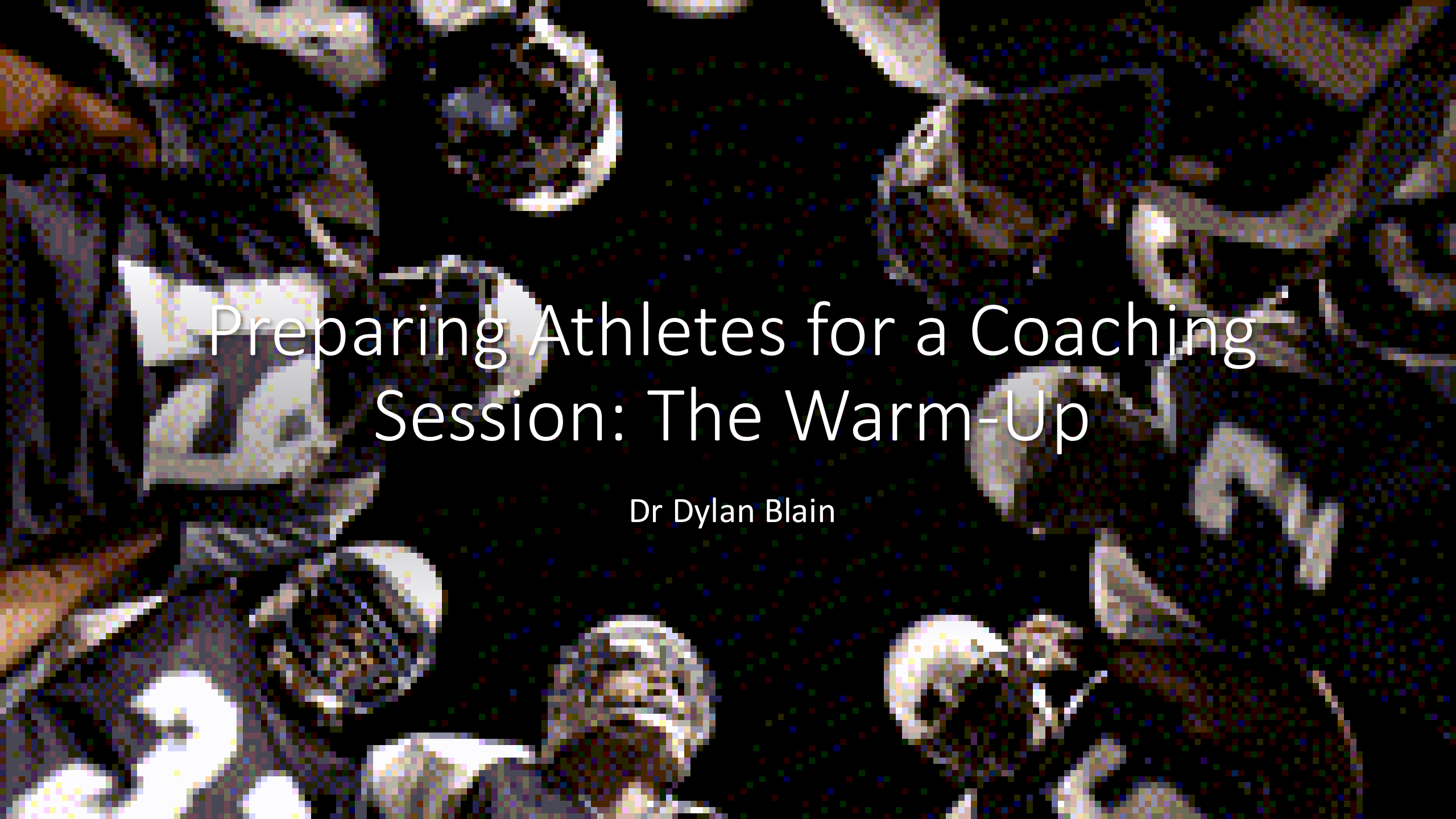


A group of athletes, mostly young men, are in a gymnasium. Some are sitting on the floor, while others are standing or in motion. They appear to be in the middle of a warm-up or a light exercise routine. The background is slightly blurred, focusing attention on the athletes.

