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Cracks in the ice webinar November 2017

# Effects of ice on the brain and body.

Professor Nicole Lee

 @DrNicoleLee



Dr. Nicole

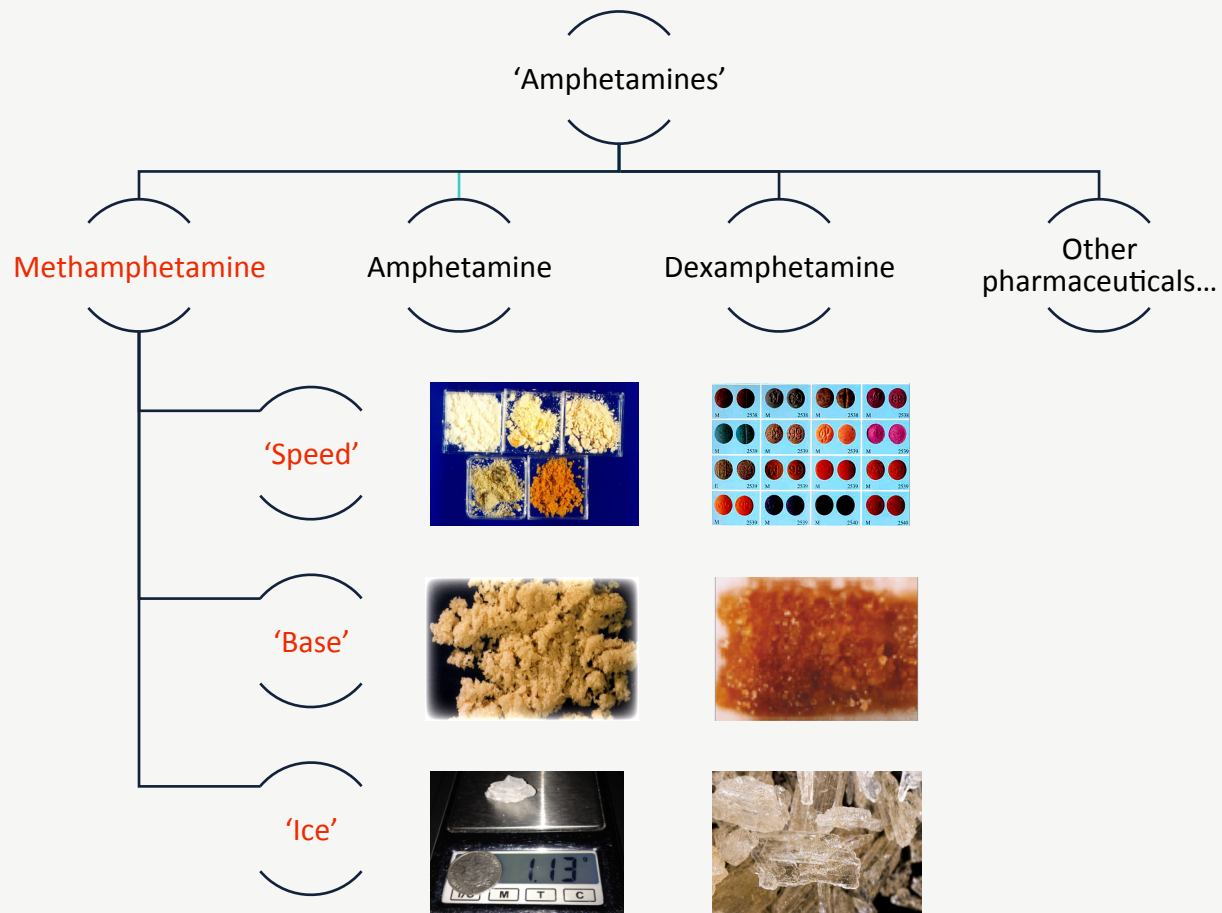
# METH



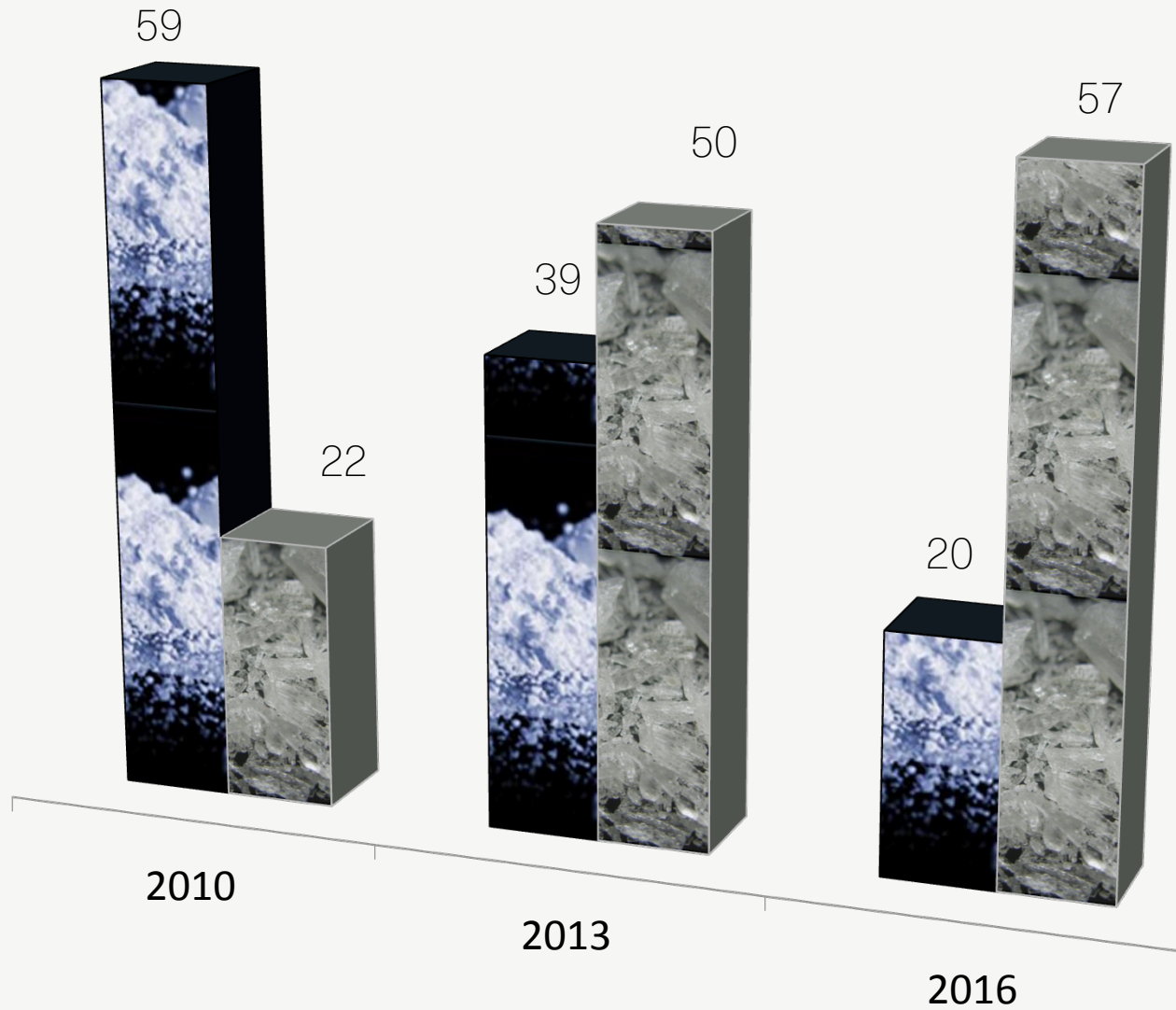
## BEFORE



## AFTER



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70%

Irregular users  
*< once a month*

Not dependent  
Mild health issues  
Mild sleep problems  
Acute harms

10%

Occasional users  
*Once a month+*

Unlikely dependent  
Moderate mental health issues  
Moderate sleep, nutrition issues  
Acute harms

20%

Regular users  
*Once a week+*

Probably dependent  
Smoking or injecting  
Severe mental health issues  
Severe sleep, nutrition issues  
Acute and long term harms

NDSHS, 2014

**Immediate effects.**

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Mild intoxication



Moderate  
intoxication



Toxicity



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Euphoria and wellbeing

Energy

Attention, alertness and memory

Sex drive

Appetite



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Nervousness, anxiety, panic  
Agitation

