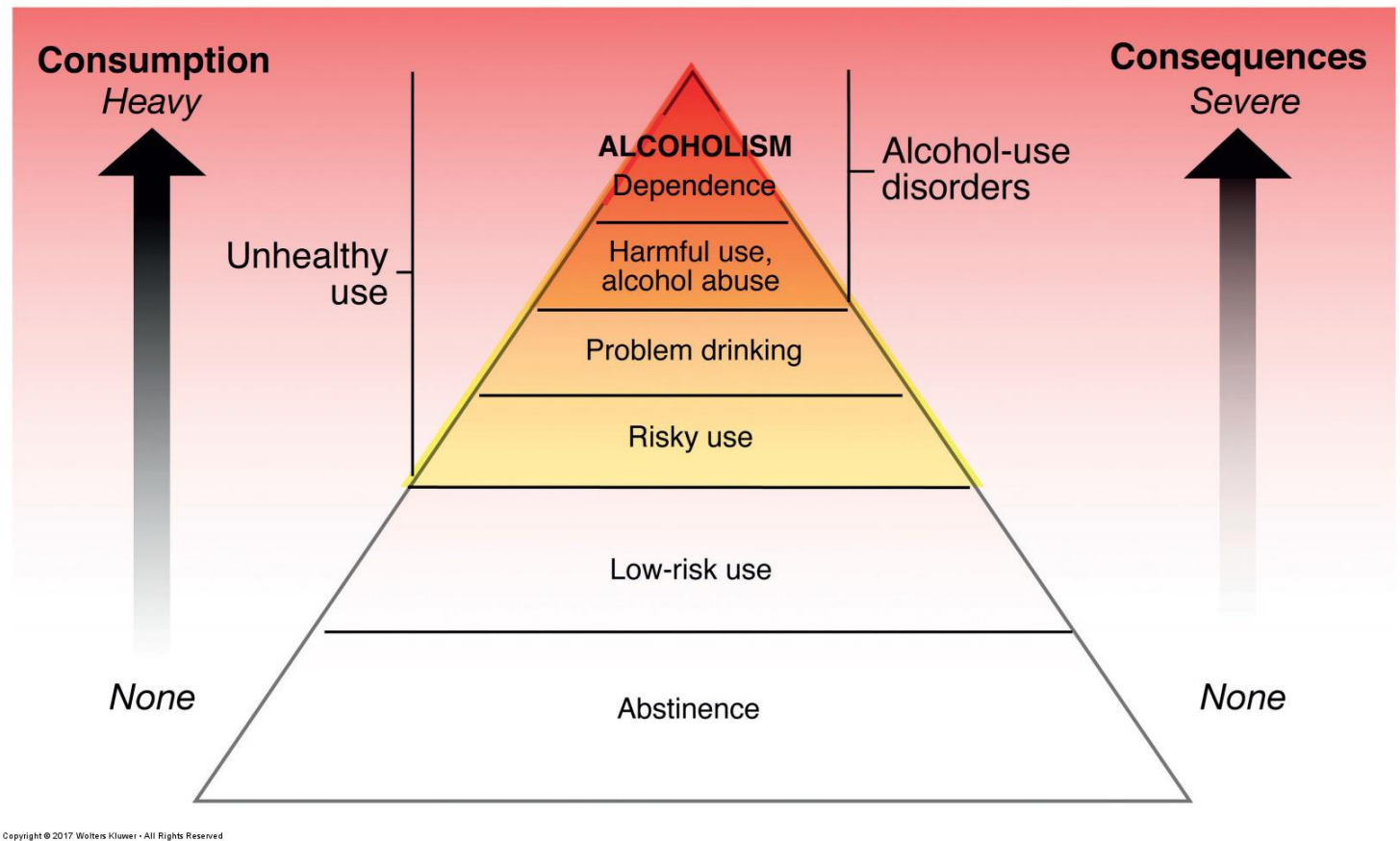
Withdrawal syndrome: a group of signs and symptoms, both physiologic and psychologic, that occurs on abrupt discontinuation of drug use.

First, we will talk
about Alcohol...



The Spectrum of Alcohol Use

Fig 65-1



Alcohol Consumption



<https://images.app.goo.gl/DtY3SLofJVsJNNTh6>



<https://images.app.goo.gl/YKzyQbArTW8VznEFA>

I. Clinical Pattern of Alcohol Use

I. Effect of Alcohol Intoxication

- I. Behavioral changes: aggressiveness, mood instability, impaired judgement; impair attention/memory, stupor, coma
- II. Physical characteristics: slurred speech, lack of coordination, unsteady gait, nystagmus

II. Consequences of Underage Drinking

- I. Drinking and driving
- II. Suicide
- III. Sexual assault/ high risk sex behavior
- IV. Alcohol induced mental impairment



4 Main Signs of Alcoholism

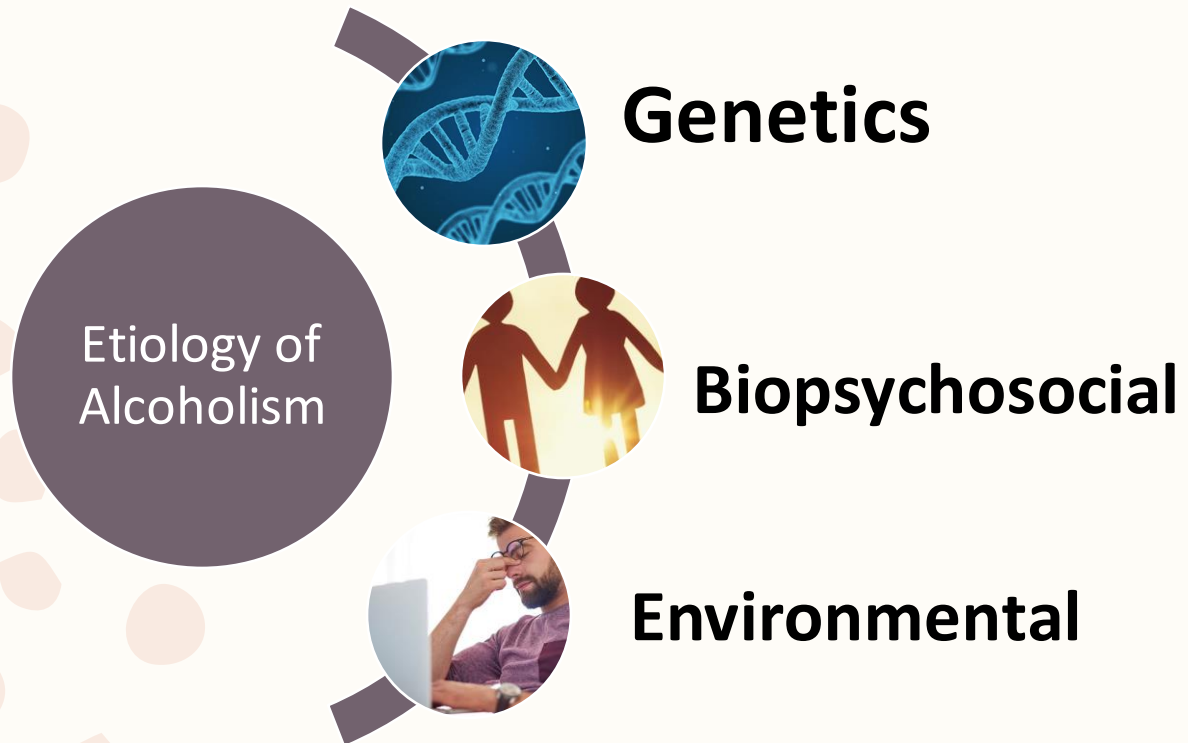
1. Craving

2. Loss of Control

3. Physical Dependence

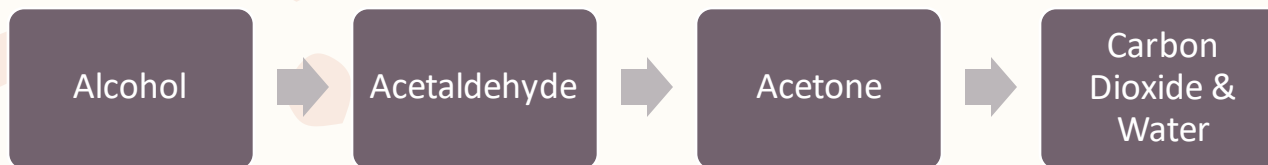
4. Tolerance

Etiology of Alcoholism



Metabolism of Alcohol

- I. Ingestion and Absorption
- II. Liver Metabolism- occurs in liver
- III. Diffusion



<10% excreted by
lungs/skin/kidneys
(breath, sweat, urine)



<https://images.app.goo.gl/6fZPgwfDubH5HwMm9>



Blood Alcohol Concentration (BAC)

Amount of alcohol by weight, in a set volume of blood.