Preparing Athletes for a Coaching Session: The Warm-Up

Dr Dylan Blain

Objectives

- Identify the benefits and components of a pre-exercise warm-up
- Structure effective warm-ups
- Understand how to make the most of the warm-up

(Jeffreys, 2007)

Warm-Up

- Positive effects on performance
 - Faster muscle contraction and relaxation of both agonist and antagonist muscles
 - Improvements in the rate of force development and reaction time
 - Improvements in muscle strength and power
 - Lowered viscous resistance in muscles

(Jeffreys, 2007)

Warm-Up *(continued)*

- Positive effects on performance
 - Increased blood flow to active muscles
 - Enhanced metabolic reactions
 - An increased psychological preparedness for performance

(Jeffreys, 2007)

Key Point

- The structure of the warm-up influences potential improvements; as such, the warm-up needs to be specific to the activity to be performed.

(Jeffreys, 2007)

Warm-Up

- Should consist of a period of aerobic exercise, followed by stretching, and ending with a period of activity similar to the upcoming activity

(Jeffreys, 2007)

Warm-Up *(continued)*

- Components
 - A general warm-up period may consist of 5 to 10 minutes of slow activity such as jogging or skipping.
 - A specific warm-up period incorporates movements similar to the movements of the athlete's sport.
 - The whole warm-up typically lasts between 10 and 20 minutes.

(Jeffreys, 2007)

Key Point

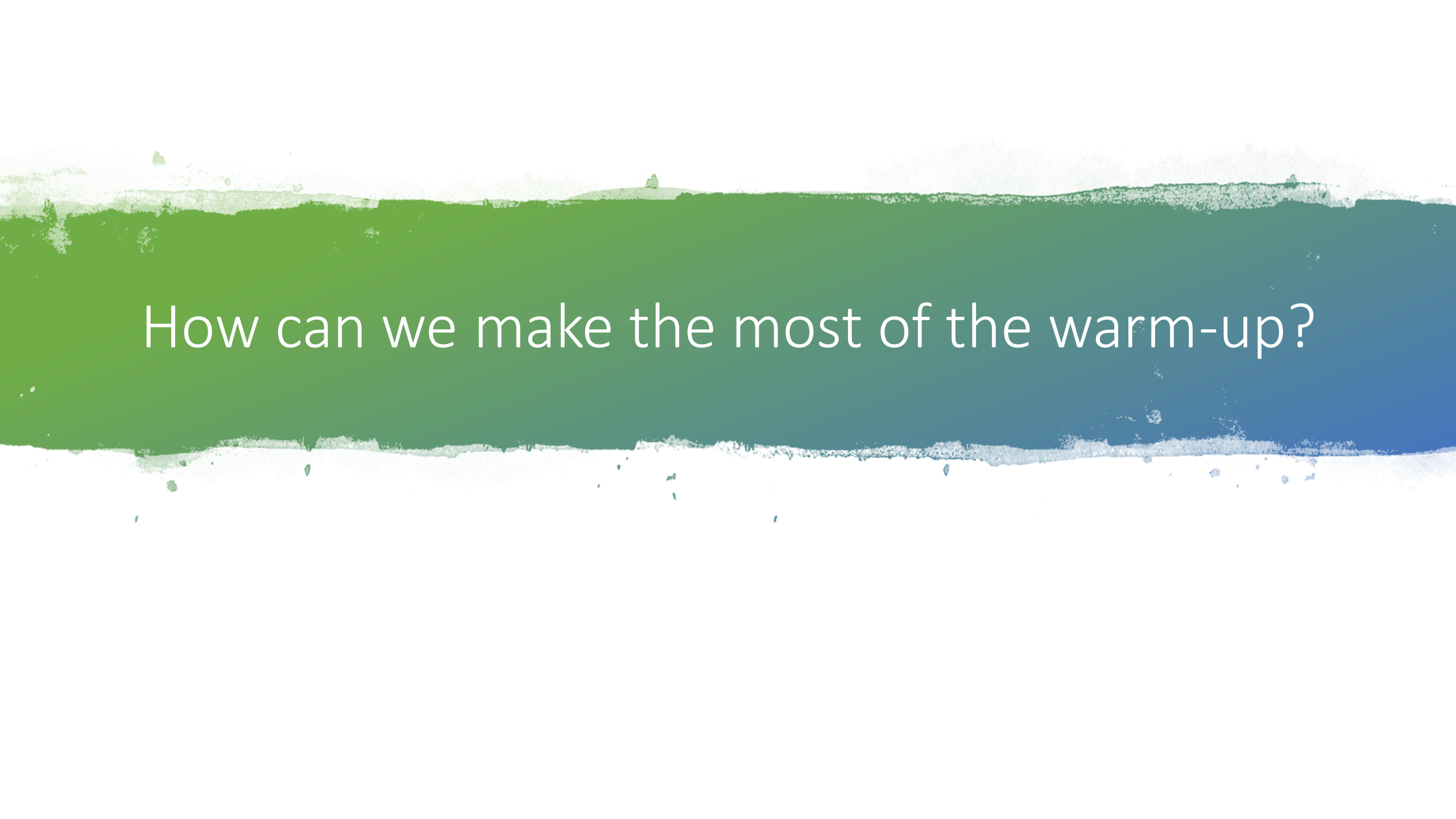
- The warm-up is an integral part of the training session. Strength and conditioning professionals should plan warm-ups incorporating short-, medium-, and long-term considerations that will contribute to the overall development of the athlete.

