

A grayscale photograph of a person sitting in the driver's seat of a car. An airbag has deployed from the center console, cushioning the person's head and upper body. The person's right arm is extended out of the window. The car's interior, including the dashboard and steering wheel, is visible. The text "CHAPTER THIRTEEN: A NEED FOR SAFETY" is overlaid in white, bold, sans-serif font on the left side of the image. A thin vertical blue line is positioned to the right of the text.

# CHAPTER THIRTEEN: A NEED FOR SAFETY

# ANALYZING THE DANGER

In Canada you are:

❓ 50 times more likely to die in a car accident than a plane accident

❓ 5 times more likely to die in a car accident than to be murdered

❓ More than 60 times more likely to be injured in a car crash than die in one

❓ All of this is preventable

# ANALYZING THE DANGER: WEEKDAY

Let's analyze danger. Car accidents are most likely to happen on Friday. Why?



# ANALYZING THE DANGER: WEEKDAY

Let's analyze danger. Car accidents are most likely to happen on Friday. Why?

- ❑ Parties on Friday (alcohol + drugs)
- ❑ People are tired from the week
- ❑ People are rushing to get home
- ❑ People have plans for the weekend



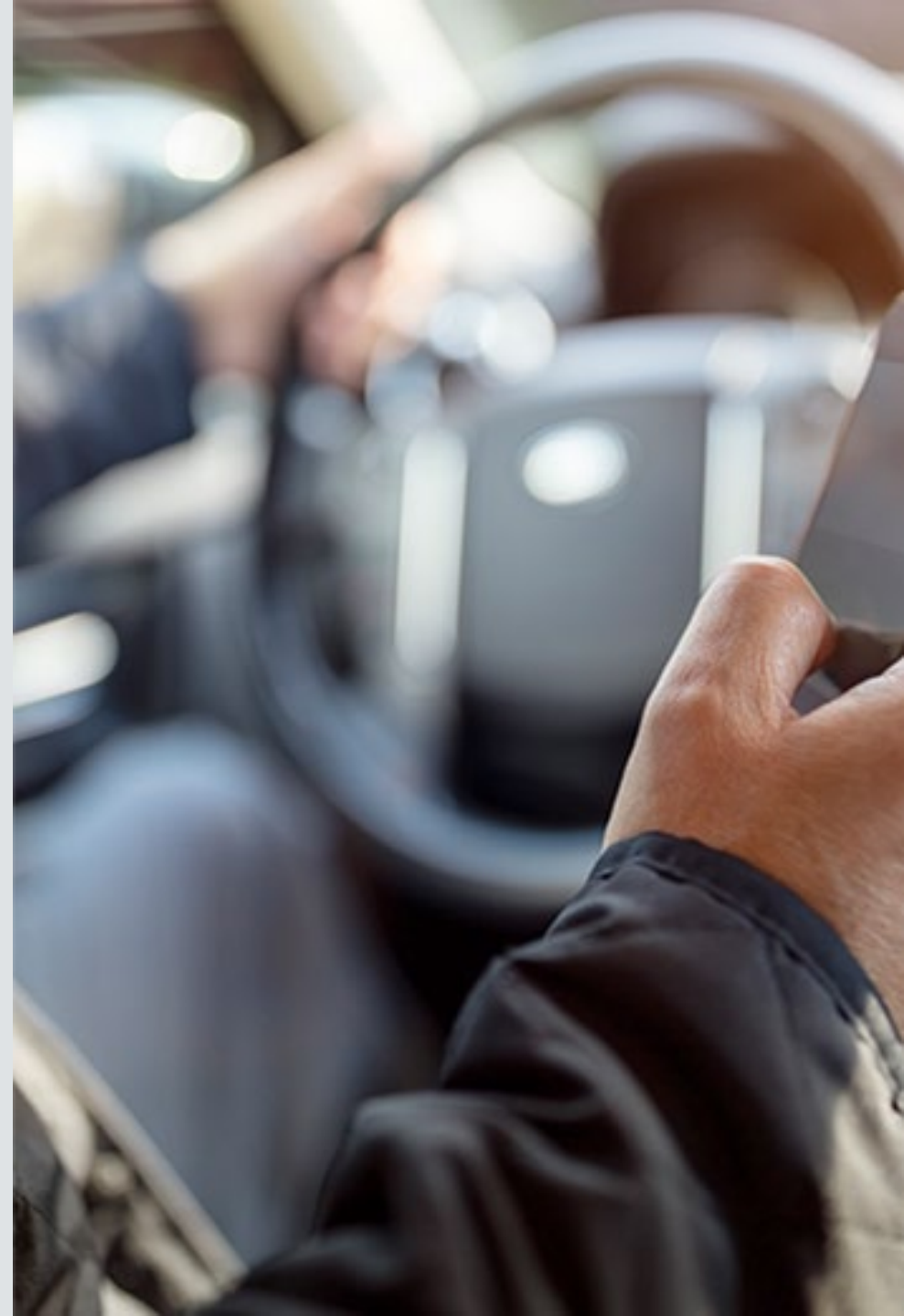
# ANALYZING THE DANGER: AGE

- What age group is most likely to be injured or killed in a car accident?
  - Proportionally, it is ages 15-19



