INTERNATIONAL STANDARD

ISO
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Prosthetics and orthotics — Limb deficiencies —

Part 4:
Description of causal conditions leading to amputation

Prothèses et orthèses — Malformations des membres —

Partie 4: Description des causes qui conduisent à l'amputation

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.

Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

International Standard ISO 8548-4 was prepared by Technical Committee ISO/TC 168, *Prosthetics and orthotics*.

ISO 8548 consists of the following parts under the general title *Prosthetics and orthotics — Limb deficiencies*:

— *Part 1: Method of describing limb deficiencies present at birth*

— *Part 2: Method of describing lower limb amputation stumps*

— *Part 3: Method of describing upper limb amputation stumps*

— *Part 4: Description of causal conditions leading to amputation*

— *Part 6: Description of condition of patient requiring a prosthesis*

Future parts will deal with other descriptions of limb deficiencies.

Introduction

The outcome of the rehabilitation of a patient who has had an amputation depends not only on the surgery performed and the prosthesis which may be fitted, but also on the cause and underlying condition for which the amputation was performed, and on other disabilities and attributes of the patient. Members of clinic teams in different countries develop their own nomenclature to meet their own needs. Hence there is a need for an international system to be developed in order to compare one publication with another and one patient with another. The different care groups who would appreciate and use a standardized system of describing the reason for amputation and the general state of the patient include surgeons, other doctors (especially those concerned with rehabilitation), physical and occupational therapists and prosthetists. Such a system would also be of value to epidemiologists and government health officials.

The system proposed has to meet the needs of the different members of the clinic team and to enable the description of the cause of amputation and the underlying condition to be recorded in a way that can be easily incorporated in reports. This part of ISO 8548 deliberately aims at defining the minimum information to be described. It should be feasible for this information to be included in forms designed by the individual institution and be capable of ready adaptation for computer analysis.

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Prosthetics and orthotics — Limb deficiencies —

Part 4:
Description of causal conditions leading to amputation

1   Scope

This part of ISO 8548 establishes a method of describing the causal conditions leading to amputation and the underlying pathology.

2   Normative references

The following standards contain provisions which, through reference in this text, constitute provisions of this part of ISO 8548. At the time of publication, the editions indicated were valid. All standards are subject to revision, and parties to agreements based on this part of ISO 8548 are encouraged to investigate the possibility of applying the most recent editions of the standards indicated below. Members of IEC and ISO maintain registers of currently valid International Standards.

ISO 8548-1:1989, *Prosthetics and orthotics — Limb deficiencies — Part 1: Method of describing limb deficiencies present at birth.*

ISO 8548-2:1993, *Prosthetics and orthotics — Limb deficiencies — Part 2: Method of describing lower limb amputation stumps.*

ISO 8548-3:1993, *Prosthetics and orthotics — Limb deficiencies — Part 3: Method of describing upper limb amputation stumps.*

ISO 8549-1:1989, *Prosthetics and orthotics — Vocabulary — Part 1: General terms for external limb prostheses and external orthoses.*

ISO 8549-2:1989, *Prosthetics and orthotics — Vocabulary — Part 2: Terms relating to external limb prostheses and wearers of these prostheses.*

3   Definitions

For the purposes of this part of ISO 8548, the definitions given in ISO 8548-1, ISO 8548-2, ISO 8548-3, ISO 8549-1 and ISO 8549-2 apply.

4 Cause of amputation

4.1 General

The object of surgical amputation is to save life, relieve pain and improve function or general health. The cause of amputation is described in three ways. Firstly, by the clinical condition or conditions leading to amputation, secondly, by the pathological condition or conditions and thirdly, by the specific disease.

NOTE For example, the actual clinical condition leading to amputation might be pain caused by inadequate vascular perfusion due to atherosclerosis which is the pathological condition. It follows, therefore, that one pathological condition may be associated with more than one clinical condition leading to amputation, e.g. atherosclerosis may lead to amputation for nonviability and for pain. Furthermore, a specific disease may present with more than one pathological condition, e.g. diabetes mellitus presenting with dysvascularity, infection or neurological disorder or a combination of these.

The cause of amputation shall be described by including the information as shown in 4.2 to 4.4.

4.2 Clinical conditions leading to amputation

The clinical conditions leading to amputation are:

a) acute life threatening situation;

b) nonviability;

c) pain;

d) severe injury;

e) infection;

f) ulceration;

g) neoplasm;

h) neurological disorder or

i) deformity.

State the clinical conditions leading to amputation.

4.3 Pathological conditions leading to amputation

4.3.1 General

The underlying pathological conditions leading to amputation may be:

a) trauma;

b) dysvascularity;

c) infection;

d) neurological disorders;

e) neoplasm or

f) deformity.

State the pathological conditions leading to amputation and the additional information as shown in 4.3.2 to 4.3.7.

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4.3.2 Trauma

Traumatic agents may be:

a) mechanical;

b) thermal;

c) electrical;

d) chemical or

e) radioactive.

State the agents responsible and whether there was a traumatic severance, subsequent amputation for severe damage, or because the predicted functional outcome was poor.

4.3.3 Dysvascularity

Dysvascularity may be due to:

a) atherosclerosis without diabetes mellitus;

b) atherosclerosis with diabetes mellitus;

c) acute vascular incident, or

d) other.

State the conditions leading to dysvascularity.

4.3.4 Infection

Infection may affect:

a) soft tissues;

b) bone;

c) joints.

State the tissues affected and if possible whether the infection is acute or chronic in nature.

4.3.5 Neurological disorders

Neurological disorders may result from:

a) congenital abnormality:

b) injury;

c) infection;

d) systemic disease; or

e) other causes.

State the cause of the disorder.

4.3.6 Neoplasm

Types of neoplasm may include:

a) benign tumours;

b) malignant primary tumours or

c) malignant secondary tumours.

State the type of neoplasm.

4.3.7 Deformity

State the nature of the deformity and whether it was present at birth or acquired subsequently.

4.4 Specific disease

State the specific disease leading to amputation, using International Classification of Diseases (ICD) codes.

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