



# Traumatic Brain Injury



Traumatic Brain Injury (TBI) is the leading cause of long-term disability in children. It is usually the result of a jolt, shake or blow to the body that transmits a force to the head. TBIs can also be caused by a penetrating injury that is strong enough to injure the brain and disturb its function. Young children are most at risk for TBIs as they rely on others to keep them safe.

TBIs can be mild, moderate or severe. How a TBI affects a child depends on the type of injury and how serious it is. The effects can be immediate, or they can become apparent years later when there are increased demands and expectations of a child academically, behaviourally and emotionally.

With their brains still developing, children are especially at risk of long term effects from TBIs. They can have ongoing speech, vision or hearing problems, emotional and developmental delays and

behavioural issues. Their injury can also affect their entire family, causing emotional stress and mental health conditions, time off work for parents, unemployment and financial stress.

After a TBI, the brain remains vulnerable to further damage as it needs time to recover and repair. If a child sustains another TBI before their brain has healed, it can result in far more serious consequences.



Around **1,300** TBIs per **100,000** people, aged **0-4** years.

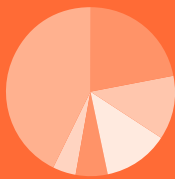


Around **818** TBIs per **100,000** people, aged **5-14** years.



**95%** of Traumatic Brain Injuries are mild in severity.

## THE CAUSES



- 49% Falls
- 25% Exposure to mechanical forces
- 14% Traffic motor vehicle crash
- 7% Assault
- 5% Unknown

## WHO IS GETTING INJURED?



**CHILDREN**  
Account for 25% of estimated TBI cases.



**FALL RELATED**  
TBIs due to a fall injury is most common in infants and children.



**BOYS**  
Almost twice as likely to suffer a TBI than girls.



**MĀORI & PACIFIC**  
And children living in urban and deprived areas.

## SAFETY DEVICES



- Helmets for biking, scootering and skateboarding can protect against a skull fracture.
- Safety gates (especially on stairs).
- Appropriate car restraints for age and height until 148cm.
- Safety glass.
- Straps to prevent TV and furniture tip-overs.

## WHERE IT HAPPENS



40% private home



20% recreational area



19% school



8% highway/road/street



5% other locations e.g. shopping centre, bus stop

## THE TREND



TBI is an increasing problem in Aotearoa. Studies show that infants, children and adolescents are at greater risk of TBI than any other age group.



**TBIs ACROSS ALL AGE GROUPS COST NZ ECONOMY APPROX. \$83.5 MILLION**

# Top Safety Tips

**Traumatic Brain Injury (TBI) is the leading cause of long-term disability in children.**

## Birth to 11 months

- Keep young children safe by strapping them into seats and carriers.
- Never leave young children alone on changing tables, beds, couches or other furniture. If you do need to step away, put him/her in a safe place, like a cot or playpen.
- Never use baby walkers on wheels. Walkers may tip over, causing the child to fall out or fall down stairs.
- Keep the side rails on a cot up. Rise and securely lock both bed rails when not attending to your child.
- It's ok to walk away if baby is crying and you are feeling frustrated. Put baby in a safe place, close the door and take a break. Do not pick up the baby until you have calmed down. Never, ever shake a baby.

## 1-2 years

- Tuck away and secure power cords in walkways and common areas.
- Clean up spills as soon as they happen.
- Avoid letting children walk around the house in socks.
- Keep toys or items that may interest children away from high furniture.
- Position furniture to avoid access to windows.
- Use a safety gate at the top and the bottom of stairs.

## 3-4 years

- Children need to wear their helmets correctly every time they ride their bikes, scooters, skateboards or skates.
- Check that helmets carry stickers indicating they meet safety standards.
- Teach children to use handrails when walking up or down stairs and to keep their shoelaces tied up.
- Bunk beds encourage climbing so they should only be used by children over nine years of age. Make sure there are guardrails on the top bunk and that the opening for entering and exiting is no more than 40cm wide.

## 5-9 years

- Talk to children about how to be safe on a trampoline. We suggest the rule is 'one at a time' so there is no one they can collide with.
- Steer your children to age-appropriate activities in playgrounds to help prevent falls and find playgrounds with shock-absorbing surfaces.
- Ensure your child is wearing a helmet when riding a bike, scooter or a skateboard to protect their head from a skull fracture if they fall.
- Educate older children about looking after their brain – see <https://mybrainrobbie.org>

## 10-14 years

- Continue to model and reinforce the importance of buckling up on every trip. This should encourage young people to take responsibility for their own car safety when they are with friends.
- Talk about the importance of wearing a helmet when riding a bike or a skateboard, to protect their head from a skull fracture if they fall.
- Wet floors are very slippery so can be a slipping hazard for children. Wipe up spills immediately.
- Educate older children about looking after their brain – see <https://mybrainrobbie.org>



### First aid

If you notice anything that makes you think your baby or child has received a head injury, or they just seem "Not OK", call 111 or take them to the doctor immediately.

You may notice that they are:

- Vomiting
- Sleepy or difficult to wake
- Abnormally quiet
- Irritable, have a different cry
- Not eating or drinking like usual

**If your child is injured you can find out more about ACC support at [www.acc.co.nz/im-injured](http://www.acc.co.nz/im-injured).**

**ACC Claims: 0800 101 996 or email [claims@acc.co.nz](mailto:claims@acc.co.nz). TBI resources: [www.acc.co.nz/tbi](http://www.acc.co.nz/tbi).**

**For detailed references on the data and information contained in this card and to download additional copies visit [www.starship.org.nz/safekids/reference-cards](http://www.starship.org.nz/safekids/reference-cards).**