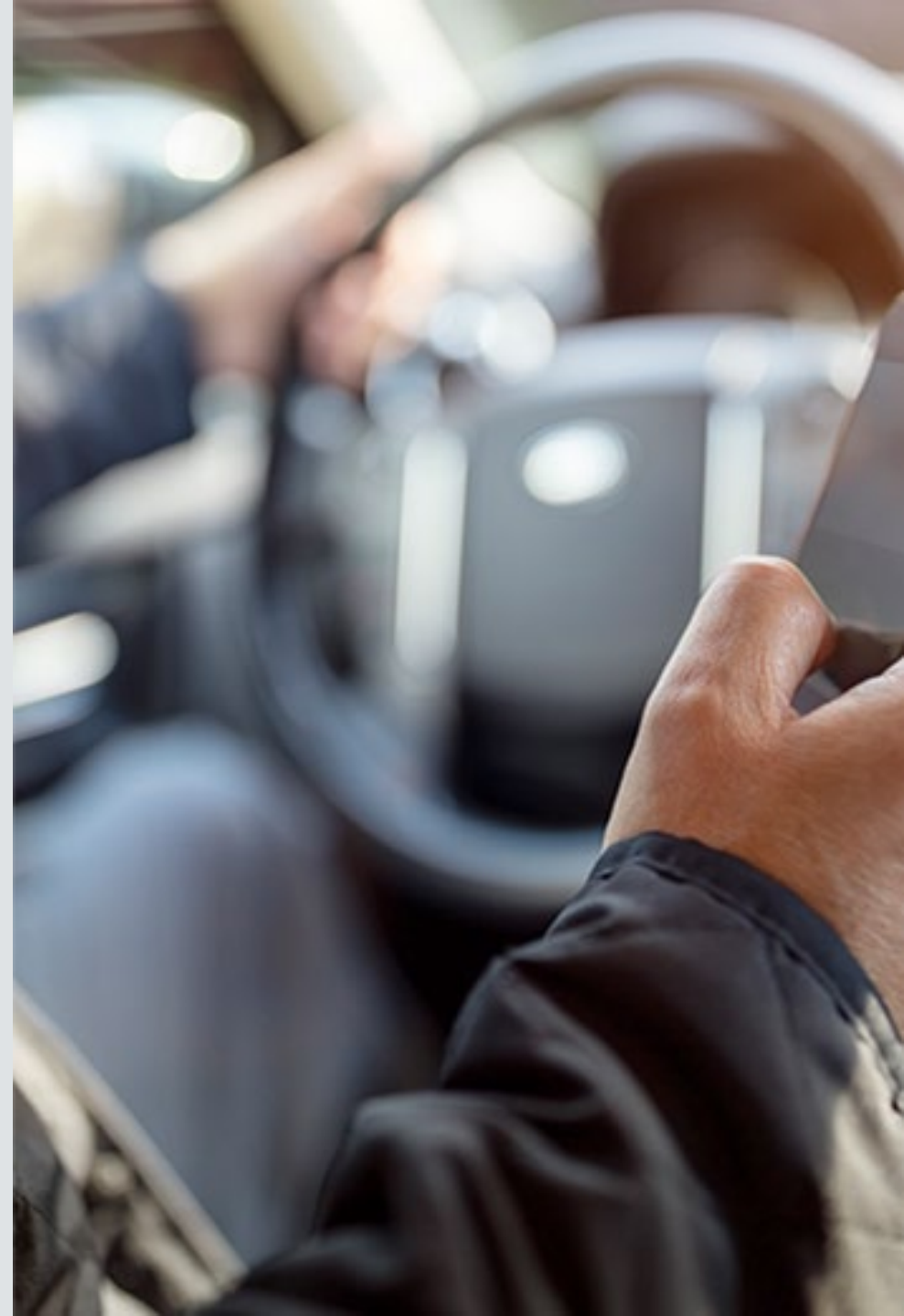
# DISTRACTIONS

- **Distractions** are anything that takes your attention away from what you are supposed to be doing
- You **cannot** control distractions **outside** your vehicle, but you **can** control distractions **inside** your vehicle
- Examples of controllable distractions:



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- Examples of controllable distractions:
  - ❑ **Cell phones**



# REACTION TIME

- Reaction time is the time it takes to recognize a problem and act on it
- There are two major factors that affect reaction time





# REACTION TIME: FATIGUE

- **Fatigue** is the first major factor affecting reaction time
- Sleepy drivers cannot pay attention
- May run off road or into oncoming traffic
- Stimulants (e.g. coffee) can speed up reaction time temporarily



# REACTION TIME: DRUGS

- Drugs are the second major factor affecting reaction time
- A driver under the influence of drugs that cannot function normally is impaired
- Depressants (e.g. alcohol, Benadryl) slow reaction time and lower coordination



# REACTION TIME: DRUGS

- Alcohol use leads to drunk driving
- Laws against it use Blood Alcohol Concentration (BAC)
- Measured in g of alcohol per 100 mL of blood
- Legal limit is 0.08



# COLLISION INJURIES

- Collisions damage people as well as cars, causing **trauma**
- **Trauma** is defined as physical or emotional stress



