

## Functional training and international classification of functioning: an approach

### *Treinamento funcional e classificação internacional de funcionalidade: uma aproximação*

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**Abstract** – The International Classification of Functioning (ICF) was elaborated by the World Health Organization (WHO) in order to unify the language among health professionals within the biopsychosocial model. ICF contains domains that resemble conceptual aspects and practical perspectives of functional training (FT). There is a consensus limitation of which aspects should be considered about the term “functionality”, in addition to being notorious the little use of ICF in physical activity programs. The aim of this approach study was to support the practical application of ICF as an easy way to complement functional evaluation in FT methods. Discussions were held on how the term “functionality” can be better understood in physical activity programs as well as some possibilities to make ICF in FT more operational. The absence of evidence about the use of ICF in relation to sports science elucidates the need of this approach, which may contribute to expand the knowledge about individuals’ functional health.

**Key words:** Physical Education and Training; Motor Activity; ICF.

**Resumo** – A Classificação Internacional de Funcionalidade (CIF) foi elaborada pela Organização Mundial de Saúde para unificar a linguagem entre profissionais de saúde dentro de um modelo biopsicossocial. A CIF contém domínios que se assemelham com aspectos conceituais e perspectivas práticas do treinamento funcional (TF). Existe limitação consensual de quais aspectos devem ser considerados sobre o termo “funcionalidade”, além de ser notório a pouca utilização da CIF em programas de atividade física. O objetivo dessa aproximação é defender a aplicação prática da CIF como forma de complementar uma avaliação funcional em métodos do tipo TF. Foram realizadas discussões sobre como o termo “funcionalidade” pode ser melhor compreendido em programas de atividades física, bem como algumas possibilidades de operacionalizar a CIF no TF. A escassez de evidências da utilização da CIF em relação às Ciências do Esporte elucidada a necessidade dessa aproximação podendo contribuir na ampliação de informações da saúde funcional dos indivíduos.

**Palavras-chave:** Classificação Internacional de Funcionalidade, Incapacidade e Saúde; Educação Física e Treinamento; Atividade Motora.

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## INTRODUCTION

Functional training (FT) has been used and presents worldwide acceptance in the fitness segments. However, the scientific community began to think over on how this method is being applied and if, indeed, the proposal of the term “functional training” has been properly applied<sup>1</sup>. It was observed that the specificity of this FT proposal is necessary, and in the same way as any other types of training in Sports Science; FT has been recently recommended for several populations, while respecting the principles of physical training and the practitioner’s individuality<sup>2,3</sup>.

The information on the identification and standardization of the functionalities of FT practitioners is not grouped into any classification. Until today, no proposal has been developed in the attempt to unify the terms related to the functionality of subjects practicing some kind of physical training such as FT. In this sense, it is believed that such identification can have an approach to the International Classification of Functioning (ICF), proposed by the World Health Organization (WHO), which includes factors related not only to organic / structural aspects, but also environment, activity and social participation, indicating elements that can act as facilitators or barriers to certain actions<sup>4,5</sup>.

This classification system has some features that make it useful for FT, especially when the aim is to identify the subject’s functionality. FT programs apply tests that evaluate certain functional variables. All tests are capable of being encoded by ICF, making communication universal and capable of being supplied with an information system<sup>6,7</sup>. Moreover, with a universal language, scientific and applied communication becomes more accessible to FT professional<sup>8</sup>. In addition, approaching ICF to FT can facilitate interaction of other health professionals with physical education teachers and follow the same individual under a broader perspective, particularly with an emphasis on functionality.

Thus, this study aimed to support the practical application of ICF as a way to complement functional assessment related to the FT method.

## INTERNATIONAL CLASSIFICATION OF FUNCTIONING, DISABILITY AND HEALTH

As a member of the WHO International Family of Classifications, ICF is considered a reference classification as the International Classification of Diseases (ICD) and both can be used together or separately, having no patent, trademark or commercial nature. ICD provides mortality and morbidity data and ICF provides information on health and health-related states that interfere with functionality<sup>4</sup>. Thus, ICF is based on the biopsychosocial, disabilities and functional model, which are part of the biological, individual and social perspective of understanding health<sup>4,10</sup>. Below is a short representation of components that constitute the ICF model (Box 1):