TABLE 65-1

Effects of BACS at Various Levels

DOSE	EFFECT
50 mg/dL	Sedation, tranquility, fine motor coordination reduced, unsteadiness on standing.
50–100 mg/dL	Reduced anxiety, alertness, and critical judgment; enhanced self-esteem, slowed reaction time, and impulsive risk-taking behavior.
100–300 mg/dL	Slowed reaction time, slurred speech, staggering; mood swings, memory deficits, blackouts; increased aggressive behavior.
300–400 mg/dL	Labored breathing, nystagmus, lowered blood pressure and body temperature; loss of consciousness.
400–500 mg/dL	Depressed respiration, alcoholic coma, possibly fatal.

Source: National Institute on Alcohol Abuse and Alcoholism. *8th Special Report to the U.S. Congress on Alcohol and Health*. Rockville, MD: National Institute on Alcohol Abuse and Alcoholism; 1993:89.

What Effects BAC?

- Body Weight & Fatty Tissue
- Tolerance
- Time
- Food/ Last Meal
- Hydration

BAC calculator Simulation*

– <https://www.alcohol.org/bac-calculator/>

Why is
important to
recognize this is
simulation only?

The screenshot shows a web-based BAC calculator simulation. At the top, there are two buttons for gender: 'MALE' with a blue male symbol and 'FEMALE' with a pink female symbol. Below these is a section for 'BODY WEIGHT IN POUNDS' with a text input field labeled 'Enter weight'. Underneath, there are three drink options: 'Beer 12oz' with a green can icon and '- 5% ABV', 'Wine 5oz' with a red wine glass icon and '- 12% ABV', and 'Liquor 1.5oz' with a liquor bottle icon and '- 40% ABV'. Each drink option has a corresponding circular input field. At the bottom, there is a section for 'TIME SINCE FIRST DRINK' with two input fields labeled 'Hours' and 'Minutes', each preceded by a circular input field.

At home BAC meters

Why
might
this be
helpful?

BACtrack Helps You Make Better Decisions While Drinking

.02

Estimate Your Alcohol
Level in Seconds



Stay Safe and Consume
Alcohol Responsibly



Know When Your BAC
Will Return to 0.00%



– <https://www.bactrack.com/>

Why do we get a “beer belly”?

Remember your
nutrition
prerequisite
courses?



Why settle for a six-pack
When you can have a
keg?



someecards
user card

Alcohol may have calories- but NO nutrients!

Fat

9 calories per gram

9

Alcohol

7 calories per gram

7

Protein

4 calories per gram

4

Starch (carbohydrate)

4 calories per gram

4

Sugars (carbohydrate)

4 calories per gram

4

Yes, lots of calories in alcohol, but no NUTRIENTS. One of the negative health consequences of drinking is malnutrition, and as we will see later inability to absorb nutrients.



Centers for Disease Control and Prevention
CDC 24/7: Saving Lives, Protecting People™

Alcohol and Public Health

WHAT IS CONSIDERED A "DRINK"?

U.S. STANDARD DRINK SIZES



12 OUNCES
OF 5% ABV
BEER



8 OUNCES
OF 7% ABV
MALT LIQUOR



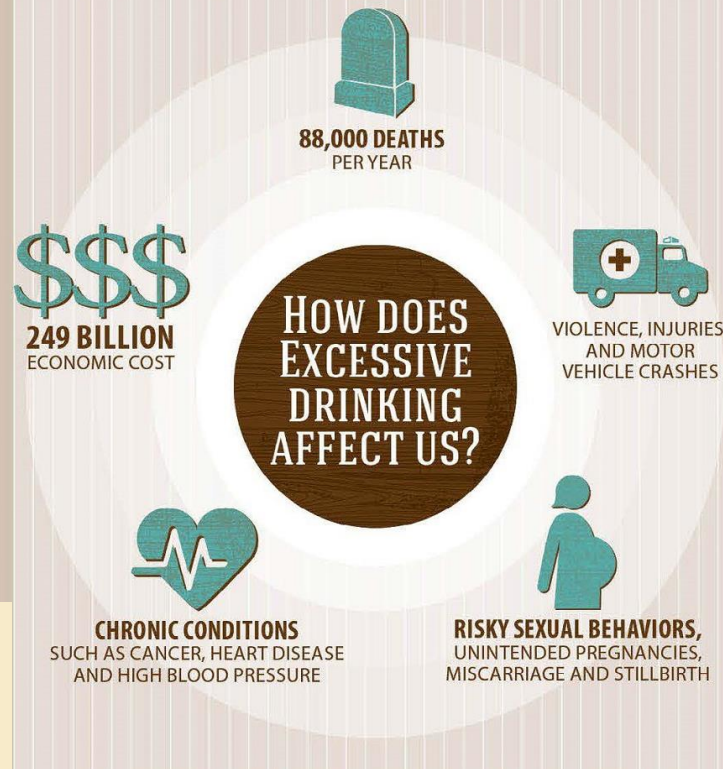
5 OUNCES
OF 12% ABV
WINE



1.5 OUNCES
OF 40% ABV
(80-PROOF)
DISTILLED SPIRITS
OR LIQUOR
(Examples: gin, rum,
vodka, whiskey)

Wilkins text definition of moderate alcohol use “two drinks per day for men, and one drink per day for women”






Oral Cancers
Liver Disease
Heart Disease & HBP

BINGE DRINKING IS THE MAIN PROBLEM

OVER **90%** OF
EXCESSIVE DRINKERS
BINGE DRINK

1 IN 6

MORE THAN
38 MILLION U.S. ADULTS
BINGE DRINK


BINGE DRINKERS
DO SO ABOUT
4 TIMES A MONTH


BINGE DRINKERS
AVERAGE **8 DRINKS**
PER BINGE


MOST PEOPLE WHO
BINGE DRINK ARE **NOT**
ALCOHOL DEPENDENT
OR ALCOHOLICS

IF YOU CHOOSE TO DRINK, DO SO IN MODERATION



NO ONE SHOULD BEGIN DRINKING OR
DRINK MORE FREQUENTLY BASED ON
POTENTIAL HEALTH BENEFITS

UP TO **1** DRINK A
DAY FOR WOMEN



UP TO **2** DRINKS
A DAY FOR MEN



DON'T DRINK AT ALL IF YOU ARE **UNDER AGE 21**,
PREGNANT OR MAY BE PREGNANT, OR
HAVE HEALTH PROBLEMS THAT COULD BE
MADE WORSE BY DRINKING

FOR MORE INFORMATION
WWW.CDC.GOV/ALCOHOL



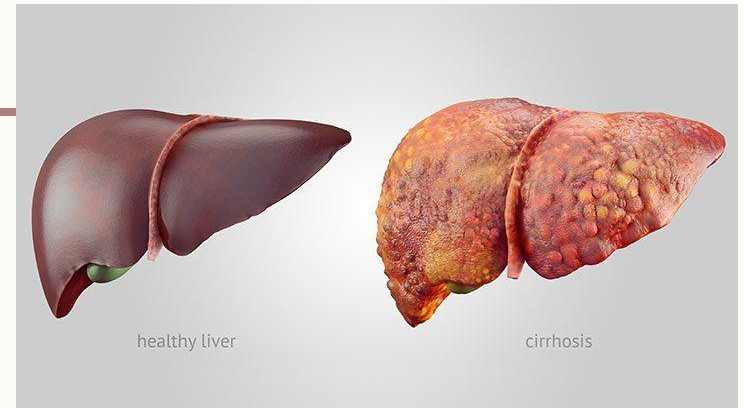
U.S. Department of
Health and Human Services
Centers for Disease
Control and Prevention

C20001618

25 Health Hazards of Alcohol



- I. Liver Disease
- II. Immunity and Infection
- III. Digestive System
- IV. Nutritional Deficiencies
- V. Cardiovascular Diseases
- VI. Neoplasms
- VII. Nervous System
 - I. Central and Peripheral
 - II. Wernicke-Korsakoff's Syndrome
- VIII. Reproductive System



<https://images.app.goo.gl/F5PW8JyZY6EiaCda>



Wernicke-Korsakoff's Syndrome ★

What are the Wet Brain Symptoms of Wernicke-Korsakoff Syndrome?

