

## Alcohol: The Fatal Co-factor

Michael Nerney and Associates  
PO Box 93 Long Lake NY 12847  
518-624-5351  
michaelfnerney@gmail.com

1

---

---

---

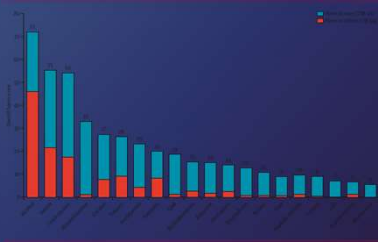
---

---

---

---

## The Destructive Force of Alcohol



2

---

---

---

---

---

---

---

## By the Numbers

Drug Overdose fatalities in the US  
152 per day    64,000 per year

Alcohol fatalities in the US.  
241 per day    88,000 per year

3

---

---

---

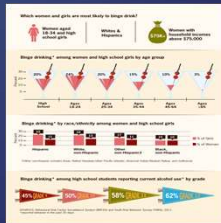
---

---

---

---

## New Cohort



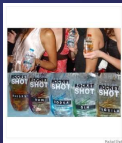
4

## Alcohol: new products

- Alcohol treats



- Pocket Shots



5

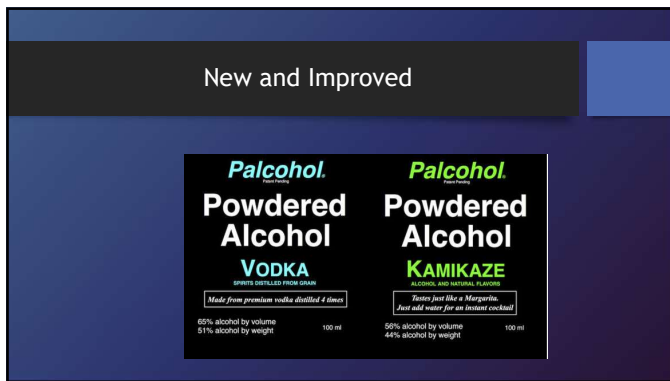
## Alcohol: new products, cont.

- Malt Beverages

- Malt brewed beer
- Sugars
- Flavors
- 20 - 24 ounces
- 7 - 13% alcohol



6



7

---

---

---

---

---

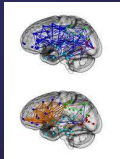
---

---

---

### Motivation for drug use

- Seek drugs for:
  - Create positive effect in brain chemistry
    - Dopamine release in reward sites
  - Suppress negative emotions
  - Activation in specific sites



8

---

---

---

---

---

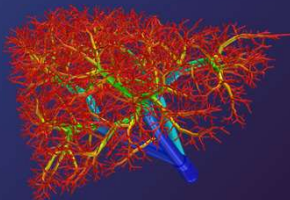
---

---

---

### Alcohol in combination with other drugs

- Alcohol and Liver function
- Liver Pathways
- P 450
- Busy signal, come back later



9

---

---

---

---

---

---

---

---

## Impulse Control

- PRDM2
  - Down regulated
  - Disrupts impulse control
- ECM-extracellular matrix
- PNN-perineuronal nets



10

---

---

---

---

---

---

---

---

## Drug combinations

- Enhance Primary Drug Effect
  - Boost the initial drug
  - Slow metabolism
  - Grapefruit juice



11

---

---

---

---

---

---

---

---

## Drug combinations

- Reduce Negative Side Effects
  - Minimize unpleasant effects



12

---

---

---

---

---

---

---

---

## Drug combinations

- Alleviate Withdrawal
  - Mask the withdrawal symptoms
  - Two separate systems
  - One system suppression



13

---

---

---

---

---

---

---

---

## Alcohol and Cocaine

- Coca wine
- Vin Mariana



14

---

---

---

---

---

---

---

---

## Alcohol and Cocaine

- New Compound-Cocaethlyene
- 5 Times  $\frac{1}{2}$  Life
- Cardiac arrest



15

---

---

---

---

---

---

---

---

## Alcohol and Marijuana



16

---

---

---

---

---

---

---

---

## Alcohol and Marijuana

- Popular combination
- Cross fade
- Which one first
- Toxic effect



17

---

---

---

---

---

---

---

---

## Alcohol and Caffeine

- Impact on Brain
  - Two systems activated
    - Stimulatory - caffeine
    - Biphasic - alcohol
- Harvard University study
  - "Wide Awake Drunk"



18

---

---

---

---

---

---

---

---

## Alcohol and caffeine: Risk factors

### • Physical

- Energized
- Uncoordinated
- 30% drop in glucose uptake in motor cortex
- 30% drop in glucose uptake in visual cortex
- Slower reaction time



19

---

---

---

---

---

---

---

---

## Alcohol and caffeine: Risk factors

- High risk when operating any moving vehicle
  - Auto/motorcycle
    - 32% of all crashes alcohol-related
  - Boat
    - 60% of fatalities alcohol-related
  - Bike/skateboard
- High risk:
  - Swimming
  - Heights
  - Parties



20

---

---

---

---

---

---

---

---

## Alcohol and caffeine: Risk factors, cont.

### • Behavioral

- Sense of competence
- Aggressive social interactions
- Twice as likely to suffer physical injury
- Twice as likely to get in fights
- Twice as likely to be either a victim or a perpetrator of sexual assault

21

---

---

---

---

---

---

---

---

## Alcohol and Heroin

**Heroin use is part of a larger substance abuse problem.**

Nearly all people who used heroin also used at least 1 other drug.