Psychotic symptoms

Jaw clenching, teeth grinding

Nausea, vomiting

Headache

Hot and sweaty, racing pulse



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Chest pain

Aggressiveness

Tremor, seizure

Severe headache

Unsteady walking

Difficulty breathing

Hot flushed sweaty skin

Confusion, disorientation

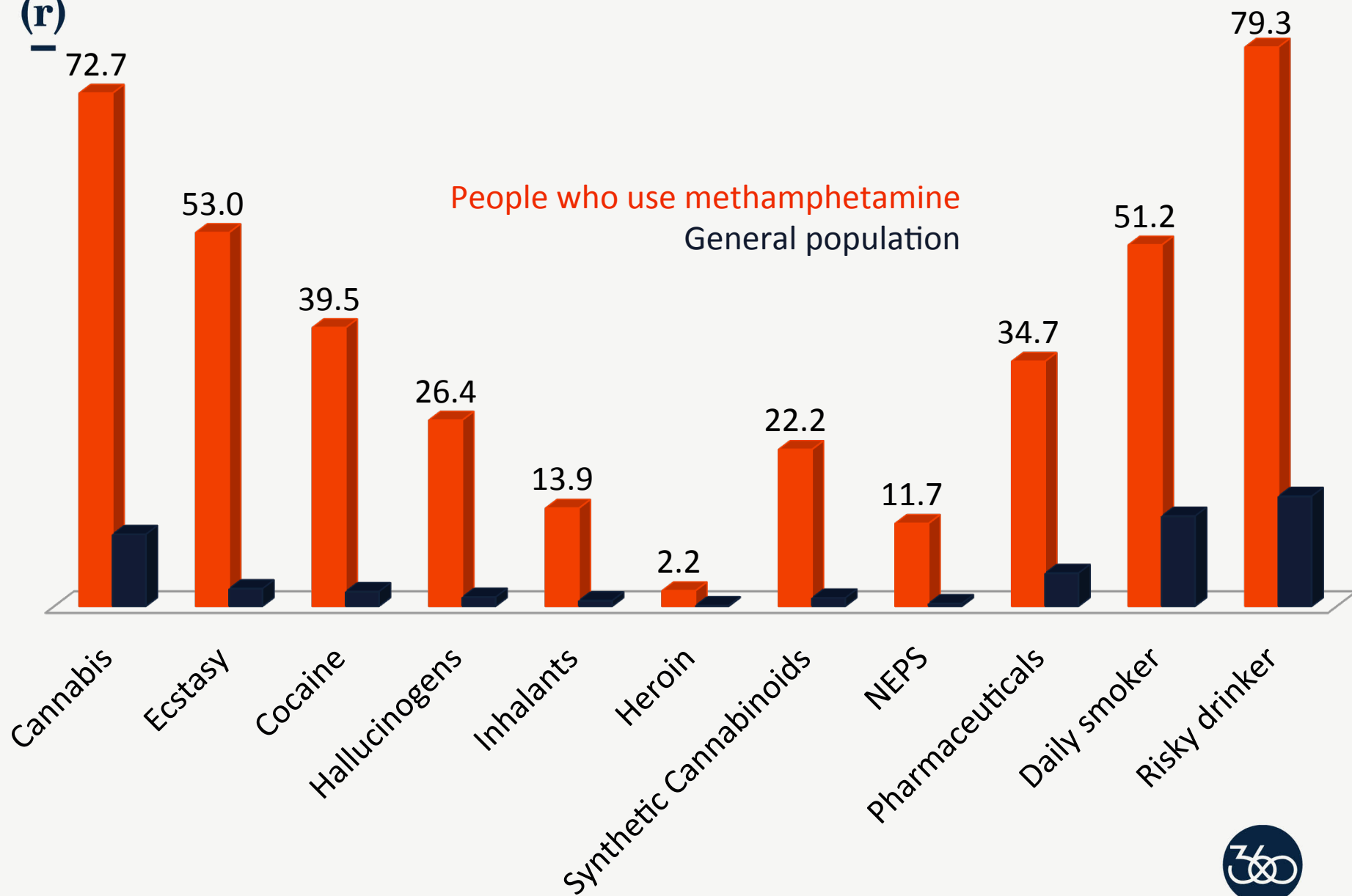
Muscle rigidity, spasm, jerking

Severe agitation, panic, psychosis

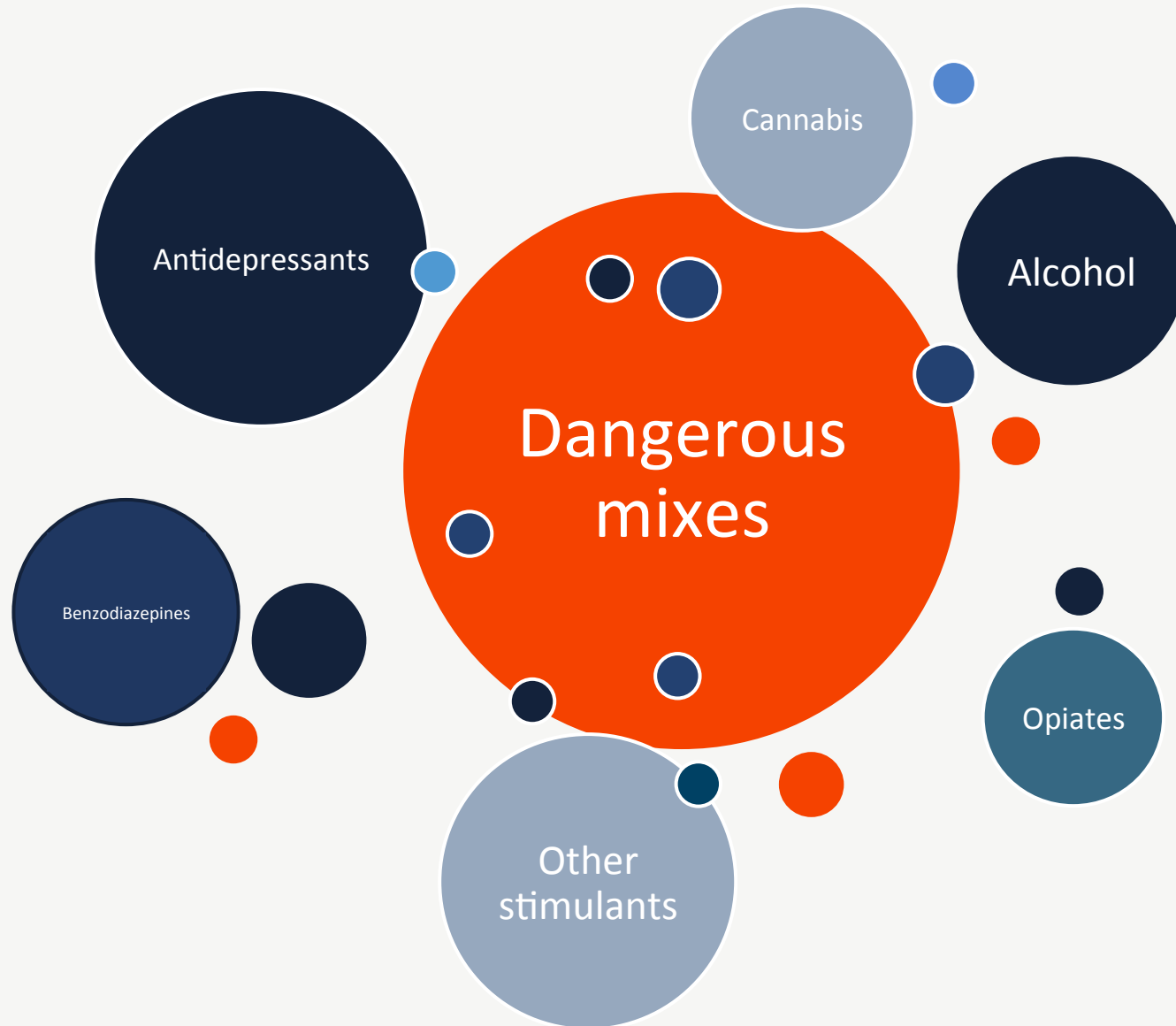


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NDSHS, 2014



**Effects of long term use.**

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Heart, liver & kidney

Teeth & skin

Sleeping problems

Enduring mental health problems

Decreased motivation

Weight loss, malnutrition

Poor concentration and memory



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## **Meth mouth.**

Reduces saliva

Poor oral hygiene

Teeth grinding (bruxism)

Direct caustic effects



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# Skin picking.

Psychosis

Body effects

Obsessive-compulsive



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# Sleep and nutrition.