- Confusion or Delirium
- Inability to Form New Memories
- Lack of Muscle Coordination
- Muscle Atrophy
- Difficulties Walking
- Problems with Vision
- A History of Alcoholism
- Thiamine or Vitamin B-1 Deficiency
- Malnutrition



<https://irishealing.com/what-is-wet-brain-syndrome-wernicke-korsakoff-syndrome/>

- 2 syndromes together:
 - Wernicke's encephalopathy
 - Korsakoff's psychosis
- Thiamine (B1) deficiency
- Alcohol impairs thiamine nutrient absorption



<https://ssl.adam.com/content.aspx?productid=617&pid=1&gid=002401&site=makatimed.adam.com&login=MAKA1603>

Fetal Alcohol Spectrum Disorders (FASD)

I. Alcohol Use During Pregnancy

- I. No placental barrier
- II. Other factors

II. Criteria for FASD Diagnosis

III. Characteristics of an Individual with FASD





FIGURE 65-2 Facial Features of Fetal Alcohol Syndrome

BOX 65-3

FASD Terminology and Abbreviations

FAS: Fetal alcohol syndrome. A characteristic pattern of abnormal growth, minor facial anomalies, and abnormal central nervous system (CNS) development resulting from maternal consumption of alcohol during pregnancy.

PFAS: Partial fetal alcohol syndrome. FAS without the growth deficiency.

FASD: Fetal alcohol spectrum disorder. An umbrella term describing the range of effects that can occur in an individual whose mother drank alcohol while pregnant. Diagnoses that fall under the umbrella include FAS, PFAS, ARND, static encephalopathy/alcohol exposed (SE/AE), and neurobehavioral disorder alcohol exposed (ND/AE).

ARND: Alcohol-related neurodevelopment disorder. Individuals with ARND have confirmed prenatal alcohol exposure and present with significant structural and/or functional CNS abnormalities. They do not present with the FAS facial phenotype. Alternate terms used to define this outcome include SE/AE and ND/AE.



Nursing mom

<https://images.app.goo.gl/uxsq6ABDKtBMjAVf8>

Can alcohol be found in breast milk?

Yes. Alcohol levels are usually highest in breast milk 30-60 minutes after an alcoholic beverage is consumed, and can be generally detected in breast milk for about 2-3 hours per drink after it is consumed. However, the length of time alcohol can be detected in breast milk will increase the more alcohol a mother consumes. For example, alcohol from 4 drinks can be detected in breast milk for up to 10 hours.



I'm breast-feeding. Is it OK to drink alcohol?

Answer From Elizabeth LaFleur, R.N.

Breast-feeding and alcohol don't mix well. There's no level of alcohol in breast milk that's considered safe for a baby to drink.

When you drink alcohol, it passes into your breast milk at concentrations similar to those found in your bloodstream. Although a breast-fed baby is exposed to just a fraction of the alcohol his or her mother drinks, a newborn eliminates alcohol from his or her body at only half the rate of an adult.



Alcohol Withdrawal Syndrome

- I. Predisposing Factors
- II. Signs and Symptoms
- III. Complications



**Liquor Stores
Deemed Essential.
But Why?**

Treatment for Alcoholism

I. Early Intervention

I. WE as health providers and friends can help here

II. Detoxification

III. Pharmacotherapy

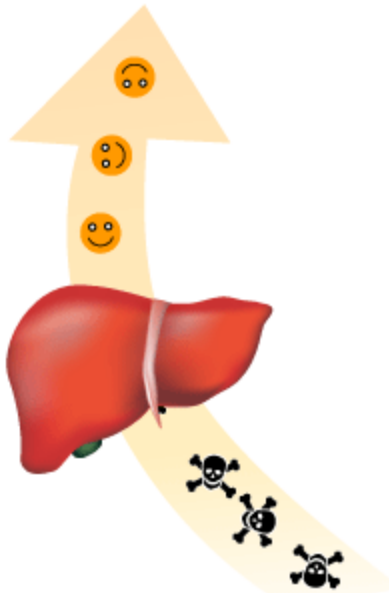
IV. Rehabilitation

Detoxification



<https://images.app.goo.gl/NSbYaz83Ud49VQTt9>

- Treatment for immediate emergencies
- Remove from source- abstinence
- Goals of Therapy
- Relief from acute withdrawal symptoms



<https://www.hepatitis.va.gov/basics/liver-as-filter.asp>

Antabuse (Disulfiram)



Photo credit:
<https://modapharma.org/product/disulfiram/>

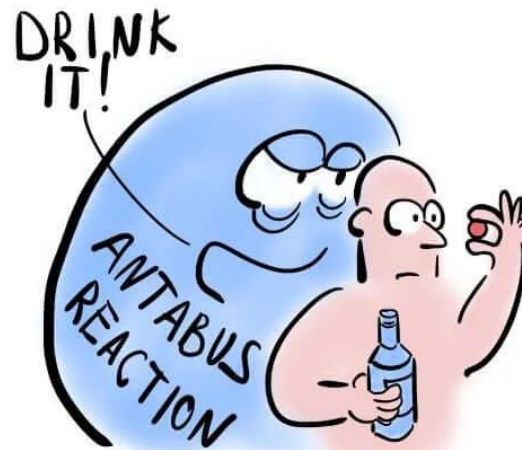


Photo credit:
<https://steptohealth.com/antabuse-uses-and-effects/>

Other Medications for treating alcoholism

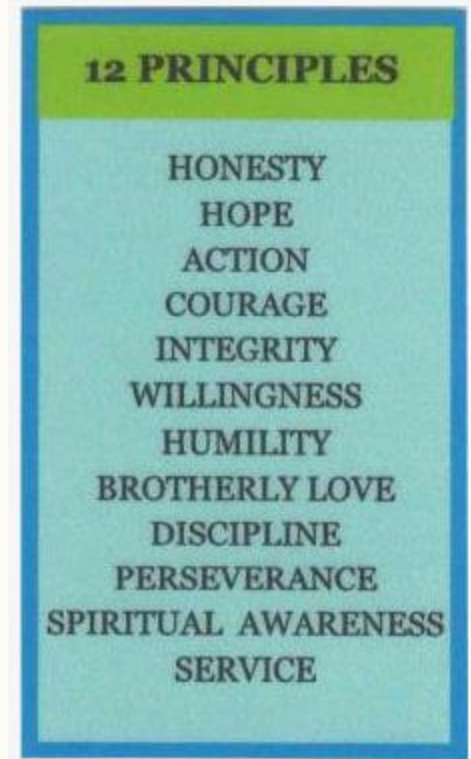
- Naltrexone (Revia) – anticraving agent
- Acamprosate
- Toirimate (anticonvulsant)

Alcoholics Anonymous



<https://www.aa.org/>

Alcoholics Anonymous is an international fellowship of men and women who have had a drinking problem. It is nonprofessional, self-supporting, multiracial, apolitical, and available almost everywhere. There are no age or education requirements. Membership is open to anyone who wants to do something about his or her drinking problem.



<https://images.app.goo.gl/Cpobju2bqyo1bsBy7>

Shifting from Booze to Pills



<https://images.app.goo.gl/SsLsF26iHHMN7USs5>

Most Common Drugs of Abuse

- I. Cannabinoids (Marijuana)
- II. Depressants
- III. Dissociative Anesthetics
- IV. Hallucinogens
- V. Opioids and Morphine Derivatives
- VI. Stimulants
- VII. OtherCompounds

Legend:

- Legalized
- Medical and Decriminalized
- Medical
- Decriminalized
- Fully illegal

If a patient responds “yes”, what follow up questions would you ask?

Students at HCC must abide by school drug policies.

Licensed medical professionals can NOT be under the influence at work!

Kelli Jäecks!

THE ULTIMATE CANNABIS CHEAT SHEET

There's a lot more to know about cannabis than you think.



THC & CBD- do you know the difference?

