

BS ISO 8549-4:2014



BSI Standards Publication

# Prosthetics and orthotics — Vocabulary

Part 4: Terms relating to limb amputation

**bsi.**

...making excellence a habit.™

**National foreword**

This British Standard is the UK implementation of ISO 8549-4:2014.

The UK participation in its preparation was entrusted to Technical Committee CH/168, Prosthetics and orthotics.

A list of organizations represented on this committee can be obtained on request to its secretary.

This publication does not purport to include all the necessary provisions of a contract. Users are responsible for its correct application.

© The British Standards Institution 2014. Published by BSI Standards Limited 2014

ISBN 978 0 580 84459 1

ICS 01.040.11; 11.040.40

**Compliance with a British Standard cannot confer immunity from legal obligations.**

This British Standard was published under the authority of the Standards Policy and Strategy Committee on 30 November 2014.

**Amendments issued since publication**

Date	Text affected
------	---------------

---

---

---

**Prosthetics and orthotics —  
Vocabulary —**

Part 4:  
**Terms relating to limb amputation**

*Prothèses et orthèses — Vocabulaire —*

*Partie 4: Termes relatifs à l'amputation de membres*





**COPYRIGHT PROTECTED DOCUMENT**

© ISO 2014

All rights reserved. Unless otherwise specified, no part of this publication may be reproduced or utilized otherwise in any form or by any means, electronic or mechanical, including photocopying, or posting on the internet or an intranet, without prior written permission. Permission can be requested from either ISO at the address below or ISO's member body in the country of the requester.

ISO copyright office  
Case postale 56 • CH-1211 Geneva 20  
Tel. + 41 22 749 01 11  
Fax + 41 22 749 09 47  
E-mail [copyright@iso.org](mailto:copyright@iso.org)  
Web [www.iso.org](http://www.iso.org)

Published in Switzerland

# Contents

Page

<b>Foreword</b> .....	<b>v</b>
<b>Introduction</b> .....	<b>vi</b>
<b>1 Scope</b> .....	<b>1</b>
<b>2 Normative references</b> .....	<b>1</b>
<b>3 Terms and definitions</b> .....	<b>1</b>
3.1 General limb amputation .....	1
3.2 Amputation procedures .....	3
3.3 Person who has had an amputation .....	3

## Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see [www.iso.org/directives](http://www.iso.org/directives)).

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights. Details of any patent rights identified during the development of the document will be in the Introduction and/or on the ISO list of patent declarations received (see [www.iso.org/patents](http://www.iso.org/patents)).

Any trade name used in this document is information given for the convenience of users and does not constitute an endorsement.

For an explanation on the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the WTO principles in the Technical Barriers to Trade (TBT) see the following URL: [Foreword - Supplementary information](#)

The committee responsible for this document is ISO/TC 168, *Prosthetics and orthotics*.

ISO 8549 consists of the following parts, under the general title *Prosthetics and orthotics — Vocabulary*:

- *Part 1: General terms for external limb prostheses and external orthoses*
- *Part 2: Terms relating to external limb prostheses and wearers of these prostheses*
- *Part 3: Terms relating to external orthoses*
- *Part 4: Terms relating to limb amputation*

## Introduction

At present, no internationally accepted terminology describes the complete range of surgical limb amputation levels, amputation procedures, and persons who have had an amputation. Members of clinic teams in different countries have developed their own terminology to meet their own needs.

There is a need for a standard international system of terminology which will allow practitioners to accurately describe the surgical history of persons who have had a limb amputation(s) and to facilitate comparisons with the experience of other practitioners.

The terminology will also be of value to epidemiologists and governmental health officials.





# Prosthetics and orthotics — Vocabulary —

## Part 4: Terms relating to limb amputation

### 1 Scope

This part of ISO 8549 specifies a vocabulary for the description of surgical limb amputations, amputation procedures, and persons who have had an amputation.

### 2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO 8549-2, *Prosthetics and orthotics — Vocabulary — Part 2: Terms relating to external limb prostheses and wearers of these prostheses*

### 3 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO 8549-2 and the following apply.

#### 3.1 General limb amputation

##### 3.1.1

##### **limb amputation**

surgical removal of the whole or part of a limb

##### 3.1.2

##### **level of amputation**

joint or segment at which amputation is performed

Note 1 to entry: For the upper limb, see [3.1.3](#), and for the lower limb, see [3.1.4](#).