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**NORADRENALINE**

Alertness  
Concentration  
Energy

Anxiety  
Impulse  
Irritability

**SEROTONIN**

Obsessions &  
compulsions  
Memory

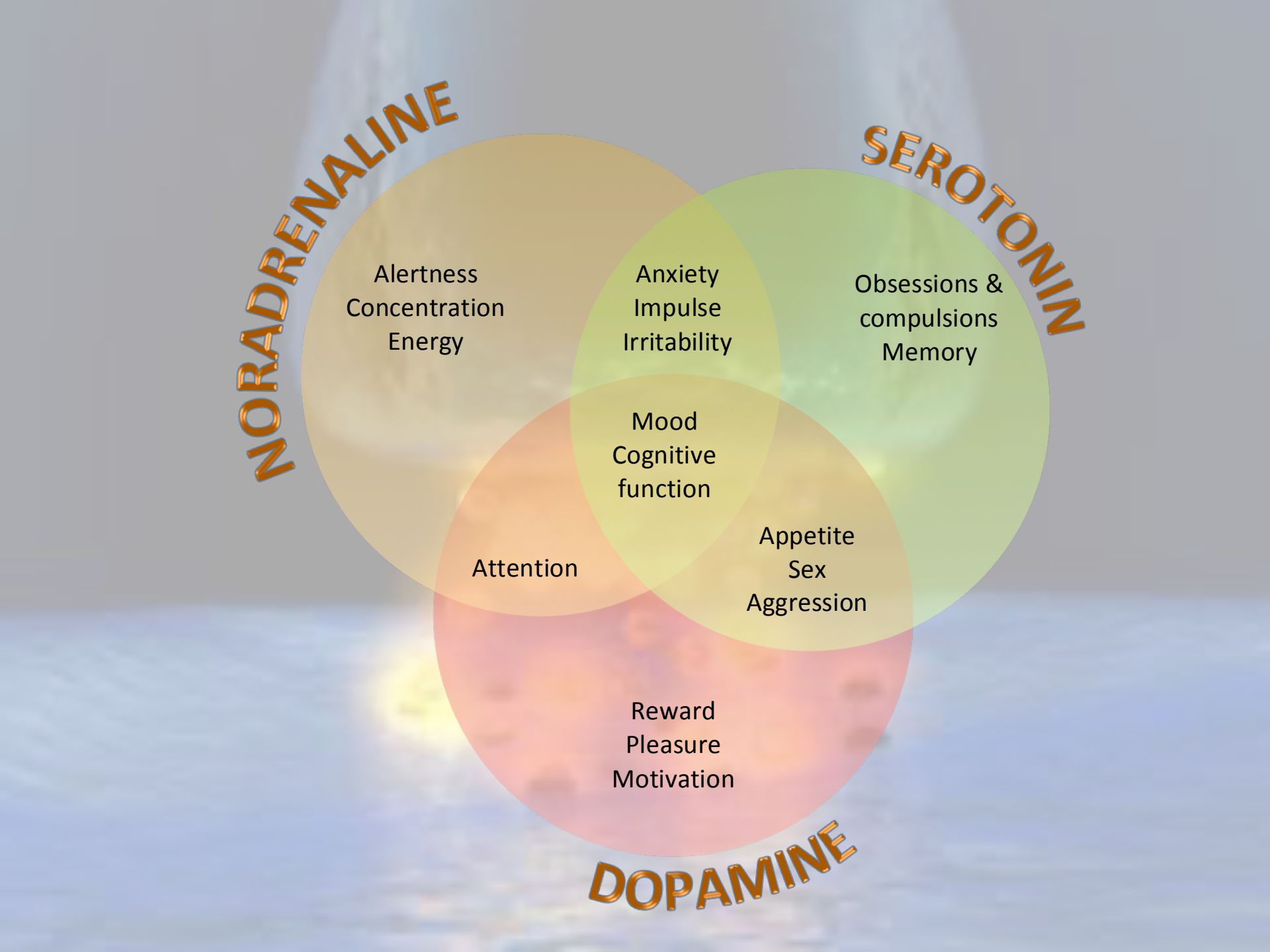
Mood  
Cognitive  
function

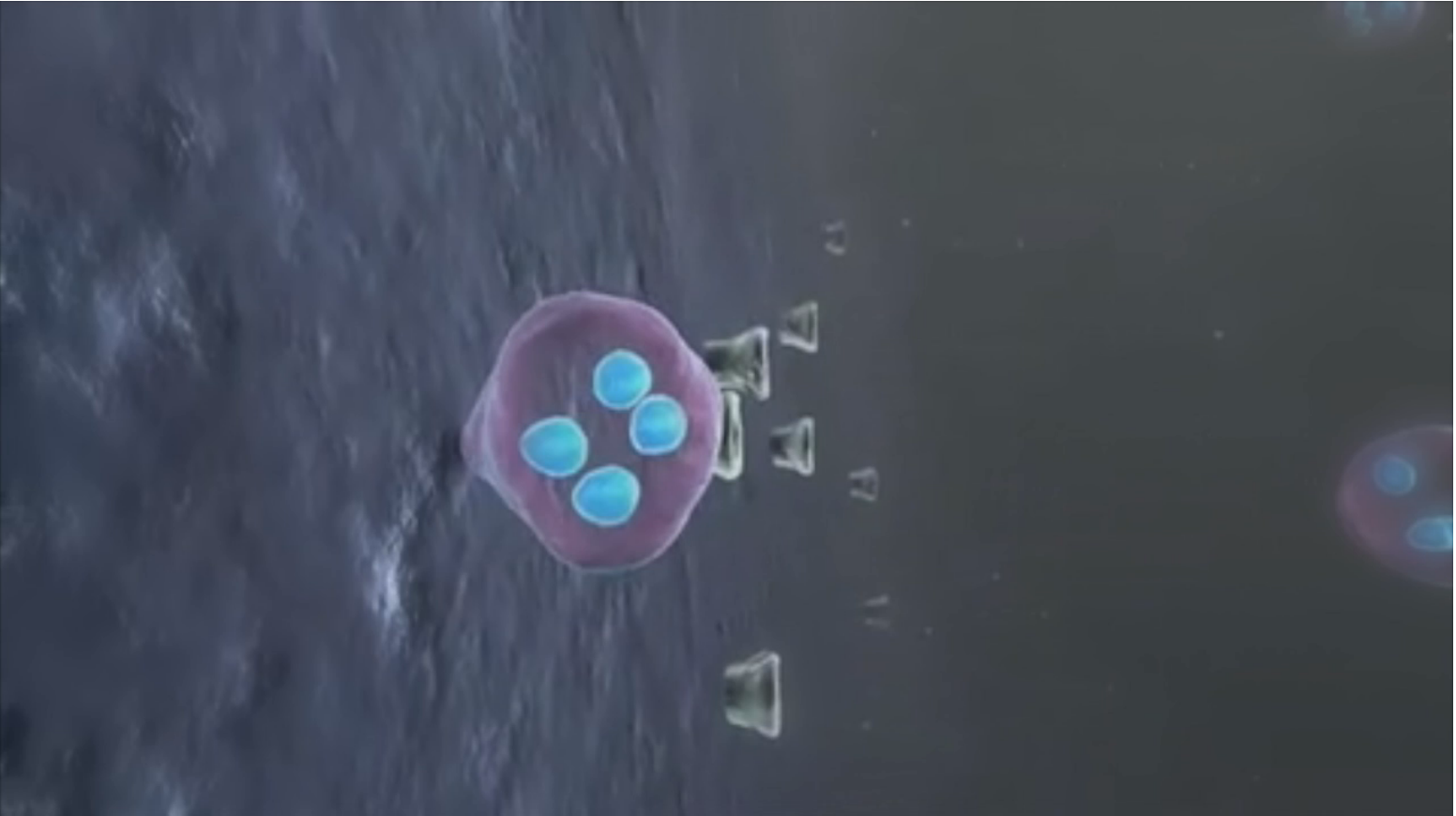
Attention

Appetite  
Sex  
Aggression

Reward  
Pleasure  
Motivation

**DOPAMINE**

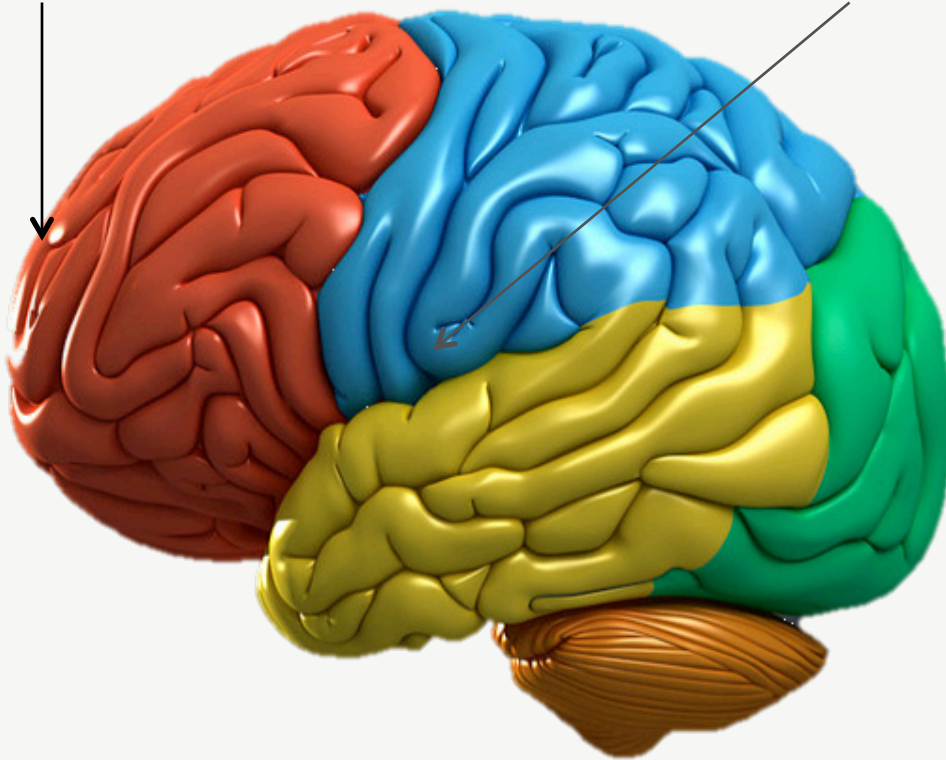




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Frontal lobe  