THC (tetrahydrocannabinol)

- Psychotropic

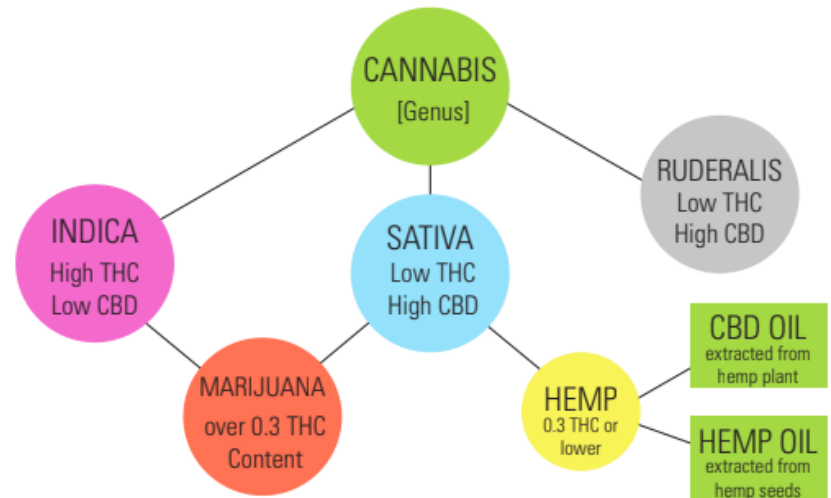
This is the 'Gets you high' part of the plant. Cannabinoid receptors are concentrated in certain areas of the brain associated with thinking, memory, pleasure, coordination and time perception. THC attaches to these receptors.

CBD (cannabidiol)

- Non-psychoactive
- Anti-psychotic
- Anti-emetic (nausea)
- Anti-inflammatory

The medical community is excited about Cannabis, as it's known to have many therapeutic benefits.

THC vs CBD vs HEMP - WHERE IT ALL COMES FROM



39 Risk Management for Legal Prescriptions

- I. Dental Team Responsibilities
- II. Prevention of Prescription Drug Abuse

Did you know?

- 1. Effective Oct 2020 in Maryland, RDH can prescribe! (**NOT opioids**) Stay tuned...in progress. (#joinADHA)
- 2. Dentists in Maryland must take a 2 CE every other renewal cycle on prescribing drugs.

Every dentist seeking renewal in 2015 and thereafter must complete a 2-hour Board-approved course on proper prescribing and disposal of prescription drugs. The course must be completed **every other renewal cycle** beginning with the 2015 renewal cycle. Dentists who do not prescribe prescription drugs are not exempt. Dental hygienists are not required to complete the course but they may do so for continuing education credits. The course may be taken on-line. These hours count toward the required 30 hours. For dentists holding drug dispensing permits the course may not be taken to fulfill the continuing education requirements contained in Senate Bill 603, Chapter 267, Laws of Maryland 2012.



Dental Hygiene

well-being committee

Join me for YOGA tonight,
2/16 at 7:30pm via ZOOM

<https://fb.me/e/24kOkDJdg>

Toll Free: 1-800-974-0068

Text: 240-319-9463

Email: info@MDHAWell-being.org OR mdhadhwbc@gmail.com

Web: <http://www.mdhawell-being.org/>

Social: <https://www.facebook.com/dentalhygwellbeing/>

<https://www.instagram.com/mdhawellbeing/>

MSBDE



MARYLAND Department of Health
State Board of Dental Examiners

Newsletter

EDITOR: ALI BEHNIA, DMD

2019 SUMMER NEWSLETTER

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- Page 5**
- Record Keeping: Paper or Electric
 - Ownership of a Dental

Meet Our New Executive Director

We are proud to announce that Mr. Frank McLaughlin is the new Executive Director of the Maryland State Board of Dental Examiners. Mr. McLaughlin brings more than 26 years of experience in working with organized dentistry both on the federal and state levels and is a great fit to this Board.

In 1990, Frank started with the American Dental Association as their Director of Political Affairs.



Disciplinary Actions Taken (May- December 2018)

All Board orders are public documents. To view any of these orders, please go to the Board's website.

License Name	License #	Summary of Action Taken
Escatrina Summers, D.R.T.	14401	Effective 05/16/2018 - Reprimand, One (1) Year Probation, \$100 Donation, Ten (10) Hours Pro Bono Service. Practicing on expired certificate.
Steven Haywood, D.D.S.	10713	Effective 05/16/2018 - Reprimand, Two (2) Year Probation, \$5,000 Fine. CDC Violations.
Ana Tellez, D.R.T.	20013	Effective 05/16/2018 - Termination of Probation.
Nashawna West, D.R.T.	20483	Effective 05/15/2018 - Suspension; Child Support Enforcement.
John Savukinas, D.D.S.	10866	Effective 06/06/2018 - Summarily Suspended. CDC Violations.
John Savukinas, D.D.S.	10866	Effective 06/20/2018 - Reprimand, Two (2) Year Probation, \$2,500 Fine. CDC Violations.
Siar Karmand, D.D.S.	13203	Effective 06/06/2018 - Revoked. Substance Abuse.
Vaqar Choudry, D.D.S.	13215	Effective 06/21/2018 - Permanently Revoked. Unprofessional Conduct; Criminal Conviction.
Larry Peterson, D.D.S.	5355	Effective 06/25/2018 - Termination of Probation.
Richard Wilson, D.D.S.	14109	Effective 06/20/2018 - Reprimand, One (1) Year Probation, \$1,500 Fine. Unprofessional Conduct; Disciplined in other State; Failure to Disclose.
Lynette Jones-Dove, D.D.S.	13672	Effective 06/29/2018 - Reprimand, Two (2) Year Probation. Professional Incompetence; Unprofessional Conduct.
Walter Gillin, D.D.S.	7389	Effective 07/18/2018 - Termination of Probation.
Dong S. Lee, D.D.S.	7702	Effective 07/18/2018 - Six (6) Month Suspension Stayed, Two (2) Year Probation. \$1,500 Fine. CDC Violations.
Mohammad Ali T. Fatemi, D.M.D.	11720	Effective 07/18/2018 - Summarily Suspended. CDC Violations.
Mohammad Ali T. Fatemi, D.M.D.	11720	Effective 08/01/2018 - Reprimand, Two (2) Year Probation, \$2,000 Fine. CDC Violations.
Charles Michelson, D.D.S.	10197	Effective 08/15/2018 - Summarily Suspended. CDC Violations.
Hirsch Seidman, D.D.S.	6725	Effective 08/15/2018 - Summarily Suspended. CDC Violations.
Vikaskumar Patel, D.D.S.	15616	Effective 08/27/2018 - Summarily Suspended. CDC Violations.
Manpreet Dhillon, D.D.S.	16264	Effective 08/27/2018 - Summarily Suspended. CDC Violations.
Crystal Fletcher, D.R.T.	12137	Effective 08/27/2018 - Suspended; Child Support Enforcement.

Pg 1097 in
text!

- I. Cardiovascular Effects
- II. Neurological Effects
- III. Gastrointestinal Effects
- IV. Kidney Damage
- V. Liver Damage
- VI. Musculoskeletal Effects
- VII. Respiratory Effects
- VIII. Prenatal Effects
- IX. Infections

Medical Effects of Drug Abuse

Cardiovascular Effects



<https://images.app.goo.gl/6xmpWe5oidgsgFz77>

- Higher BP
- Vasocontraction ****EPI!!****
- Alters electroactivity
- Cardiac stimulant
- Induce angina, precipitate M.I.
- Cause arrhythmia or sudden cardiac death
- Subclinical atherosclerotic C.V.D.