##### 3.1.3

##### **upper limb amputation**

surgical removal of the whole or part of an upper limb

##### 3.1.3.1

##### **partial hand**

amputations of the upper limb distal to the wrist joint

Note 1 to entry: These include:

- **Thumb:** Amputation of the whole or part of the thumb;
- **Phalangeal:** Amputation of part of one or more fingers;
- **Metacarpo-phalangeal disarticulation:** Amputation of one or more fingers;
- **Metacarpal:** Amputation of a part of the hand through one or more metacarpals;
- **Carpo-metacarpal disarticulation:** Amputation of a part of the hand at one or more of the carpo-metacarpal joints;

— **Carpal:** Amputation of a part of the hand through any of the carpal bones and/or joints.

Note 2 to entry: The complete description of a partial hand amputation requires the identification of the amputated bones and their levels of amputation.

**3.1.3.2  
wrist disarticulation**

amputation of the upper limb at the wrist joint

**3.1.3.3  
trans-radial**

amputation of the upper limb between the elbow joint and the wrist joint

**3.1.3.4  
elbow disarticulation**

amputation of the upper limb at the elbow joint

**3.1.3.5  
trans-humeral**

amputation of the upper limb between the shoulder joint and the elbow joint

**3.1.3.6  
shoulder disarticulation**

amputation of the upper limb at the shoulder joint

**3.1.3.7  
scapulo-thoracic disarticulation  
forequarter**

amputation of the upper limb at the scapulo-thoracic and the sternoclavicular joints

**3.1.4  
lower limb amputation**

surgical removal of the whole or part of a lower limb

**3.1.4.1  
partial foot**

amputations of the lower limb distal to the ankle joint

Note 1 to entry: These include:

- **Phalangeal:** Amputation of part of one or more toes;
- **Metatarso-phalangeal disarticulation:** Amputation of one or more toes;
- **Metatarsal:** Amputation of a part of the foot through one or more metatarsals;
- **Tarso-metatarsal disarticulation:** Amputation of part of the foot at one or more of the tarso-metatarsal joints;
- **Tarsal:** Amputation of a part of the foot through any of the tarsal bones and/or joints.

Note 2 to entry: The complete description of a partial foot amputation requires the identification of the amputated bones and their levels of amputation.

**3.1.4.2  
ankle disarticulation**

amputation of the lower limb at the ankle joint

**3.1.4.3  
trans-tibial**

amputation of the lower limb between the knee joint and the ankle joint

#### 3.1.4.4

##### **knee disarticulation**

amputation of the lower limb at the knee joint

#### 3.1.4.5

##### **trans-femoral**

amputation of the lower limb between the hip joint and the knee joint

#### 3.1.4.6

##### **hip disarticulation**

amputation of the lower limb at the hip joint

#### 3.1.4.7

##### **trans-pelvic**

amputation of the whole lower limb together with all or part of the hemipelvis

### 3.2 Amputation procedures

#### 3.2.1

##### **initial amputation**

first amputation of the whole or part of a limb

#### 3.2.2

##### **initial upper limb amputation**

first amputation of the whole or part of an upper limb

#### 3.2.3

##### **initial lower limb amputation**

first amputation of the whole or part of a lower limb

Note 1 to entry: The complete description of an amputation has to specify upper or lower limb, left or right side.

#### 3.2.4

##### **revision amputation**

surgical procedure on a previously amputated limb without changing the level of amputation

Note 1 to entry: This can involve removal of soft tissue, bony tissue, or both.

#### 3.2.5

##### **two-stage amputation**

amputation planned to be carried out in two stages

Note 1 to entry: The first stage involves amputating the devitalized and/or infected parts of the limb. The wound may be left fully or partially open. The second stage involves revision amputation, or even amputation to a higher level, and wound closure.

#### 3.2.6

##### **reamputation**

amputation of an amputated limb to a higher level

### 3.3 Person who has had an amputation

#### 3.3.1

##### **amputee**

person who has had an amputation

Note 1 to entry: The complete description of the person requires the identification of the amputated limbs.