(Jeffreys, 2007)

Warm-Up

- RAMP protocol:
 - **Raise:** Elevate body temperature, heart rate, respiration rate, blood flow, and joint fluid viscosity via low-intensity activities that simulate the movement patterns of the upcoming activity.
 - **Activate and Mobilize:** Actively move through a range of motion.
 - **Potentiate:** Perform sport-specific activities that progress in intensity until the athlete is performing at the intensity required for the subsequent competition or training session.

(Jeffreys, 2007)

A horizontal brushstroke with a green-to-blue gradient, featuring a textured, painterly appearance with visible brush marks and some white speckles. The stroke is centered horizontally and spans most of the width of the image.

How can we make the most of the warm-up?

Making the most of the Warm-Up

- Developing Foundational Movement Skills
 - For example, Squat, Lunge, Hinge, Push, Pull, Brace, Rotate (Tompsett et al, 2014; Jeffreys, 2019)

Making the most of the Warm-Up – Evidence from Intervention Research

- FIFA 11+ (FIFA, 2016). Available at <https://www.fifamedicalnetwork.com/lessons/prevention-fifa-11/>
- RFU Activate Programme (English Rugby Football Union). Available at: <https://www.englandrugby.com/participation/coaching/activate>



FIFA 11+ (FIFA, 2016)

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Lesson

FIFA 11+

The FIFA 11+ is an injury-prevention programme which has been specifically designed to prevent football injuries.^[15] It was developed by a panel of international experts to build on earlier injury-prevention efforts, including the PEP programme and FIFA 11.

The programme takes twenty minutes to complete and is designed to be performed twice a week. No specific equipment is needed. The FIFA 11+ consists of 15 exercises divided into three separate components. These are:



Running exercises *8 minutes*

Encompassing cutting, change of direction, decelerating and proper landing techniques



Strength, plyometric and balance exercises *10 minutes*

Focus on core strength, eccentric control and proprioception



Running exercise *2 minutes*

High-speed and change-of-direction running



There are three levels for each specific exercise (level 1, level 2, level 3) that increase the difficulty of each respective exercise. This allows for both individual and team progression throughout the course of the competitive season.

