



Brain Injury Screening Tool (BIST-ED)

The BIST-ED was developed to be a brief tool for use on initial presentation after injury to guide health care pathway decision making in the emergency department. Its purpose is to help guide the clinical assessment by operationalising current international best practice guidelines.¹

The BIST-ED was developed for health professionals working across primary and secondary health care and for sports and other contexts where traumatic brain injuries (TBI) can occur.

The BIST can facilitate decision making through identification of people who are at low, medium, or high risk of longer-term difficulties.

The BIST should be used in addition to clinical judgment and other assessments such as the Vestibular/Oculomotor Motor Screening (VOMS), King-Devick or the Romberg's test. Additional questioning to add to the clinical picture is encouraged.

Date of Injury

Time of Injury

Date of Consultation

Age

Gender/ Sex

Ethnicity

If your answer is OTHER please specify:

1. Please tell me about what happened

2. Are there high risk indicators such as suspicion of skull fracture, focal neurological deficit, high speed, focal blunt trauma or fall from height? (e.g. >5 stairs)¹

Yes No

1. If high risk indicators present, consider referral to a Concussion Service if not admitted.

3. Did the incident occur in traumatic circumstances which could result in emotional or psychological reactions? (e.g. assault, domestic violence, fatalities in a car accident)²

Yes No

2. If psychological trauma likely, consider referral to Concussion Service if not admitted.

4. Did anyone with you at the time of the injury say anything else about what happened?

Yes No

5. Were you sick or did you vomit?

Yes No If yes, how many times?

6. Were you knocked out (or did you lose consciousness)?

Yes No If yes, how long? hrs mins

7. Did you have a fit or seizure straight afterwards? (e.g. go stiff or shake violently)

Yes No

8. Are you feeling better, worse or about the same since the injury?

Better Worse About the same

9. Have you had a concussion or brain injury before?³

Yes No If yes, (i) How many times?

(ii) When was the last injury?

(iii) How long did it take you to recover from your last injury?

Days

Weeks

Months

3. If multiple, recent or unrecovered previous injury, consider referral to Concussion Service if not admitted.

10. Are you currently taking any medications that thin the blood? (e.g. anti-coagulants)

Yes No

11. Have you ever experienced any difficulties with your mental health?

Yes⁴ No

4. If yes, consider referral to Concussion Service if not recovered in 7-10 days.

12. Do you have a history of migraine (severe headache with vomiting or extreme sensitivity to light and sound)

Yes⁵ No

5. If yes, consider referral to Concussion Service if not recovered in 7-10 days

13. Please ask the patient the following question.

Compared with before the accident, please rate how much you experience the following symptoms

												
		Not at all	Mild (a little)			Moderate (quite bad)				Severe (very bad)		
		0	1	2	3	4	5	6	7	8	9	10
Physical	Headache (my head hurts)											
	My neck hurts											
	I don't like bright lights											
	I don't like loud noises											
Total physical score (out of 40)												
Vestibular-ocular	I feel dizzy or like I could be sick											
	If I close my eyes, I feel like I am at sea											
	I have trouble with my eyesight (vision)											
	I feel clumsy (bumping into things or dropping things more than usual)											
Total vestibular score (out of 40)												
Cognitive	It takes me longer to think											
	I forget things											
	I get confused easily											
	I have trouble concentrating											
Total cognitive score (out of 40)												
If more than 24 hours post-injury, please also rate these physical symptoms												
	I get angry or irritated easily											
	I just don't feel right											
	I feel tired during the day											
	I need to sleep a lot more or find it hard to sleep at night											

Total symptom severity score within 24 hours (out of 120⁶)		Total symptom severity score >24 hours (out of 160⁷)	
Number of symptoms endorsed within 24 hours (out of 12)		Number of symptoms endorsed >24 hours (out of 16)	
What is the dominant symptom cluster? (High proportion or most severe symptoms reported (e.g. physical, vestibular or cognitive?)⁸			

6. If 50 or more consider referral to concussion Service, as this person is likely to be at moderate risk of poor recovery. If <50 this person is at low risk, consider referral to GP to follow up with patient in 7-10 days.

7. If 66 or more consider referral to concussion Service, as this person is likely to be at moderate risk of poor recovery. If <66 this person is at low risk, consider referral to GP to follow up with patient in 7-10 days.

8. If vestibular cluster score is highest, there is combination of vestibular symptoms and head/neck pain symptoms or a vestibular item is rated >8 consider referral to a Physiotherapist or Concussion Service.

14. Injuries to the brain can affect how a person feels, thinks and ability to do every day activities.

On a scale of 0 to 10, how much do you feel your injury is impacting on you? Where 0 means that the injury has not had any impact on you and 10 means you feel that injury impacts on everything you do.



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Reference

Silverberg ND, et al on behalf of the American Congress of Rehabilitation Medicine Brain Injury Interdisciplinary Special Interest Group Mild TBI Task Force. Management of Concussion and Mild Traumatic Brain Injury: A Synthesis of Practice Guidelines. Archives of Physical Medicine and Rehabilitation, 2020, 101; 382-393

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