



University of
Strathclyde
Engineering

National Centre for Prosthetics & Orthotics (NCPO) University of Strathclyde, Glasgow

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Director of Research, NCPO

British Sarcoma Group
Annual General Meeting
20th March 2009



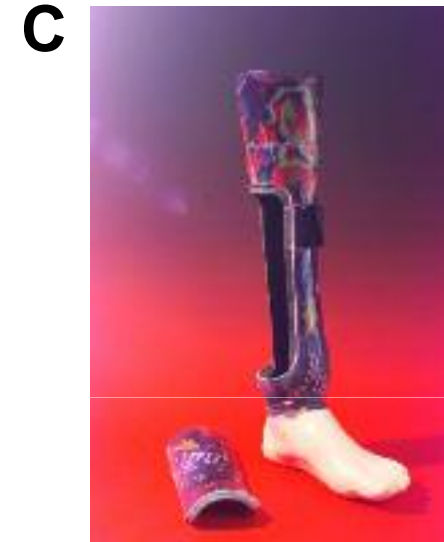
Outline

- General introduction to Prosthetics & Orthotics (P&O)
- National Centre for Prosthetics and Orthotics (NCPO)
 - ➡ Who we are and what we do
- Research at NCPO

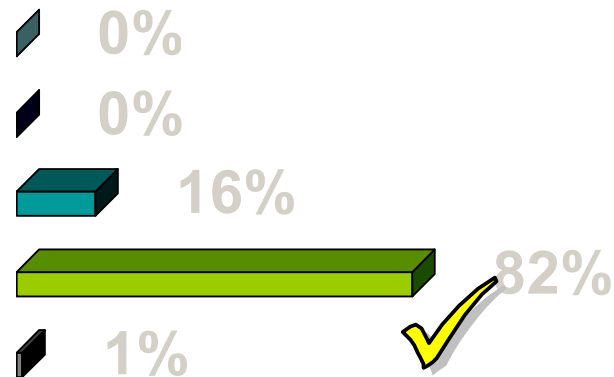
General Introduction to P&O

- P&O is a fascinating field at the interface between Health/Life Sciences and Engineering
- Prosthetists/Orthotists are part of the rehabilitation team
- Provide end users with assistive devices such as prosthesis or orthosis
 - ➡ Aim to rehabilitate and thus re-integrate people as far as possible back into their daily lives and communities.

Which one is a prosthesis?



1. A
2. B
3. C
4. All of them?
5. None?



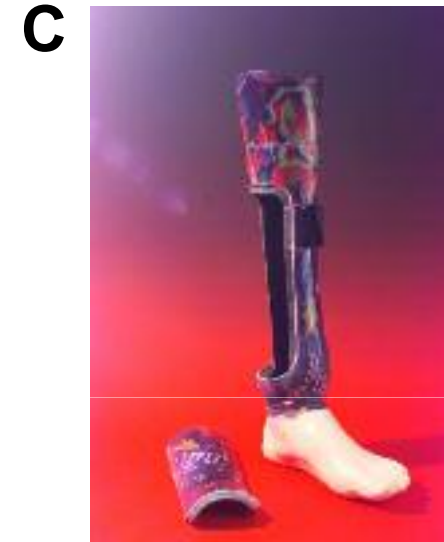
Picture sources:

[A] District Amputee Care Centre (www.districtamputeecarecenter.com)

[B] NCPO

[C] Warren Gase, General & Cosmetic Dentistry. (www.gasedds.com)

Which one is a prosthesis?



1. A
2. B
3. C
- ✓ 4. All of them?
5. None?

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Definition of a prosthesis:

General: A prosthesis replaces a body part

Specific to the field of P&O:

A prosthesis replaces a limb lost due to a congenital deformity, an accident or an amputation.

Not included:

Implants



Picture sources:

Implants: Surgical Concepts (www.surgicalconcepts.nl) and ConforMIS (www.conformis.com)

Definition of a prosthesis:

General: A prosthesis replaces a body part

Specific to the field of P&O:

A prosthesis replaces a limb lost due to a congenital deformity, an accident or an amputation.

Not included:

Implants



Epiprosthesis



Picture sources:

Implants: Surgical Concepts (www.surgicalconcepts.nl) and ConforMIS (www.conformis.com)

Epithesis: www.tulpe.org

Which one is an orthosis?

A



B



C



D



1. A

2. B

3. C

4. D

5. A, B, C but not D

6. All of them?

7. None?



5%



2%



2%



3%



22%



66%



2%



Picture sources:
[A] – [C] NCPO
[D] RSL Steeper Orthopedics

Which one is an orthosis?

A



B



C



D



1. A

2. B

3. C

4. D

5. A, B, C but not D

✓ 6. All of them?

7. None?

Picture sources:

[A] – [C] NCPO

[D] RSL Steeper Orthopedics

Definition of an orthosis:

An ***orthosis*** provides a person with a device that assists, corrects and/or supports a limb and its function.

The limb could have lost its full function due to accident, illness, and/or a disease.



Picture source:
NCPO

NCPO: Who we are

- University of Strathclyde
Department of the Faculty of Engineering
NCPO (1972) → with the sole remit to provide a BSc degree in Prosthetics and Orthotics

Today: remit includes PG teaching and research.

Special case in financial terms:

Funded directly by the Scottish Government as a Trust in its own right.

NCPO: What we do

- Education:
 - UG course in Prosthetics and Orthotics
 - Combination of Medical and Engineering knowledge
 - MSc in Rehabilitation Studies (by Open-learning only)
 - PhD in Prosthetics and Orthotics

- Professional Development

Variety of short courses such as

-) Clinical gait analysis
-) Orthotic management of the diabetic foot
-) AFO management of neurological conditions
-) Paediatric prosthetics

...

www.strath.ac.uk/prosthetics/shortcourses/



NCPO: What we do

- Consultancy services:
For challenging cases requiring specialist knowledge, NCPO offers consultancy services.

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