Neurological Effects



<https://images.app.goo.gl/BTs6ctHLHoR5ikFt9>

- Brain Changes leading to:
 - Memory lapse
 - Decision making & Attention problems
 - Euphoric effects
 - Seizure, stroke, intracerebral hemorrhage
 - Depression, paranoia, aggression, hallucinations
- Substance induced disorders such as:
 - Amnesia, delirium, dementia
 - Mood or anxiety disorders
 - Sleep disorders

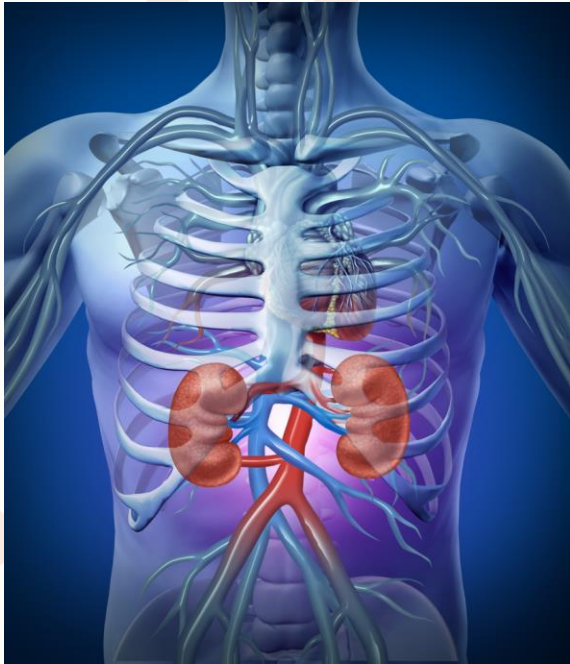


Gastrointestinal Effects

- Cocaine:
 - Abdominal pain, life threatening hemorrhage
 - Severe bowel gangrene
- Nausea
- Vomiting

What dental issue comes with chronic vomiting?

<https://images.app.goo.gl/gQk3XRvYb6j5f3fj>



<https://images.app.goo.gl/TvCYPbutZPBoU7PN7>

Kidney Damage

- Renal function reduced
- Pain medications plus alcohol, antibiotics, illegal drugs cause kidney damage if used improperly
- Toluene severely affects liver and kidneys



<https://images.app.goo.gl/aRR4cG7gBnz mFFETA>



<https://images.app.goo.gl/bzyDXA6ZDJFw1dg9>

Liver Damage

- The liver helps us DETOX
- Metabolism can become decreased, unable to break down drugs, stay at toxic level in system
- Chronic abuse leads to significant liver damage
- Alcohol and cocaine together form **Cocaethylene**
 - Intensifies cocaine's euphoric effect, and can lead to risk of sudden death



Musculoskeletal Effects

- Affect puberty and hormones, disrupt growth
- Steroid drug use ill effects on growth, lead to decrease in growth
- Muscle cramping
- Decreased overall wellness

<https://images.app.goo.gl/bMv4cY7Rponzs79h9>



Respiratory Effects

- Inhaled substances contribute to lung damage
- Lead to asthma, bronchitis, emphysema, lung cancer

<https://images.app.goo.gl/DEqV8Frn98ScDRrd8>

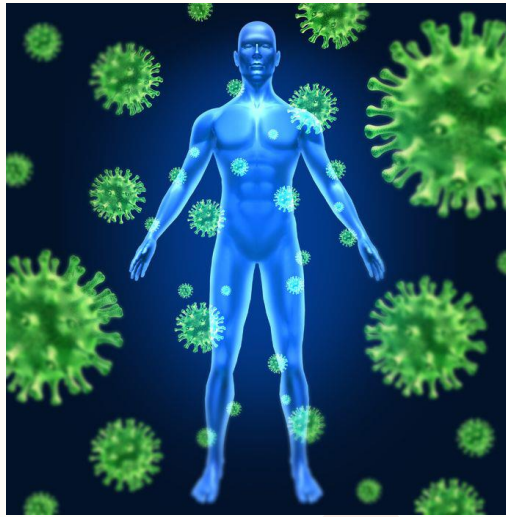


<https://images.app.goo.gl/Yc5JNc1mWwFuLGPb9>

What other dental condition do we know is correlated with premature birth or LBW?

Prenatal Effects

- Miscarriage
- Premature birth
- Low birth weight
- FASD



<https://images.app.goo.gl/tC5GgyVpWLryW98M7>

Infections

- Bacteria skin infections
- Poor nutrition can leave to increased risk of many other conditions
- Comorbidity of HIV leads to compromised immune system

Treatment Methods:

1. Behavior Change

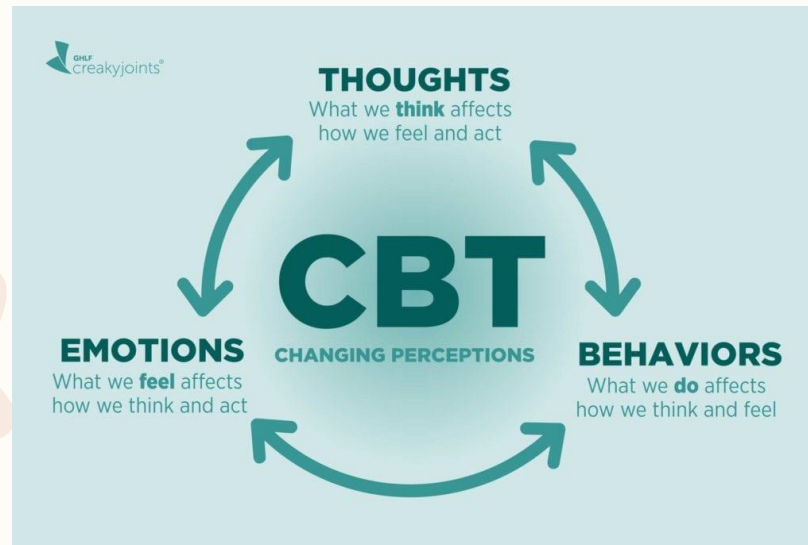
2. Drug Withdrawal Medications

I. Behavioral Change Interventions

Counseling

Therapy

Support
Groups



<https://images.app.goo.gl/uKVECdQtKHwRdCak8>

Treatment Methods:

1. Behavior Change
 2. Drug Withdrawal Medications
-



<https://images.app.goo.gl/yF4KcPUBm9kn5KkF6>



<https://images.app.goo.gl/EJ1DGsoUCM6jEJng7>

Dental Hygiene Process of Care

Remember-
your EIOE
starts the
moment
you see
your
patient!

- I. Assessment
- II. Intraoral Examination
- III. Dental Hygiene Diagnosis
- IV. Planning
- V. Implementation
- VI. Evaluation



Review Box 65-8, 65-9, and 65-10

Dental Hygiene Assessment

- What are we looking for?
 - EIOE starts at the threshold of office
 - Patient history
 - The interview
 - See ch 20 “motivational interviewing”
 - Screening – CAGE questionnaire
 - Screening- 5 A’s
 - Ask, Advise, Assess, Assist, Arrange
 - Older adult patients
 - Vital Signs



What does our Medical History form say at HCC?

Indicate which of the following conditions you currently have or have had in the past. Checking the box will indicate a "YES" response, leaving blank will indicate a "NO" response.

- | | | | |
|---|---|--|---|
| <input type="checkbox"/> *Pre-Med - Amox | <input type="checkbox"/> *Pre-Med - Clind | <input type="checkbox"/> *Pre-Med - Other | <input type="checkbox"/> Allergies |
| <input type="checkbox"/> Allergy - Aspirin | <input type="checkbox"/> Allergy - Codeine | <input type="checkbox"/> Allergy - Erythro | <input type="checkbox"/> Allergy - Hay Fever |
| <input type="checkbox"/> Allergy - Latex | <input type="checkbox"/> Allergy - Other | <input type="checkbox"/> Allergy - Sulfa | <input type="checkbox"/> Anemia |
| <input type="checkbox"/> Arthritis | <input type="checkbox"/> Artificial Joints | <input type="checkbox"/> Asthma | <input type="checkbox"/> Blood Disease |
| <input type="checkbox"/> Cancer | <input type="checkbox"/> Diabetes | <input type="checkbox"/> Dizziness | <input type="checkbox"/> Epilepsy |
| <input type="checkbox"/> Excessive Bleeding | <input type="checkbox"/> Fainting | <input type="checkbox"/> Glaucoma | <input type="checkbox"/> Head Injuries |
| <input type="checkbox"/> Heart Disease | <input type="checkbox"/> Heart Murmur | <input type="checkbox"/> Hepatitis | <input type="checkbox"/> High Blood Pressure |
| <input type="checkbox"/> High Cholesterol | <input type="checkbox"/> HIV | <input type="checkbox"/> Jaundice | <input type="checkbox"/> Kidney Disease |
| <input type="checkbox"/> Liver Disease | <input type="checkbox"/> Mental Disorders | <input type="checkbox"/> Nervous Disorders | <input type="checkbox"/> Other |
| <input type="checkbox"/> Pacemaker | <input type="checkbox"/> Pregnancy | <input type="checkbox"/> Radiation Treatment | <input type="checkbox"/> Respiratory Problems |
| <input type="checkbox"/> Rheumatic Fever | <input type="checkbox"/> Pneumonia | <input type="checkbox"/> Sinus Problems | <input type="checkbox"/> Stomach Problems |
| <input type="checkbox"/> Stroke | <input type="checkbox"/> Substance Use Disord | <input type="checkbox"/> Tuberculosis | <input type="checkbox"/> Tumors |
| <input type="checkbox"/> Ulcers | <input type="checkbox"/> Venereal Disease | | |

If any of the previous questions are marked Yes, please explain: *

Pupils

- A: Dilated
- B: Normal
- C: Pinpoint

Note- keep in mind patients who are legally and responsibly taking medications such as Vyvanse might have pinpoint pupils. Make sure to use your questioning skills before jumping to conclusions!

