

# The *cross* technique: coaches' perceptions & implications for injury prevention

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## 1. Introduction

The Cross technique (see Image 1) is used in a duel of proximity between goalkeepers (GK) and opponents facing the goal.

This technique appears to be used by an increasing number of goalkeepers, particularly at an elite level, but no study has yet covered it nor its relationship to injuries.



## 2. Methods

- International Online survey for GK Coaches ( $n = 411$ )
- Coaching education level (EL) and competition level (CL), were studied for differences.
- Men/women 404 (98%) / 7 (2%)
- Age:  $40.8 \pm 10.8$
- Years of experience  $11.5 \pm 8.1$
- Coached player's age  $18.8 \pm 4.9$

Coached player's sex	Men	277 (67%)
	Women	23 (6%)
	Both	111 (27%)
GK-courses level	International	139 (33.8%)
	National	146 (35.5%)
	Local	50 (12.2%)
Competition level	None	76 (18.5%)
	Elite	249 (60.5%)
	Sub-elite	89 (21.7%)
	Recreational	73 (17.8%)

## 3. Results

- Almost all coaches recognized (99%) and used (78%) the technique
- *Recreational* level (47%) & age of  $11.3 \text{ years} \pm 2.8$  was recommended to start teaching the technique.
- Most coaches (90.7%) related the technique to a risk of injury and 36% had at least one injured player while performing it (*Elite* coaches more likely ( $p < .01$ )).
- *Contusion* (37%) and *Musculo-skeletal* (36%) type of injuries were the most common.
- The majority of the coaches considered no injury risk difference between men or women GKs (68.1%), nor between young and adult GK (41.1%).

## 4. Conclusion

- The cross technique is commonly known and used by GK coaches among players of all levels & ages.
- Coaches' answers signal an injury risk while performing the technique, independently of players' age or sex.
- Future research should take this technique into consideration when defining injury prevention approaches in football goalkeepers.

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