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Medicine and Rehabilitation

RESEARCH ARTICLE

Open Access

The FIFA 11+ injury prevention program for soccer players: a systematic review



David Sadigursky^{1*} , Juliana Almeida Braid², Diogo Neiva Lemos De Lira¹, Bruno Almeida Barreto Machado¹, Rogério Jamil Fernandes Carneiro¹ and Paulo Oliveira Colavolpe¹

Background

- Soccer is one of the most widely played sports in the world.
- However, soccer players have an increased risk of lower limb injury. These injuries may be caused by both modifiable and non-modifiable factors, justifying the adoption of an injury prevention program such as the Fédération Internationale de Football Association (FIFA) 11+.
- The purpose of this study was to evaluate the efficacy of the FIFA 11+ injury prevention program for soccer players.

Methodology

- This meta-analysis was based on the PRISMA 2015 protocol.
- A search using the keywords “FIFA,” “injury prevention,” and “football” found 183 articles in the PubMed, MEDLINE, LILACS, SciELO, and ScienceDirect databases.
- Of these, 6 studies were selected, all of which were randomized clinical trials.

Results

- The sample consisted of 6,344 players, comprising 3,307 (52%) in the intervention group and 3,037 (48%) in the control group.
- The FIFA 11+ program reduced injuries in soccer players by 30%, with an estimated relative risk of 0.70 (95% confidence interval, 0.52–0.93, $p = 0.01$).
- In the intervention group, 779 (24%) players had injuries, while in the control group, 1,219 (40%) players had injuries. However, this pattern was not homogeneous throughout the studies because of clinical and methodological differences in the samples. This study showed no publication bias.

Conclusion

- The FIFA 11+ warm-up program reduced the risk of injury in soccer players by 30%.



Activate Programme (English Rugby Football Union)

COACHING

Get Involved Age Grade Rugby Kids First Activate 

Adult

U17-U18

U16

U15

Coach resources

Booking a course

Coaching Webinars



ACTIVATE

Activate is the RFU's Injury Prevention Exercise Programme.

Activate is an injury prevention exercise programme that can be integrated into training and pre-match sessions. Exercises are designed to improve functional and core strength, balance and agility, helping players with the game's physical demands.

Available at: <https://www.englandrugby.com/participation/coaching/activate>

Feedback

Original article



OPEN ACCESS

Reducing musculoskeletal injury and concussion risk in schoolboy rugby players with a pre-activity movement control exercise programme: a cluster randomised controlled trial

Michael D Hislop,¹ Keith A Stokes,¹ Sean Williams,¹ Carly D McKay,¹ Mike E England,² Simon P T Kemp,² Grant Trewartha¹

Activate Programme (English Rugby Football Union)

- Activate Programme Cluster randomized Control Trial (Hislop et al., 2017)
- Aim: To determine the efficacy of a movement control exercise programme in reducing injuries in youth rugby players and to investigate the effect of programme dose on injury measures.

Methods

- Cluster-randomised controlled trial,
- 40 independent schools (118 teams, 3188 players aged 14–18 years) were allocated to receive either the intervention or a reference programme, both of which were to be delivered by school coaches.
- The intervention comprised balance training, whole-body resistance training, plyometric training, and controlled rehearsal of landing and cutting manoeuvres.
- Time-loss (>24 hours) injuries arising from school rugby matches were recorded by coaches and medical staff.

Results

- 441 time-loss match injuries (intervention, 233; control, 208) were reported across 15 938 match exposure-hours (intervention, 9083; control, 6855).
- Intention-to-treat results indicated unclear effects of trial arm on overall match injury incidence (rate ratio (RR)=0.85, 90%confidence limits 0.61 to 1.17), although clear reductions were evident in the intervention arm for concussion incidence (RR=0.71, 0.48 to 1.05).
- When trial arm comparisons were limited to teams who had completed three or more weekly programme sessions on average, clear reductions in overall match injury incidence (RR=0.28, 0.14 to 0.51) and concussion incidence (RR=0.41, 0.17 to 0.99) were noted in the intervention group.

Conclusion

- A preventive movement control exercise programme can reduce match injury outcomes, including concussion, in schoolboy rugby players when compared with a standardised control exercise programme, although to realise the greatest effects players should complete the programme at least three times per week.