Intrinsic foot muscle activity during standing balance tasks in adults with hallux valgus (HV) compared to controls

Research team contacts

<table>
<thead>
<tr>
<th>Principal Researcher:</th>
<th>Dr Sheree Hurn</th>
<th>Honours supervisor</th>
</tr>
</thead>
<tbody>
<tr>
<td>Associate Researchers:</td>
<td>Ms Victoria Tan</td>
<td>Honours student</td>
</tr>
<tr>
<td></td>
<td>Ms Christel Leong</td>
<td>Honours student</td>
</tr>
<tr>
<td></td>
<td>Mr Aaron Wholohan</td>
<td>Honours supervisor</td>
</tr>
<tr>
<td></td>
<td>Ms Ainslie Davies</td>
<td>Research assistant</td>
</tr>
</tbody>
</table>

Faculty of Health, Queensland University of Technology (QUT)

Dr Melinda Smith             Co-investigator

Faculty of Health and Behavioural Sciences, UQ

Dr Karen Mickle                  Research Fellow

Institute of Health and Sport, Victoria University

What is the purpose of the research?

The purpose of this research is to understand foot muscle activity during standing balance tasks in people with hallux valgus (HV), a common musculoskeletal foot deformity more commonly known as ‘bunions’. This research is important because moderate to severe HV has been linked to problems with balance and increased falls risk in older adults, but it is unknown whether this is due to foot muscle weakness.

Are you looking for people like me?

The research team is looking for volunteers with moderate to severe HV, and those eligible to be part of a matched control group without HV.

You may be eligible if you are:

- Aged 18 years or over.
- Have not had a major lower limb injury in the past 6 months.
- Can walk without the assistance of a walking aid.
- Have no known neurological conditions.

Screening for the study will include some questions about your medical history, and a brief non-invasive examination of your feet.

What will you ask me to do?

Your participation will involve a non-invasive clinical examination of your feet, followed by measuring activity in your foot and leg muscles using sensors taped to the surface of your skin. You will be asked to perform two simple tasks while your muscle activity is being measured: 1) standing quietly with your eyes open and standing on one leg, and 2) bending the big toe down whilst seated.

Are there any risks for me in taking part?

The research team has identified the following possible risks in relation to participating in this study:

- Potential loss of balance or fatigue during balance tasks.
- Allergy to consumables (e.g. gloves or adhesives) used in the study.

Safety precautions will be adhered to throughout the study to minimise these risks. It should be noted that if you do agree to participate you can withdraw from participation in the research project without comment or penalty.

Are there any benefits for me in taking part?

It is expected that this research project will not benefit you directly. However, it may help improve clinical practice for managing HV, especially in older adult populations who are at greater risk of balance problems and falls.

Will I be compensated for my time?

No, but we would very much appreciate your participation in this research.

I am interested – what should I do next?

If you are interested in participating in this study, please contact the researcher for details of the next
step. You will be provided with further information to ensure that your decision and consent to participate is fully informed.

Dr Sheree Hurn  sheree.hurn@qut.edu.au  07 3138 5623

Thank You!

QUT Ethics Approval Number: 1700001160