

# Dynamic versus static stretching in the sports warm-up

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<b>Registration date</b> 09/02/2010	<b>Overall study status</b> Completed	<input type="checkbox"/> Statistical analysis plan <input type="checkbox"/> Results
<b>Last Edited</b> 09/02/2010	<b>Condition category</b> Signs and Symptoms	<input type="checkbox"/> Individual participant data <input type="checkbox"/> Record updated in last year

**Plain English summary of protocol**  
Not provided at time of registration

## Contact information

**Type(s)**  
Scientific

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## Additional identifiers

**EudraCT/CTIS number**

**IRAS number**

**ClinicalTrials.gov number**

**Secondary identifying numbers**  
N/A

# Study information

## Scientific Title

Dynamic stretching in the warm-up enhances both static and dynamic hamstring flexibility while static stretching only impacts static flexibility: a randomised controlled trial

## Study objectives

1. Static flexibility measurements will not correlate with dynamic hamstring flexibility measures
2. Static stretching exercises will only improve static flexibility and will have no impact on dynamic hamstring flexibility
3. Dynamic stretching exercises will improve dynamic flexibility and will have no impact on static flexibility
4. The intervention treatments will be gender dependent, i.e., females will achieve greater changes in hamstring flexibility following each of the stretching intervention

## Ethics approval required

Old ethics approval format

## Ethics approval(s)

Committee for Ethics in Human Research approved from 8th December 2004 until 8th December 2006 (ref: CEHR 04-94)

## Study design

Randomised cross-over controlled trial

## Primary study design

Interventional

## Secondary study design

Randomised controlled trial

## Study setting(s)

Other

## Study type(s)

Treatment

## Participant information sheet

Not available in web format, please use the contact details below to request a patient information sheet

## Health condition(s) or problem(s) studied

Hamstring flexibility/hip flexion range of motion

## Interventions

The final sample consisted of 12 students of which five females and seven males served as participants.

Participants (n = 12) were randomly assigned to three intervention treatments of 225 seconds on separate days in a cross-over study design:

Treatment 1: No stretching  
Treatment 2: Static stretching  
Treatment 3: Dynamic stretching

Each participant presented for testing for a duration of approximately 15 minutes on a designated day - once every week for three weeks (three sessions in total).

### **Intervention Type**

Other

### **Phase**

Not Applicable

### **Primary outcome measure**

Change in hamstring flexibility (hip ROM in degrees) after each intervention (Treatment 1, 2 , 3) from pre-test to post-test

### **Secondary outcome measures**

No secondary outcome measures

### **Overall study start date**

01/01/2005

### **Completion date**

01/07/2006

## **Eligibility**

### **Key inclusion criteria**

1. Drawn from a variety of sporting backgrounds which predominantly involved the lower body
2. Trained lightly for a minimum of three times a week
3. Did not use any routine muscle flexibility training in their regular training program of their specific sport
4. Free of any bony or soft tissue injury to the spine and lower limbs, and no history of the same in the past one year
5. Adults (aged 18 years and over), either sex

### **Participant type(s)**

Patient

### **Age group**

Adult

### **Lower age limit**

18 Years

### **Sex**

Both

### **Target number of participants**

**Key exclusion criteria**

1. Those who had an designated period of stretching in daily warm-up routine
2. History of lower limb/lumbosacral spine injury in the last year
3. Inability to be present for testing sessions every week

**Date of first enrolment**

01/01/2005

**Date of final enrolment**

01/07/2006

**Locations****Countries of recruitment**

Australia

**Study participating centre**

Unit 4, 5 Adelaide Terrace

South Australia

Australia

5039

**Sponsor information****Organisation**

Individual Sponsor (Australia)

**Sponsor details**

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**Sponsor type**

Other

**Funder(s)**

**Funder type**

Other

**Funder Name**

Investigator initiated and funded (Australia)

## **Results and Publications**

**Publication and dissemination plan**

Not provided at time of registration

**Intention to publish date****Individual participant data (IPD) sharing plan****IPD sharing plan summary**

Not provided at time of registration