Most used at least **3** other drugs.

**Heroin** is a highly addictive opioid drug with a high risk of overdose and death for users.

**People who are addicted to...**

ALCOHOL	MARIJUANA	COCAINE	Rx OPIOID PAINKILLERS
2x	3x	15x	40x

...more likely to be addicted to heroin.

SOURCE: National Survey on Drug Use and Health (NSDUH), 2017-2018

22

---

---

---

---

---


---

---

---

## Alcohol and Heroin

- Backdoor Path
- Synergistic
- Overdose Fatalities



23

---

---

---

---

---

---

---

---

## Alcohol and Heroin

**Heroin use is part of a larger substance abuse problem.**

Nearly all people who used heroin also used at least 1 other drug.

Most used at least **3** other drugs.

**Heroin** is a highly addictive opioid drug with a high risk of overdose and death for users.

**People who are addicted to...**

ALCOHOL	MARIJUANA	COCAINE	Rx OPIOID PAINKILLERS
2x	3x	15x	40x

...more likely to be addicted to heroin.

SOURCE: National Survey on Drug Use and Health (NSDUH), 2017-2018

24

---

---

---

---

---

---

---

---



## Alcohol and Pain Pills

- Rx Meds
- Opioids







25

---

---

---

---

---

---

---

---

## Alcohol: combinations

- Robo-shots
  - Dextromethorphan
  - Opioid cough suppressant
  - Plus alcohol
  - Rapid and powerful intoxication
  - Motor control
  - Impulse control
  - Delusional



26

---

---

---

---

---


---

---

---

## Alcohol and Nicotine

- Reciprocal enhancement
- By the numbers
- Past and Present
- Cancer and Cardiac



27

---

---

---

---

---

---

---

---

## Alcohol: combinations

### • Robo-shots

- Dextromethorphan
- Opioid cough suppressant
- Plus alcohol
- Rapid and powerful intoxication
- Motor control
- Impulse control
- Delusional



28

---

---

---

---

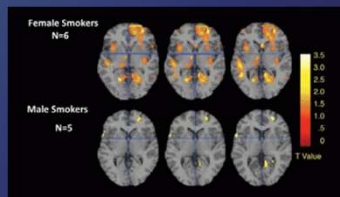
---

---

---

---

## Gender Differences



29

---

---

---

---

---

---

---

---

## Alcohol: impact on adolescent brain

- Duke University study
  - NMDA pathways
- Adult brain
  - Calming effect
- Adolescent brain
  - Biphasic - excitatory effect
    - It's a party!

30

---

---

---

---

---

---

---

---

## Alcohol and Bad Behaviors

- Homicide
  - Road Rage
- Assault
  - Mask Refusal
- Suicide
  - Males



31

---

---

---

---

---

---

---

---

## COVID 19 Influence

- Gun Sales

32

---

---

---

---

---

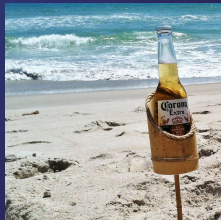
---

---

---

## A Day at the Beach

- Spring, Summer, and Fall
- Open water drownings
- Male /Female



33

---

---

---

---

---


---

---

---

### Social media

- GoPro/YouTube
- High T + H2O = 1+1+1+1+1+1+1+1 = DD
- ETOH + T + H2O = 50%  
E + H2O = 1 DD
- Open water 3x



34

---

---

---

---


---

---

---

### High Risk

- Driving
- Swimming
- Falls
- Burns



35

---

---

---

---


---

---

---

### The Cabin in the Woods

- Highest Risk for Females
  - Second Location
    - More bad outcomes



36

---

---

---

---

---

---

---

## Alcohol and Cancer



37

---

---

---

---

---

---

---

---

## Cancers

- Co-carcinogenic
- As many as 7
- Female Specific



38

---

---

---

---

---

---

---

---

## National Cancer Institute

- Skin, Prostate, Pancreas, Breast, Liver,
- Colon, Larynx, Esophagus
- Dose Related
- Cause Unknown



39

---

---

---

---

---

---

---

---

## Alcohol Risk Factors

- Age
- Gender
- Exposure
- Amount



40

---

---

---

---

---

---

---

## Emerging Trends

- Drunkorexia
- High Intensity Drinking

41

---

---

---

---

---

---

---

## COVID 19 Influence

- Alcohol sales
- Drive Thru
- Take Out
- Home Delivery

42

---

---

---

---

---

---

---

## Alcohol: Cultural factors

- Attitude
- Appearances
- Apathy

43

---

---

---

---

---

---

---

## PREVENTION

- Medical Staff
- Parents
- School
- Law Enforcement



44

---

---

---

---

---

---

---

## Third party adults

- Non Family Member
- Regular Contact
- Care and Concern
- Positive Role Model
- Do Not Want to Disappoint



45

---

---

---

---

---

---

---

Q and A

Wrap up

- FINDERS
- KEEPERS
- LOSERS
- WEEPERS

---

---

---

---

---

---

---