

TBI 101

An Introduction to Traumatic Brain Injury

Presented by

The California Traumatic Brain Injury Advisory Board

in association with

The Brain Injury Survivors Committee



DEPARTMENT of
REHABILITATION

Employment, Independence & Equality

Overview

1

**Introduce
Public to TBI**

2

**Increase
Awareness**

3

**Provide
Community
Resources**

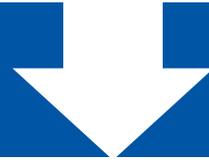
Why is Brain Injury Awareness Important?

- Major cause of death and disability
- Short and long-term chronic health concerns
- Frequently underdiagnosed
- Growing public health concern
- Over 200,000 TBI-related emergency department visits and hospitalizations each year in California

What Is Brain Injury?

Acquired (ABI)

- Any brain injury that occurs after birth
- Caused by internal trauma (non TBI) and external trauma (TBI)



Traumatic (TBI)

- Occurs when an external force causes damage to the brain
- Can range from mild (like a concussion) to severe
- Can affect physical, cognitive, emotional, and behavioral functions

Common Causes of ABI

- Stroke
- Anoxia
- Brain tumor
- Poisoning
- Drugs

Brain Injury Symptoms (1 of 3)

- Brain injury symptoms can vary based on the individual and the severity of their injury.
- A person may not recognize or admit they are having problems.
- A person may not understand how symptoms affect their daily lives.
- Brain injuries can affect multiple aspects of a person's life.



Brain Injury Symptoms (2 of 3)

Physical

- Balance
- Dizziness and Vertigo
- Fatigue
- Headaches
- Vision
- Light and Sound Sensitivity

Cognitive

- Confusion
- Easily Overwhelmed
- Decision Making
- Motivation and Initiative
- Concentration and Memory
- Difficulty Sustaining Attention

Brain Injury Symptoms (3 of 3)

Emotional

- Anhedonia (apathy)
- Anxiety or nervousness
- Angered easily, irritable, mood swings
- Sadness, depression, increased risk for suicide
- Lack of motivation
- Flooding (easily overwhelmed)
- Social isolation, sensitive to criticism

Sleep

- Insomnia: Difficulty falling asleep or staying asleep
- Obstructive sleep apnea
- Sleeping less than usual
- Sleeping more than usual
- Vivid dreams or nightmares