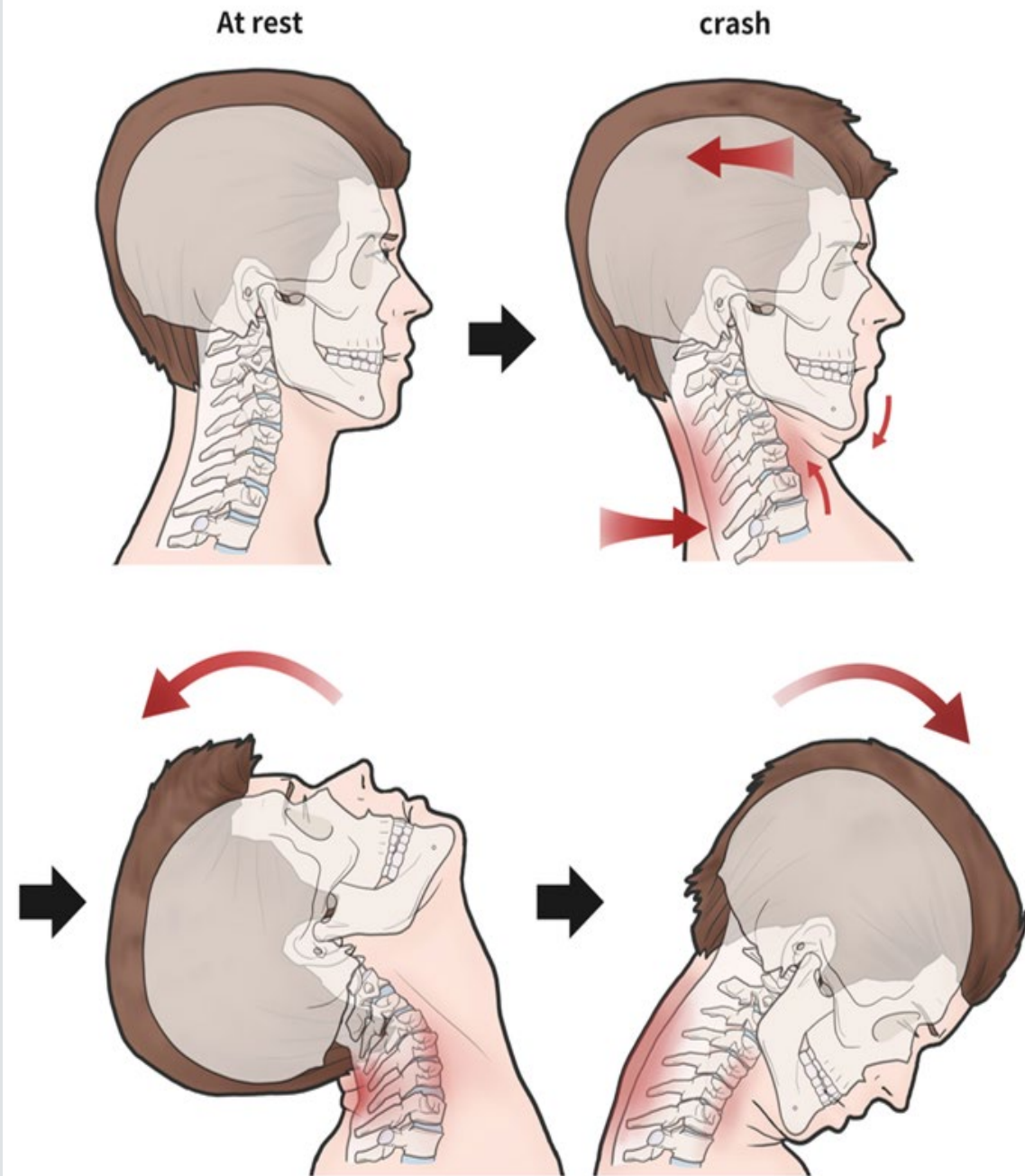
# PHYSICAL TRAUMA

- Heal on their own
  - Cuts and bruises
- Require treatment
  - Broken bones, whiplash
- Permanent
  - Brain and spine injuries



# PHYSICAL TRAUMA: WHIPLASH

- Sprained muscles and ligaments in the neck
- Common injury in rear-end collisions
- Prevented by seatbelts and well-adjusted headrests
- Treated by physical therapy