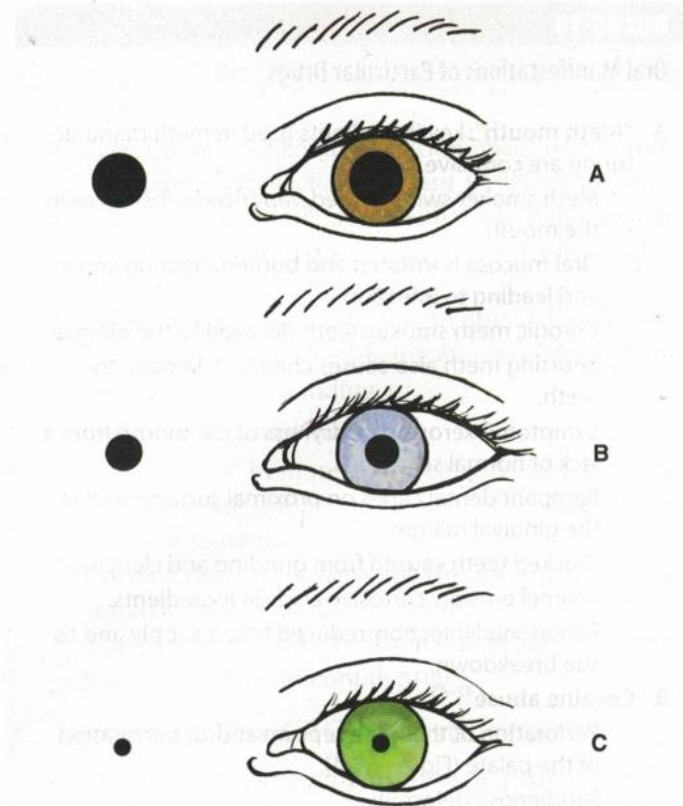


FIGURE 65-3 Examination of the Pupils. A: Dilated; occurs in shock, heart failure, other emergencies, and in the use of hallucinogens and amphetamines. B: Normal. C: Pinpoint; occurs in the use of morphine and related drugs, heroin, barbiturates. (Source: The American National Red Cross: Standard First Aid and Personal Safety.)

Clinical of Signs of Drug Use

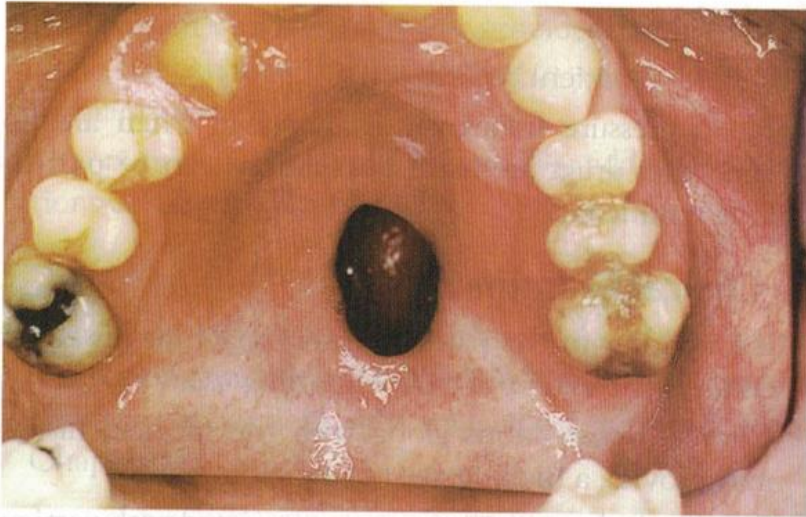


FIGURE 65-4 Nasopalatal Defect. The problems due to chronic cocaine snorting began to manifest themselves as nosebleeds followed by recurring sinus infections. Within 4 months, the patient discovered a pinhole in his palate. Each time he tried to swallow liquid it came out of his nose. (Photo courtesy of Peter Villa, DDS, FRDC.)

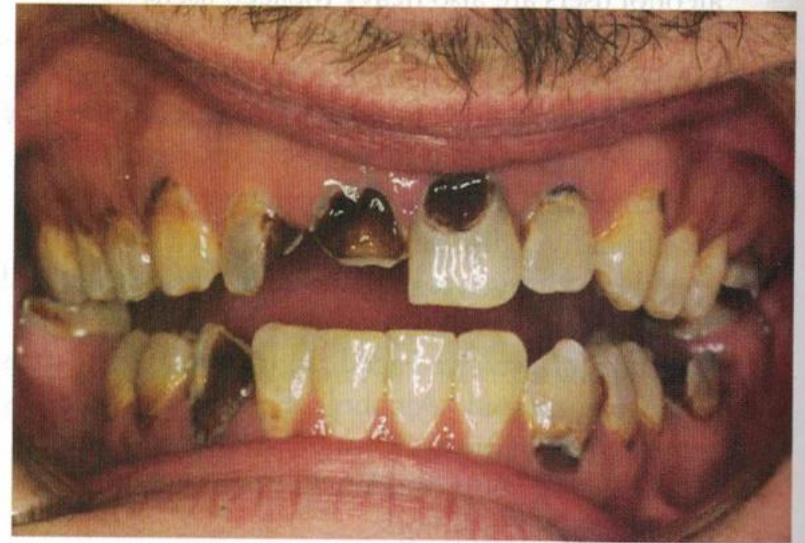


FIGURE 65-5 Rampant dental caries due to methamphetamine use in a 24-year-old patient who presented for treatment after serving time in prison and going to rehab; patient started using meth at age 16, initially snorting the powder and progressed to smoking the drug. Although some teeth could have been saved, the patient chose to have all remaining teeth extracted in order to receive full dentures. (Photo courtesy

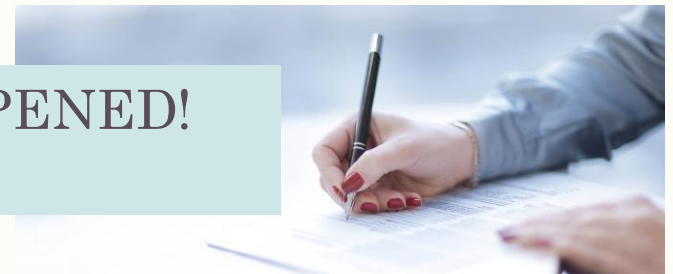
Documentation

ESPECIALLY
RECORD VITAL
SIGNS!!!

Do not loose
this habit in
“the real
world”

- Medical alert box
 - Nonalcoholic mouthrinse
 - CAGE questionnaire
 - Avoid vasoconstrictor if active user
 - *Remember local anesthesia- too much Epi can cause cardiac arrest*
 - Possible aggressive behavior

If you don't write it down- it NEVER HAPPENED!



CAGE Questionnaire Screening Tool

What other screening tools do we use in DHYG?

Box 65-8 in Wilkins Text

C : cutting down
A: annoyance by criticism
G: guilty feeling
E: eye-openers

The screenshot shows the MD+CALC website interface. At the top is a green header with the MD+CALC logo and a search bar containing the text "Search 'QT interval' or 'QT' or 'EKG'". Below the header, the title "CAGE Questions for Alcohol Use" is displayed with a star icon, followed by the subtitle "Screens for excessive drinking and alcoholism." There are three dropdown menus: "When to Use", "Pearls/Pitfalls", and "Why Use". The main content area contains four questions, each with a "No" button (0 points) and a "Yes" button (+1 point). The questions are: "Have you ever felt you needed to Cut down on your drinking?", "Have people Annoyed you by criticizing your drinking?", "Have you ever felt Guilty about drinking?", and "Have you ever felt you needed a drink first thing in the morning (Eye-opener) to steady your nerves or to get rid of a hangover?". At the bottom, a green box displays "0 points" and "Screening negative.", with buttons for "Copy Results" and "Next Steps".