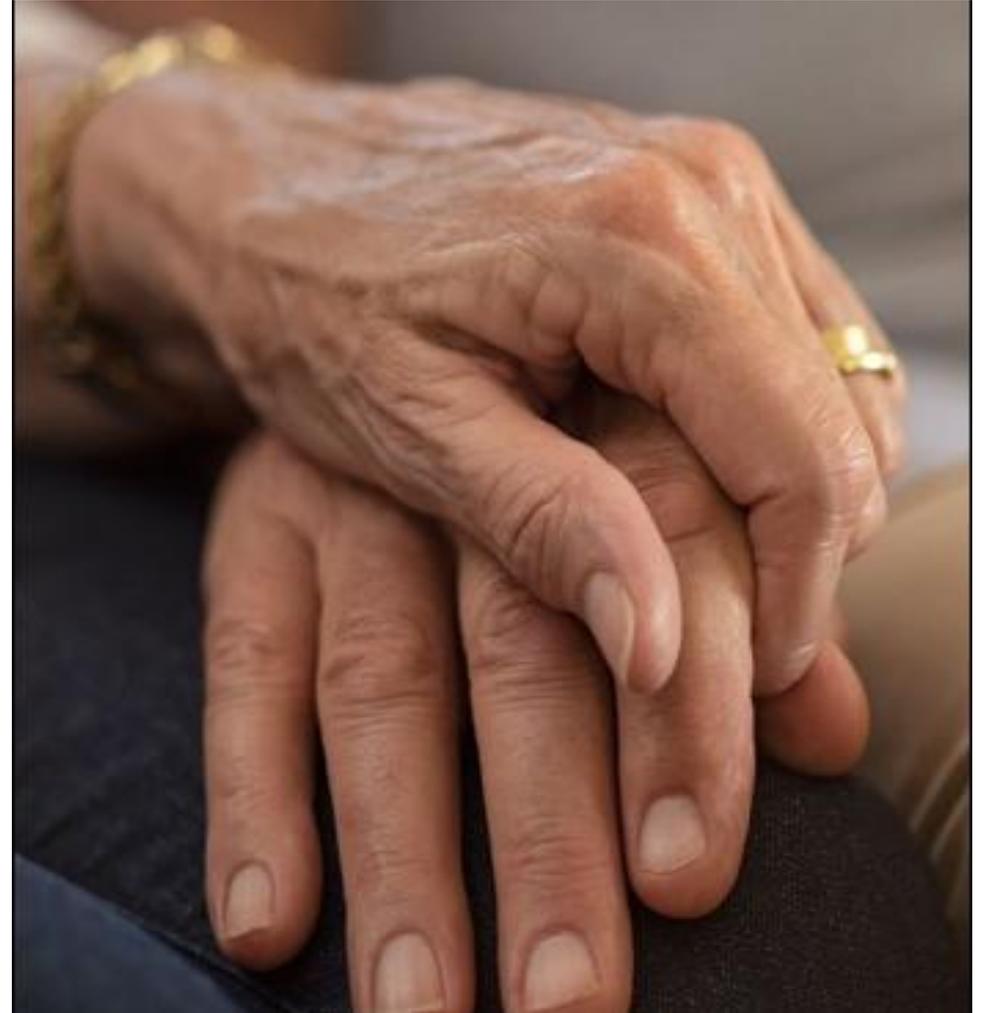
Brain Injury Survivors Speak

“The E.R. said I was ‘fine’, that I ‘just’ had a concussion and should rest for the day.

I couldn’t remember how to drive; how old my kids were or where I lived. It’s like someone had taken out a big chunk of my brain, but I knew my name and birthday and that’s all it took to decide I was ‘fine.’

That day ruined my life, and no one seemed to think it was a big deal.”

-TBI survivor



TBI Diagnosis



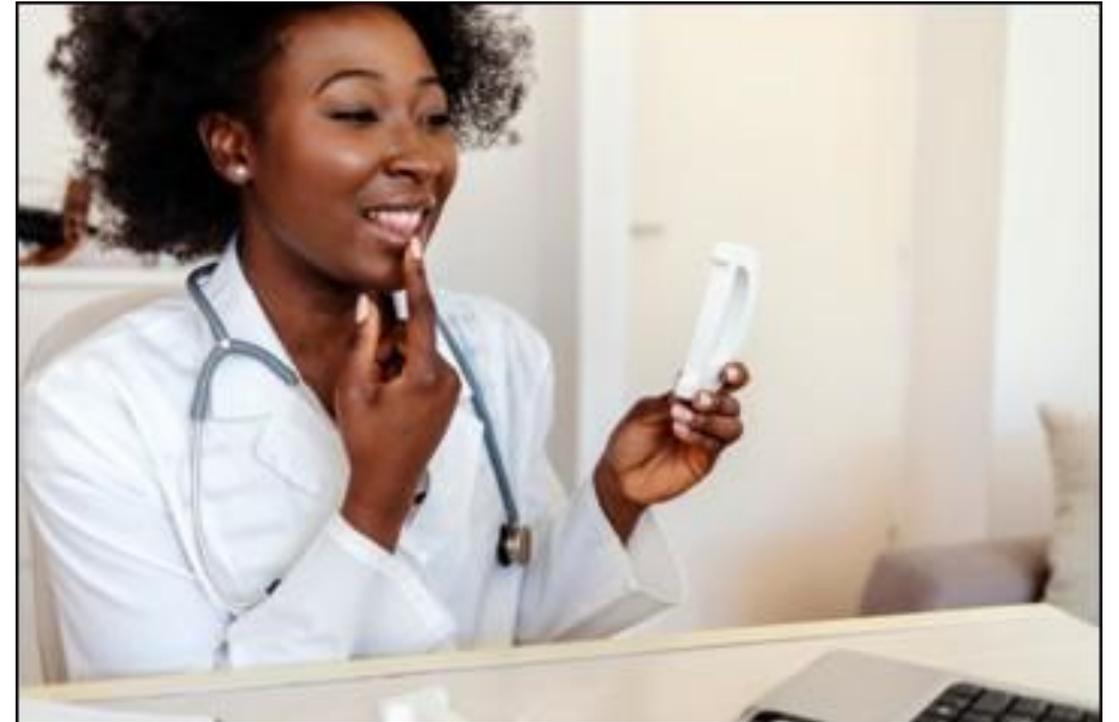
Diagnosis often includes:

- Neurological exams
- Brain imaging (CT or MRI)
- Cognitive and emotional assessments

Mild TBIs may not appear on scans, so symptom tracking is critical.

Treatment and Recovery

- Rest and gradual return to activity
- Physical, occupational, and speech therapy
- Cognitive rehabilitation
- Counseling and emotional support
- Recovery varies widely by individual



TBI & Substance Use: Key Facts

- **Many TBIs involve intoxication:** Up to **24–51%** of adolescents and adults were intoxicated at the time of injury.
- **High rates of prior substance use:** **25%** of people hospitalized for TBI have a history of Substance Use Disorder.
- **Increased risk of repeat TBI:** Alcohol-related TBIs make individuals **4× more likely** to sustain another TBI.
- **Slower recovery:** Alcohol can delay healing and raise the risk of **seizures**.
- **Worsened symptoms:** Alcohol and other substances can intensify problems with **cognition, balance, impulsivity, and depression**.



Intimate Partner Violence

- Intimate partner violence is a common cause of TBI.
- Victims of partner violence are less likely to report their TBIs than people who are injured in other ways. Male victims are even less likely than women to come forward.
- Survivors of TBIs caused by domestic violence are more likely to experience poorer overall health, including both physical and mental health challenges.

Incarceration

Research suggests almost half of people in correctional or detention facilities such as prisons and jails have a history of TBI.

In a Virginia study, more than half of children in the juvenile justice system, followed over an 18-month period, screened positive for brain injury.

People in correctional or detention facilities that have a history of TBI are much more likely than non-TBI survivors to present with the following:

- Mental health problems
- Substance use disorders
- Difficulty controlling anger
- Suicidal ideations or attempts



Housing Instability

- California has the highest rate of homeless individuals in the nation.
- 70% of homeless individuals with TBI experienced their first brain injury before they became homeless.
- People who experience homelessness have a much greater risk for having a prior TBI and for experiencing an additional TBI.

Health Disparities

People in rural areas have greater risk of dying from brain injury:

- More time needed for emergency medical care to arrive and to deliver the patient to a trauma center
- Less access to a Level 1 trauma center
- Difficulty getting specialized care

Survivors with lower incomes or who are uninsured:

- Less likely to receive treatment
- Less likely to receive inpatient services and rehabilitation
- More likely to die in the hospital