(thinking, planning, decision making)

Limbic system  
(emotional, social and memory)

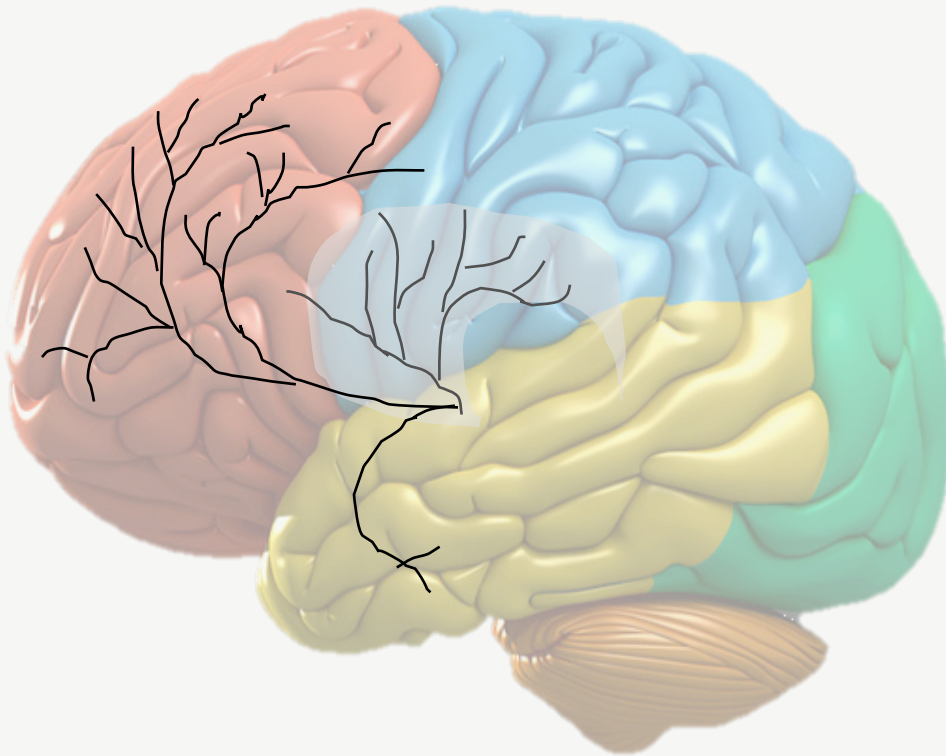


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Frontal lobe  
(thinking, planning, decision making)

Limbic system  
(emotional, social and memory)



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Focus, attention and concentration

Memory

Planning ability

Decision making

Emotion regulation

Flexible thinking

Impulse control

Mood

Threat sensitivity



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Getting to appointments

Completing tasks

Taking on new information

Thinking about consequences

Goal setting and working towards goal

Stopping inappropriate behaviour

Switching from one topic to another

Unexpected outbursts



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**Larger impairments than.**

Cocaine (20x)

Marijuana (4x)

Alzheimers disease (6x)

