

# REDUCING JOINT INJURIES IN FEMALE FOOTBALL

Crossley et al. Br J Sports Med 2020

Reducing joint injuries will also reduce incidence of post-traumatic osteoarthritis

Women's football is one of the fastest growing sports worldwide, at all levels.

Sports-related joint injuries are also on the rise, and consequently the incidence of post-traumatic knee, hip, and ankle osteoarthritis is increasing

Whittaker & Roos Best Practice & Res Clinical Rheum

This systematic review and meta-analysis combined the results from 12 studies investigating the effects of injury prevention programs on injury incidence in 11773 women football players

Crossley et al. Br J Sports Med 2020

These injury prevention programs

**REDUCED:**

**45% of ACL injuries**

**29% of hip/groin injuries\***

**17% of knee injuries\***

**22% of ankle injuries\***

\*Lower injury reduction rates than male football players

## WHAT EXERCISES MAKE UP THESE PROGRAMS?

Strength\*



11 studies

Plyometric/power\*



10 studies

Balance



8 studies

Running



9 studies

Mobility



6 studies

Agility



6 studies

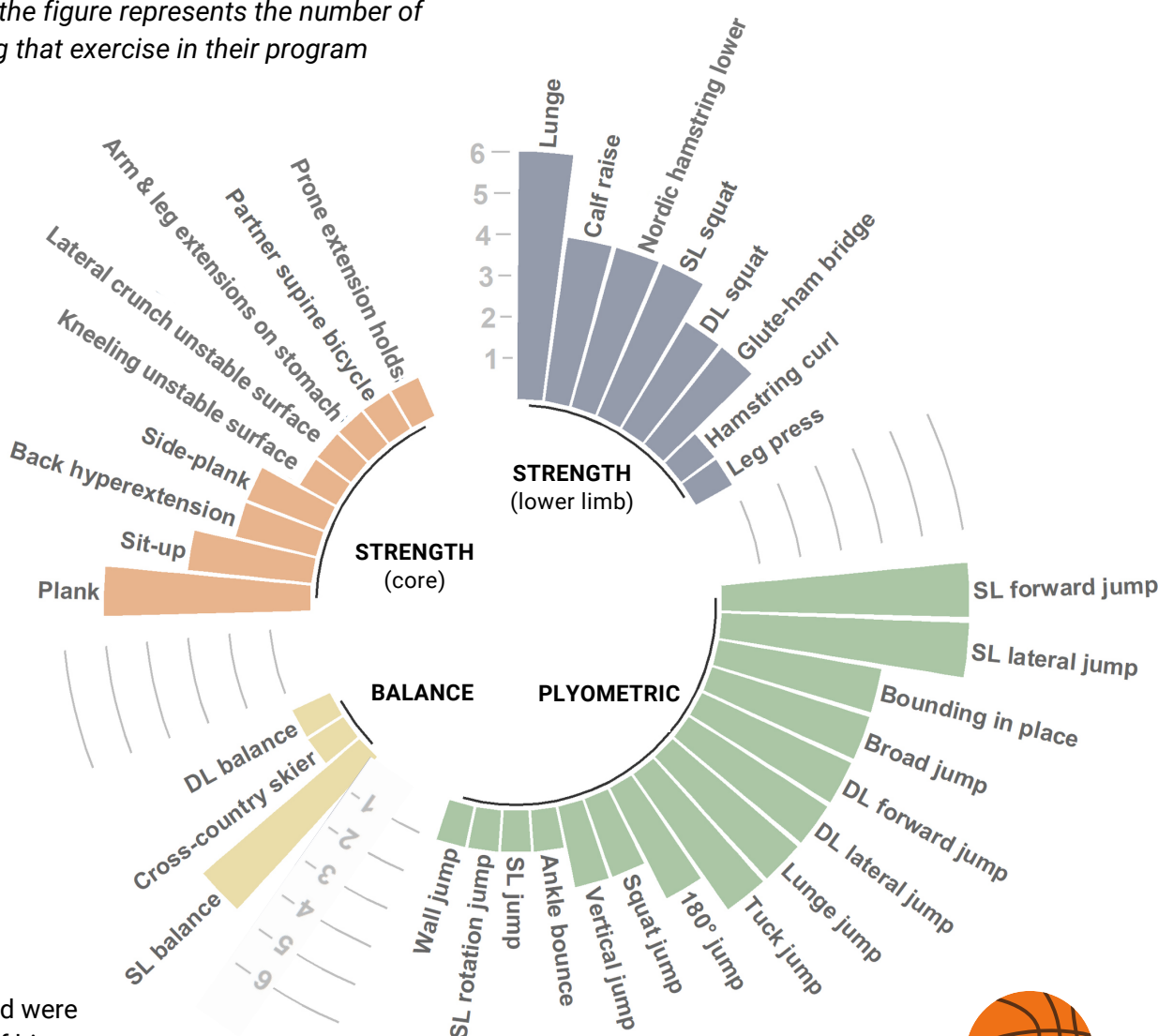
Multicomponent programs (e.g. including at least 2 of the above activities) were more effective at reducing overall injuries and knee injuries than single component programs (e.g. 1 of the above activities)

\* 30% and 67% of the studies included met the guidelines for strength and plyometric/power training, respectively.

**Figure 1.** Activities in multicomponent exercise-based injury prevention programs

The numbers in the figure represents the number of studies including that exercise in their program

DL=double leg  
SL=single leg



Most studies included were rated as a high risk of bias.

## ARE INJURY PREVENTION PROGRAMS USED?

Crossley et al. BJSM 2020; 2. Van reijen et al Sports Med 2016; 3. Verhagen et al JSAMs 2011; 4. Steffen et al BJSM 2013



- Adherence to programs in female football ranged from 52% to 95%<sup>1</sup>
- Adherence in other sports (male/female) ranges from 18% to 100%<sup>2</sup>
- ~50% of studies report information on adherence<sup>2</sup>
- Many studies don't define adherence, or how they measure it, or the effect of adherence on injury risk<sup>1,2</sup>

**Injury prevention programs work better if you do them**<sup>3,4</sup>

## WHERE TO NEXT?

**Working in female football? Start using existing evidence-based programs!**<sup>1</sup>  
**Future injury prevention studies in female football should aim to....**

- Understand how to improve their effectiveness
- Increase program adherence - as we know they work
- Improve methods and reporting of adherence to the program
- Address challenges specific to the population (e.g. less resources, sport experience)

Want to get involved in the discussion? Join the OA Prevention Related to Sport, Exercise, and Physical Activity (SEPA) Discussion Group <https://oarsi.org/research/discussion-groups>