When to Use	Pearls/Pitfalls	Why Use
CAGE Questions for Alcohol Use ☆ Screens for excessive drinking and alcoholism.		
Have you ever felt you needed to Cut down on your drinking?		
No 0	Yes +1	
Have people Annoyed you by criticizing your drinking?		
No 0	Yes +1	
Have you ever felt Guilty about drinking?		
No 0	Yes +1	
Have you ever felt you needed a drink first thing in the morning (Eye-opener) to steady your nerves or to get rid of a hangover?		
No 0	Yes +1	
0 points Screening negative.		
Copy Results		
Next Steps >>>		

<https://www.mdcalc.com/cage-questions-alcohol-us>

5 A's

Treating Tobacco Use and Dependence • PHS Clinical Practice Guidelines

Five Major Steps to Intervention (The "5A's")

Successful intervention begins with identifying users and appropriate interventions based upon the patient's willingness to quit. The five major steps to intervention are the "5 A's": Ask, Advise, Assess, Assist, and Arrange.

Tobacco is the single greatest preventable cause of disease and premature death in America today.

"Starting today, every doctor, nurse, health plan, purchaser, and medical school in America should make treating tobacco dependence a top priority."

David Satcher, MD, PhD
Former U.S. Surgeon General
Director, National Center for Primary Care, Morehouse School of Medicine

ASK

Identify and document tobacco use status for every patient at every visit. (You may wish to develop your own vital signs sticker, based on the sample below).

ADVISE

In a clear, strong, and personalized manner, urge every tobacco user to quit.

ASSESS

Is the tobacco user willing to make a quit attempt at this time?

ASSIST

For the patient willing to make a quit attempt, use counseling and pharmacotherapy to help him or her quit. (See *Counseling Patients To Quit* and pharmacotherapy information in this packet).

ARRANGE

Schedule followup contact, in person or by telephone, preferably within the first week after the quit date.


VITAL SIGNS

Blood Pressure:	_____	Weight:	_____
Pulse:	_____	Temperature:	_____
Respiratory Rate:	_____	Tobacco Use:	Current Former Never
			(circle one)

*Alternatives to expanding the vital signs are to place tobacco-use status stickers on all patient charts or to indicate tobacco use status using electronic medical records or computer reminder systems.

Five Major Steps to Intervention (The "5 A's")

1. ASK
2. ADVISE
3. ASSESS
4. ASSIST
5. ARRANGE



Recall- what
have you
already
learned

What should we be
doing to tailor care for
a patient with
substance related
disorder?

Factors to Teach the Patient

- Risks of oral cancer
- Routine oral cancer screening
- Medical emergencies
- Mouthrinses
- Breast milk
- Pregnancy
- Discard unused pain meds



Review page 1105

Drug Disposal

- Not all pharmacies may have a drug disposal program
- Note, HC Drug Free does public drug disposal programs



HCDrugFree
Empowering the Community

<https://hcdrugfree.org/>

Do alcohol containing rinses contribute to oral cancer risk?





NO!

-
- Alcohol rinsing does not contribute to oral cancer
 - ALSO, note mixing alcohol and carcinogens such as tobacco smoking will increase your oral cancer risk
 - However drinking or SWALLOWING alcohol contributes to oral cancer risk as it passes into the pharyngeal area



<https://images.app.goo.gl/xzxEu8JRb2oQAqtX7>

LISTERINE® Antiseptic – Understanding the Safety and Roles of Alcohol in Mouthwash

⬢ Alcohol has Multiple Roles in LISTERINE® Antiseptic

- **Solvent:** helps to solubilize ingredients
- **Vehicle for active ingredient:** enables superior penetration of the 4 Essential Oils into plaque biofilm, or bacterial communities
- **Preservative:** functions to prevent microbial growth and maintain product stability

⬢ Alcohol-containing Rinses Do Not Promote Oral Dryness

⬢ No Credible Link to Alcohol-containing Rinses and Oral Cancer



Use only as directed.

References: 1. Data on file. McNeil-PPC, Inc. 2. www.ADA.org

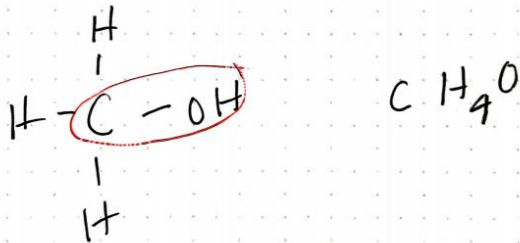
NOT JUST ORAL CARE... HEALTH  CARING™

SCIENTIFIC | EFFECTIVE | SUPPORTIVE | CUSTOMIZED

ORAL SCIENCE FROM
Johnson & Johnson
HEALTHCARE PRODUCTS
DIVISION OF MCNEIL-PPC, INC.

R-ALCHL-0212

Methanol



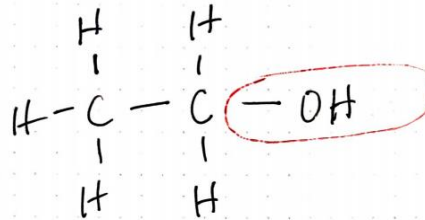
Methanol

“Wood alcohol”

Solvents

WARNING! Not for
hand sanitizers

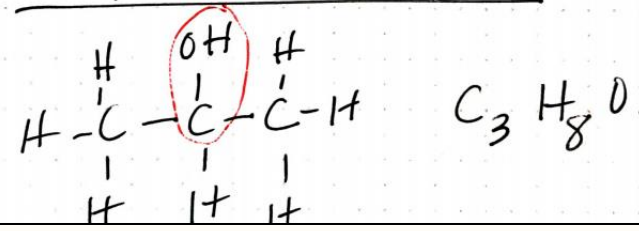
Ethanol $\text{C}_2\text{H}_6\text{O}$



Ethyl Alcohol or Ethanol

Found in Hand sanitizers, and
alcohol for consumption

Isopropyl Alcohol



Isopropyl Alcohol

For labs, medical use



FDA NEWS RELEASE

**Coronavirus (COVID-19) Update: FDA Takes
Action to Place All Alcohol-Based Hand
Sanitizers from Mexico on Import Alert to Help
Prevent Entry of Violative and Potentially
Dangerous Products into U.S., Protect U.S.
Consumers**













A clear glass bottle of blue liquid with a small glass dish containing more blue liquid next to it.

This informative table provides details about therapeutic and cosmetic mouthrinses.

—Jill Rethman, RDH, BA
Editor in Chief

Note: Mouthrinse manufacturers in the United States were invited to submit information for this table. There may be inadvertent product omissions. Submissions are edited for length and clarity.