**Box 1.** Representation of ICF components

Part 1: Functioning and Disability			Part 2: Contextual Factors	
Components	Functions (b) and structure (s) of the body	Activities and participation (d)	Environmental Factors (e)	Personal factors (e)
Domains	Body Functions Body Structures	Vital areas (Tasks, actions)	External influences on functionality and inability	Internal influences on functionality and inability
Constructs	Change in the body functions physiological) Changes in the body structures (anatomical)	Capacity of performing tasks on a standard environment Performance / Execution of tasks in the usual environment	Facilitator or limiting impact in the characteristics of the physical, social and attitudinal world	Impact of a person's attributes
Positive Aspects	Functional and structural integrity	Activities Participation	Facilitators (+)	Not applicable
	Functionality			
Negative Aspects	Deficiency	Limited activity Restricted participation	Barriers (-)	Not applicable
	Disability			

Source: World Health Organization (2004) – adapted version.

## USE OF THE INTERNATIONAL CLASSIFICATION OF FUNCTIONING TO CHARACTERIZE FUNCTIONAL TRAINING PRACTITIONERS

From the methodological point of view, ICF can be used with the purpose of characterizing and qualifying the functional status of FT practitioners. For this, it is necessary to choose the categories that represent a particular function and thereafter apply a qualifier to this category. This qualifier will depend on the subject's performance within a specific functional test. In the muscle strength test of the lower limbs measured by the sitting-rising test<sup>6</sup>, this qualifier can present a variety of situations such as complete, severe, moderate, mild or no difficulty<sup>4</sup>. The applied qualifier will always range from 0 to 4, respectively. Some situations may be unspecific and therefore, even under these conditions, the indication of a qualifier is allowed (in this case, qualifier 8) and, for those not applicable, the score 9 will be assigned. Thus, these qualifiers could be changed over time due to the effects from the FT program<sup>4</sup>.

Considering this possibility of classification, it is possible that some specific questionnaires to assess functional performance are associated with categories and qualifiers proposed by the ICF, thus resulting in more complete and unified information on the individual's functional aspects. In the scientific community, there is published study with the aim of associating validated assessment instruments (questionnaires, scales, measurements and tests) to the ICF functionality coding system in different situations, either of functions and structures, or even contextual, social and environmental<sup>9</sup>. This association is an interpretation and classification of the results (scores) of assessments made using scales and / or specific tests in order to transform that information into a language that meets the needs of health professionals within a multidisciplinary model. Another example may be the quality of life questionnaire (QOL), which has scores

ranging from 1 to 5, where score 5 is the best. ICF has levels ranging from 0 to 4, where 4 is the worst level. Thus, the association between these two instruments would be inversely proportional, where ICF 4 indicates full difficulty, which would be 1 in the QOL questionnaire.

However, if the population to be trained is part of specific groups, there are other possibilities to implement these associations. In the elderly population ( $\geq 60$  years), functional evaluation should be performed before any procedure. This can be accomplished by protocols standardized in the scientific community, such as the senior fitness battery<sup>6</sup>, which provides important information about ADL variables. This battery could be associated with the ICF encoding and, therefore, the evaluation results could inform the functional health of older individuals in a reproducible manner and with universal language for all health professionals.

Still considering the specificity of the target population to be trained, there is also the possibility of ICF implementation through the construction of lists (Check Lists / Core set), prepared with the aim of simplifying the application and properly directing the functional classification system<sup>11</sup>. These lists are usually structured in a questionnaire model containing information about the functionality of a group of subjects with similar functionality profile (Check list) or with the same disease (core sets)<sup>11</sup>. The summarized lists may be structured as follows: identification and description of ICF categories that correlate with the test or questionnaire used as a column of qualifiers (0-4 variation), indicating the functional health magnitude. Such lists at times may be replaced and / or supplemented by questions, in which individuals will report information about their functionality, allowing the researcher to identify the degree of severity in relation to functional aspects<sup>12</sup>.

## FINAL COMMENTS

The lack of evidence on the use of ICF regarding Sports Science can justify the need for approximation, since Brazil should follow the WHO guidelines and adequate public policies (including physical activity methods such as FT), within the context of the biopsychosocial model. Therefore, studies should operate the use of ICF so as to reduce the application time, as some applications used to feed smartphones and computers<sup>7</sup>.

This interaction can contribute to the expansion of information about disability, functionality and health of individuals, serving as an encoding instrument and expanding information in different training modalities. Therefore, the term “functional” present in the FT method nomenclature should be in line with the concept of functionality proposed by WHO and addressed in ICF, facilitating a unified communication among health professionals within the biopsychosocial context.

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