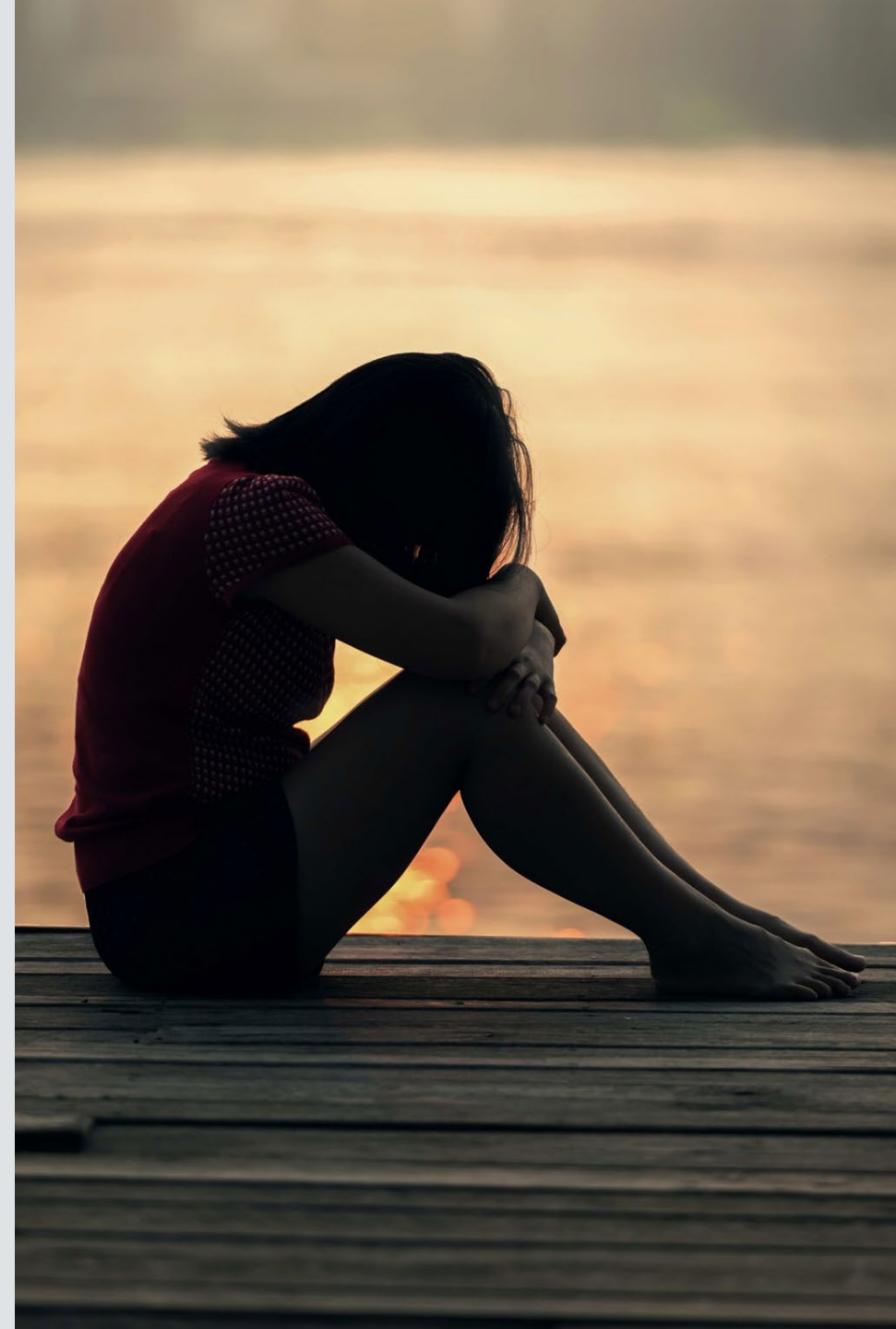
# EMOTIONAL TRAUMA

- Immediate Responses
  - Shock, disbelief
- Fear Responses
  - Flashbacks, PTSD, Nightmares
- Loss Responses
  - Depression, **Grief**



# EMOTIONAL TRAUMA: GRIEF

- Loss of a loved one in an accident
- Regret over causing an accident
- Many other sources







# How Do We Prevent Trauma?



# How Do We Prevent Trauma?

Safety.

# SAFE ROADS

- Rumble strips
  - Notify people when they come near the shoulder
- Guard rails
  - Keep vehicles safe from steep edges
- Flashing lights
  - Warning for hazards or upcoming intersections



# SAFE VEHICLES: MAINTENANCE

- Vehicle maintenance avoids mechanical failure
- Maintaining tires reduces stopping time
- Maintaining steering ensures the car remains under control
- Maintaining windshield wipers keeps the view clear in bad weather



# SAFE VEHICLES: SAFETY FEATURES

- Seatbelts prevent ejection in an accident
- Crumple zones reduce the energy of a collision
- Airbags provide cushioning during a crash



# SAFE BEHAVIOUR

- **Always wear a seatbelt!**
- Maintain enough distance from the car ahead of you
- **Never use your phone!**
- Only cross when it is safe
- **Always drive sober!**