MANUFACTURER	PRODUCT NAME	ACTIVE INGREDIENTS	INDICATIONS	CONTRAINDICATIONS
3M Oral Care	PerioMed™ 0.63% Stannous Fluoride Oral Rinse Concentrate	0.63% Stannous fluoride	Gingival inflammation, caries, hypersensitivity	Any known allergies to ingredients
	PERIDEX™ Chlorhexidine Gluconate 0.12% Oral Rinse	0.12% Chlorhexidine gluconate	Gingivitis and periodontal bleeding	Any known allergies to ingredients or chlorhexidine
ACT/Chatterm Inc	ACT® Advanced Care™ Plaque Guard™ Mouthwash	0.07% Cetylpyridinium chloride	Kills the bacteria that can cause plaque, gingivitis, and breath malodor	Not for children younger than 6 unless recommended by a doctor
	ACT Anticavity Mint Fluoride Mouthwash	0.05%/0.02% Sodium fluoride	Prevents caries, rebuilds enamel, strengthens teeth, freshens breath	Not for children younger than 6 unless recommended by a doctor
	ACT Total Care Anticavity Dry Mouth Mouthwash	0.02% Sodium fluoride	Prevents caries, soothes dry mouth, moisturizes mouth tissue, strengthens teeth, freshens breath	Not for children younger than 6 unless recommended by a doctor

ANTISEPTIC TREATS PERIODONTITIS REDUCTION IN Crest® Pro-Health™						ANTICAVITY SUPERIOR FLUORIDE UPTAKE VS. ACT® ANTICAVITY RINSE						ANTICAVITY & WHITENING ONLY LEADING BRAND THAT WHITENS & STRENGTHENS																							
FIGHTS PLAQUE & GINGIVITIS						KILLS GERMS						HELPS PREVENT CAVITIES • STRENGTHENS TEETH																							
NATURAL OPTION		LESS INTENSE FLAVOR		ALCOHOL FREE		VARIETY OF FLAVORS		NATURAL OPTION		ALCOHOL FREE METERED DOSING FOR KIDS		PEROXIDE FREE		WHITENS AND STRENGTHENS		MAX WHITE™																			
										 																									
LISTERINE® ANTISEPTIC		LISTERINE® SOFT MINT®		LISTERINE® ZERO®		LISTERINE® TOTAL CARE • FRESH MINT • CINNAMINT		LISTERINE® NATURAL ANTICAVITY		LISTERINE® TOTAL CARE ZERO		LISTERINE® SMART RINSE® • MINT SHIELD® • BUBBLE GUM® • BUBBLE BLAST®		LISTERINE® ANTICAVITY WHITE™ • GENTLE		LISTERINE® ANTICAVITY HEALTHY WHITE™ • RESTORING		LISTERINE® ANTICAVITY HEALTHY WHITE™ • VIBRANT																	
6 AND OLDER						6 AND OLDER						12 AND OLDER						6 AND OLDER						12 AND OLDER											
DAILY • RINSE 20mL • 30 SECONDS																		2X DAILY • RINSE 10mL • 60 SECONDS • AFTER BRUSHING • NO EATING OR DRINKING FOR 30 MINUTES																	
• BLEEDING UPON PROBING • XEROSTOMIA						• HALITOSIS						• DEMINERALIZATION • GINGIVAL RESSION						• TOOTHBRUSH ABRASION • ORTHODONTICS						• MAINTENANCE WHITENING • CARIES						• STAINING					

What other OHI
might you
recommend?

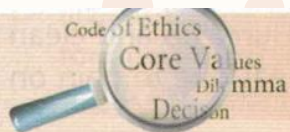
Xylitol?

Fluoride?



Now, lets apply what
we have learned.
CASE STUDY

Then we will finish with some Q&A and
I'll share some FUN resources for you



EVERYDAY ETHICS

Mr. Phillips is 20 minutes late for his continuing care appointment. The patient has previously missed two consecutive appointments. As he is being seated, he tells Christy, "Just hurry up and clean my teeth." He also tells her he can't eat because it is sore on the left side of his mouth. Mr. Phillips presents with an odor of smoke and appears quite agitated. The receptionist alerts Christy that the patient refused to update and sign his medical history; Christy begins to review the patient's medical history. Significant findings are (1) BP 160/110 (2) a cluster of ulcerated lesions on mandibular left buccal fold, (3) CAGE score of 3, (4) OHI-S index of 3. Christy consults with Dr. Franks who then examines the patient and questions Mr. Phillips about his medical history, including the CAGE questionnaire.

Dr. Franks is concerned about the patient's health and tells Mr. Phillips he is referring him for a complete physical examination and is recommending a mouthrinse with benzocaine to help reduce pain on the left side of his mouth. Dr. Franks requests that the patient stop by the receptionist to reschedule his appointment for further

treatment. Mr. Phillips becomes very aggressive because no treatment was performed; he verbally abuses the staff before storming out of Dr. Franks' office without making a follow-up appointment. Dr. Franks and Christy both record Mr. Phillips' behavior in the patient chart.

Questions for Consideration

1. Does the decision to postpone treatment for today violate Mr. Phillip's rights? Why or why not?
2. If Dr. Frank decides to terminate his practitioner-client relationship with Mr. Phillips could this be considered "abandonment"? Answer the questions provided in the Questions to Ask column of Table VI-1 in the Section VII Introduction to determine at least one other ethical alternative action that Christy might recommend for Dr. Frank to take.
3. How might each of the professional issues listed in Table VII-1 in the Section VII Introduction apply to a decision whether or not to terminate the patient-client relationship with Mr. Phillips?



Dental Hygiene

well-being committee

Join me for YOGA tonight,
2/16 at 7:30pm via ZOOM

<https://fb.me/e/24kOkDJdg>

Toll Free: 1-800-974-0068

Text: 240-319-9463

Email: info@MDHAWell-being.org OR mdhadhwbc@gmail.com

Web: <http://www.mdhawell-being.org/>

Social: <https://www.facebook.com/dentalhygwellbeing/>

<https://www.instagram.com/mdhawellbeing/>

Podcast Episode to check out



54 min

PLAY ►

Spotting Substance Abuse in Your Office with Edie Gibson, RDH

Nobody Told Me That! with Teresa Duncan

Management

[Listen on Apple Podcasts ↗](#)

Edie Gibson is a well-respected hygienist and a personal long-time educating about implants one of her personal passions has been to I've learned over the years that just because someone is quiet and always be the case.



[Episode Website ↗](#)

[More Episodes](#)

- <https://podcasts.apple.com/us/podcast/nobody-told-me-that-with-teresa-duncan/id1278687236?i=1000508433572>

Podcast:

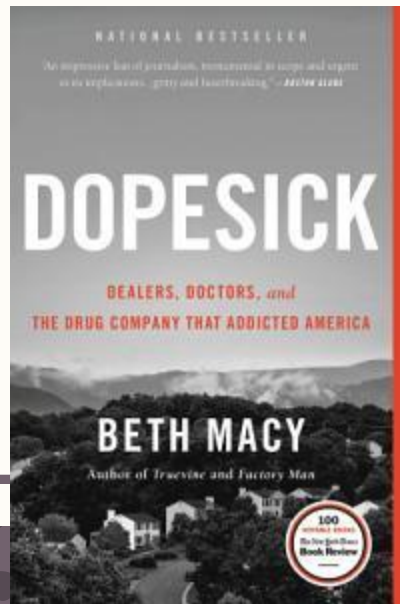
Dr. Glen Hanson

1312 Treating Substance Use Disorder with Dr. Glen Hanson : Dentistry Uncensored with Howard Farran

<https://www.youtube.com/watch?v=uHGBgx41o4E>



“Dopesick” by Beth Macy



Purdue Pharma Opioid Settlement



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LAW

Federal Judge Approves Landmark \$8.3 Billion Purdue Pharma Opioid Settlement

November 17, 2020 · 9:27 PM ET

BRIAN MANN



<https://www.npr.org/2020/11/17/936022386/federal-judge-approves-landmark-8-3-billion-purdue-pharma-opioid-settlement>

An Introduction to Substance Use Disorders for Dental Professionals



Course Author(s): Patricia A. Frese, RDH, MEd;
Elizabeth McClure, RDH, MEd
CE Credits: 3 hours
Intended Audience: Dentists, Dental Hygienists, Dental Assistants, Office Managers, Dental Students, Dental Hygiene Students, Dental Assistant Students
Date Course Online: 07/31/2017
Last Revision Date: N/A
Course Expiration Date: 01/31/2020
Cost: Free
Method: Self-instructional
AGD Subject Code(s): 157

Online Course: www.dentalcare.com/en-us/professional-education/ce-courses/ce545

The Dental Professional's Role in the Opioid Crisis



Course Author(s): Maria L. Geisinger, DDS, MS; Luis Gerardo Suarez Guzman, DMD
CE Credits: 2 hours
Intended Audience: Dentists, Dental Hygienists, Dental Assistants, Dental Students, Dental Hygiene Students, Dental Assistant Students
Date Course Online: 10/01/2018
Last Revision Date: N/A
Course Expiration Date: 09/30/2021
Cost: Free
Method: Self-instructional
AGD Subject Code(s): 157, 340

Online Course: www.dentalcare.com/en-us/professional-education/ce-courses/ce560

Disclaimer: Participants must always be aware of the hazards of using limited knowledge in integrating new techniques or procedures into their practice. Only sound evidence-based dentistry should be used in patient therapy.

Resources for Narcan Training



Questions?