#### 3.3.2

##### **upper limb amputee**

person who has had an upper limb amputation

**3.3.3**

**lower limb amputee**

person who has had a lower limb amputation

**3.3.4**

**bilateral upper limb amputee**

person who has had amputations of both upper limbs

**3.3.5**

**bilateral lower limb amputee**

person who has had amputations of both lower limbs

**3.3.6**

**unilateral upper and lower limb amputee**

person who has had amputations of both limbs on the same side

**3.3.7**

**contralateral upper and lower limb amputee**

person who has had an amputation of an upper limb and the lower limb on the opposite side

**3.3.8**

**triple amputee**

person who has had amputations of three limbs

**3.3.9**

**quadruple amputee**

person who has had amputations of all four limbs







# British Standards Institution (BSI)

BSI is the national body responsible for preparing British Standards and other standards-related publications, information and services.

BSI is incorporated by Royal Charter. British Standards and other standardization products are published by BSI Standards Limited.

## About us

We bring together business, industry, government, consumers, innovators and others to shape their combined experience and expertise into standards-based solutions.

The knowledge embodied in our standards has been carefully assembled in a dependable format and refined through our open consultation process. Organizations of all sizes and across all sectors choose standards to help them achieve their goals.

## Information on standards

We can provide you with the knowledge that your organization needs to succeed. Find out more about British Standards by visiting our website at [bsigroup.com/standards](http://bsigroup.com/standards) or contacting our Customer Services team or Knowledge Centre.

## Buying standards

You can buy and download PDF versions of BSI publications, including British and adopted European and international standards, through our website at [bsigroup.com/shop](http://bsigroup.com/shop), where hard copies can also be purchased.

If you need international and foreign standards from other Standards Development Organizations, hard copies can be ordered from our Customer Services team.

## Subscriptions

Our range of subscription services are designed to make using standards easier for you. For further information on our subscription products go to [bsigroup.com/subscriptions](http://bsigroup.com/subscriptions).

With **British Standards Online (BSOL)** you'll have instant access to over 55,000 British and adopted European and international standards from your desktop. It's available 24/7 and is refreshed daily so you'll always be up to date.

You can keep in touch with standards developments and receive substantial discounts on the purchase price of standards, both in single copy and subscription format, by becoming a **BSI Subscribing Member**.

**PLUS** is an updating service exclusive to BSI Subscribing Members. You will automatically receive the latest hard copy of your standards when they're revised or replaced.

To find out more about becoming a BSI Subscribing Member and the benefits of membership, please visit [bsigroup.com/shop](http://bsigroup.com/shop).

With a **Multi-User Network Licence (MUNL)** you are able to host standards publications on your intranet. Licences can cover as few or as many users as you wish. With updates supplied as soon as they're available, you can be sure your documentation is current. For further information, email [bsmusales@bsigroup.com](mailto:bsmusales@bsigroup.com).

## BSI Group Headquarters

389 Chiswick High Road London W4 4AL UK

## Revisions

Our British Standards and other publications are updated by amendment or revision.

We continually improve the quality of our products and services to benefit your business. If you find an inaccuracy or ambiguity within a British Standard or other BSI publication please inform the Knowledge Centre.

## Copyright

All the data, software and documentation set out in all British Standards and other BSI publications are the property of and copyrighted by BSI, or some person or entity that owns copyright in the information used (such as the international standardization bodies) and has formally licensed such information to BSI for commercial publication and use. Except as permitted under the Copyright, Designs and Patents Act 1988 no extract may be reproduced, stored in a retrieval system or transmitted in any form or by any means – electronic, photocopying, recording or otherwise – without prior written permission from BSI. Details and advice can be obtained from the Copyright & Licensing Department.

## Useful Contacts:

### Customer Services

**Tel:** +44 845 086 9001

**Email (orders):** [orders@bsigroup.com](mailto:orders@bsigroup.com)

**Email (enquiries):** [cservices@bsigroup.com](mailto:cservices@bsigroup.com)

### Subscriptions

**Tel:** +44 845 086 9001

**Email:** [subscriptions@bsigroup.com](mailto:subscriptions@bsigroup.com)

### Knowledge Centre

**Tel:** +44 20 8996 7004

**Email:** [knowledgecentre@bsigroup.com](mailto:knowledgecentre@bsigroup.com)

### Copyright & Licensing

**Tel:** +44 20 8996 7070

**Email:** [copyright@bsigroup.com](mailto:copyright@bsigroup.com)



...making excellence a habit.™