SIRC

Can neck strengthening reduce sport-related concussion risk?

A concussion is caused by a hit to the head or body that causes the head to rapidly accelerate forward, backward, or to the side.

The neck stabilizes the head during an impact. Stronger necks provide more stability, which may reduce head acceleration and concussion risk.

» To improve neck strength, exercise programs should:

- » Target the neck muscles directly
- » Work on all neck muscle groups
- » Be adjusted based on an athlete's needs and goals

Researchers are continuing to explore the link between neck strength and concussion risk. They are also exploring the use of neuromuscular training, which is training focused on improving the connection between muscles (like the neck muscles) and nervous system, to support concussion prevention.

» 4 WAYS TO STRENGTHEN THE NECK:

1	2	3	4
SHOULDER SHRUGS	LATERAL NECK FLEXION	NECK ROTATION	NECK EXTENSION
			

» Some people are more likely to have low neck strength than others. Neck strengthening may be particularly important for:

- » Children and Youth

- » Girls and Women

- » Individuals with forward head posture

DID YOU KNOW?

A

10%

increase in neck extension strength is associated with a

13%

reduction in concussion rates (Farley et al., 2022)

For more information visit sirc.ca/concussion

Canada

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