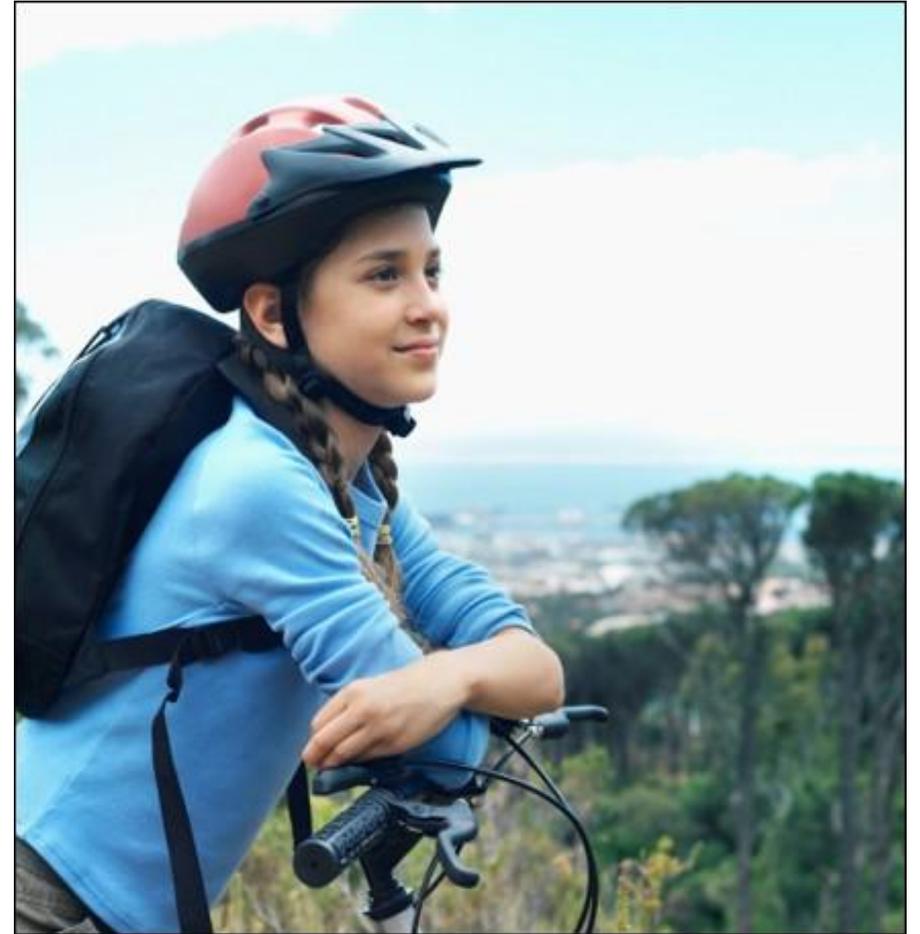
How to Support Brain Injury Survivors

- Be patient and understanding
- Offer help with daily tasks
- Encourage rest and self-care
- Avoid overstimulation
- Support emotional well-being
- Be mindful of differing communication styles



Preventing TBIs

- Wear seatbelts and helmets
- Fall-proof homes and workplaces
- Practice safe sports techniques
- Encourage awareness and education



Key Takeaways

Recovery is
unique for
everyone.

Progress takes
time.

Certain
populations are
at greater risk
for TBI and
poorer
outcomes.

Early diagnosis
and consistent
care are critical

How the Department of Rehabilitation Serves TBI-impacted Californians

Direct Support

State-funded TBI Program Sites providing services and resources to individuals living with TBI.

Services include:

- Enhanced Information and Assistance
- Community Navigation
- Person Centered Case Coordination
- Community Reintegration
- Supported Living
- Vocational Supportive Services
- Public and professional education services

For information on partnering with the TBI program or becoming a TBI program site, please email at [TBI Information email](#)

TBI Program Sites

DOR TBI Program Sites

TBI sites are subject to change.

Please confirm with the site before referring.

**Brain Injury Center
of Ventura County
(Camarillo)**

**Central Coast
Center for
Independent Living
(Salinas)**

**Disability Resources
Agency for
Independent Living
(Modesto)**

**Dignity Health
Mercy General
(Citrus Heights)**

**FREED Center for
Independent Living
(Grass Valley)**

**California
Resource Services
for Independent
Living (Pasadena)**

**Jodi House
(Santa Barbara)**

**Community
Resources for
Independent Living
(Hayward)**

**Rolling Start Inc.
(San Bernadino)**

**San Diego Brain
Injury Foundation
(San Diego)**

**Disability Action
Center
(Chico)**

**St. Jude Brain
Injury Network
(Fullerton)**

TBI Resources Directory

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Assistive Technology & Equipment	Independent Living Centers (ILCs) & State Disability Services
Caregiver & Mental Health Support	Legal Services & Consumer Rights

Resources

Communicating about Brain Injury

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Resource available on the [DOR TBI](#) website.

Suggested Screening Tools for TBI

- [NASHIA The HELPS Brain Injury Screening Tool](#)
- [Ohio State TBI Identification Method](#)

References

- [BIAA Brain Injury Association of America](#)
- [CDC: Traumatic Brain Injury & Concussion](#)
- [CDC: Health Disparities in TBI](#)
- [Couples' Relationships After Traumatic Brain Injury](#)
- [Social Skills After Traumatic Brain Injury](#)