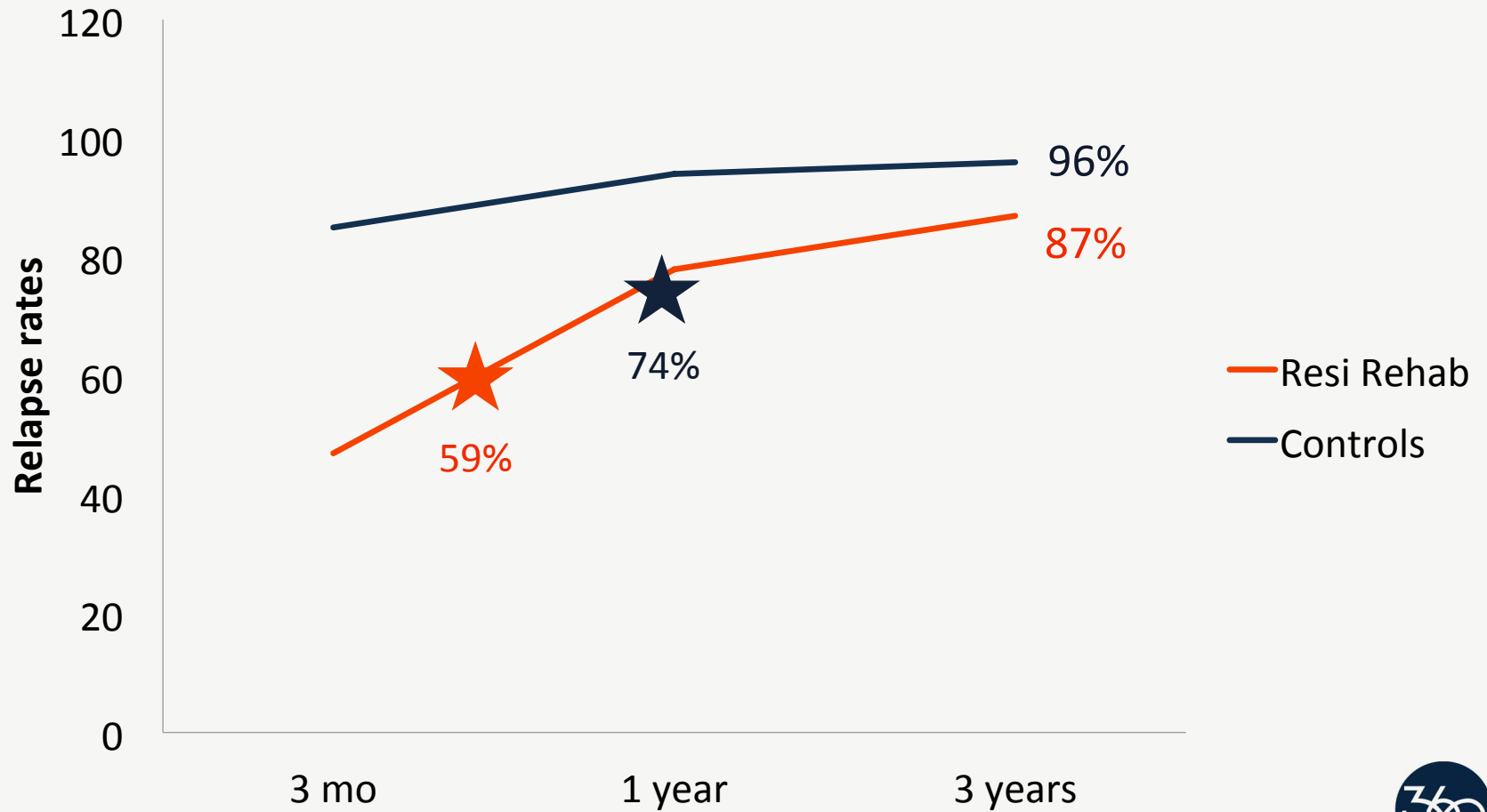
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After 6 mo abstinence cognition worse than current users  
No significant improvement 9-12 months



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McKetin et al., 2012; Baker et al., 2005; Lubman et al 2014



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25%



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80%



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# Anger and aggression.

# Frontline worker ice training

## ICE ACTION PLAN

Do you work in one of these sectors?

Want to know how to better respond to people affected by ice?

Health



Community and  
social services



Police and  
emergency services



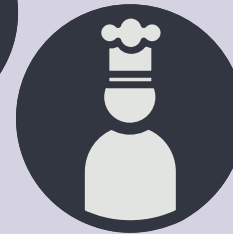
Justice services



Education settings



Local government



Transport, hospitality, real  
estate and other services

For more information visit [health.vic.gov.au/icetraining](https://health.vic.gov.au/icetraining)



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