

# Advantages of Web-based Rehabilitation

## Abstract

Web-based rehabilitation is defined as a set of tools, procedures and protocols to remotely enable the rehabilitation process. The importance of web-based rehabilitation emerges in in-hospital rehabilitation interventions and management of patients in the acute phase of the disease, as well as in the remote management of individuals with chronic health problems. As an alternative to traditional face to face treatment methods and a low cost rehabilitation option, it is increasing rapidly.

**Keywords:** web-based, rehabilitation, disease, tele-conferences, videos

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## Introduction

Web Based Rehabilitation, defined as “the use of information and communication technology to provide remote rehabilitation services”, has emerged as an appropriate option for people to provide exercise etc. practices at home, as an aid or as an alternative to traditional physiotherapy.<sup>1,2</sup> Over the past two decades, health approaches to the internet have increased rapidly, with increased access to internet services and the widespread use of a number of tele-communications devices, such as tablets, iPads and smartphones, etc.

With these remote rehabilitation services, it is possible for health professionals working in the clinic to evaluate, monitor and intervene their treatment programs despite their long distances. Web Based Rehabilitation programs, Web site exercises (videos, tele-conferences and audio explanations, etc.), is a method that can be used in all healthy or sick individuals, including disease-specific advice and training. These programs include cardio-vascular trainings, general exercise programs and balance exercises, as well as warm-up, cooling and stretching exercises, at different levels of difficulty and individualized, determined set / number approaches to meet the needs of the participants.<sup>1,2</sup> Web-based rehabilitation approaches have entered the field of rehabilitation today, as they can provide special rehabilitation programs and improve access to specialized therapists or services, especially for those with work/family difficulties, rural living or limited mobility. However, a process requiring more evidence regarding its effectiveness and costs is required.<sup>1,2</sup>

Web Based Rehabilitation approaches are an infra-structure that helps all individuals at all ages, including healthy individuals, to guide caregivers and in order to guide multiple sclerosis, rheumatoid arthritis, spinal cord injury, stroke, diabetes mellitus, elderly people, pediatric rehabilitation.<sup>1,3-5</sup> It is estimated that 10% of the global population, about 90% of them live with Type 2 diabetes. Poorly controlled diabetes; There are high risk of complications, including early mortality and cardiovascular disease, nephropathy and retinopathy. For preventive approach in patients with diabetes, approaches that improve self-management skills can improve health outcomes and reduce health costs. However, it is not clear how best to support patients in developing such skills, so that the self-management training required for diabetes patients is insufficient. However, for self-management, a Web-based support can relieve some of these barriers (especially in high-income countries with high web access levels).<sup>1-3</sup>

In people with spinal cord injury (SCI), physical activity and exercise can help maintain muscle strength and flexibility, reduce healing and pain. With the home based, Web rehabilitation approach, it has been determined that exercise programs are effective in improving physical activity in people with SCI.<sup>5</sup>

Today, Western countries provide web-based rehabilitation services to improve business ability and support participation in working life. In Germany, these services are usually provided under the German Pension Insurance (GPI) framework, as 3-week inpatient or outpatient programs. Treatments are very professional and consist of evidence-based therapy standards. Another potential service to deliver information may be web-based information guides. This service provides the advantage of easy access for those with the most time problems or those living in rural / isolated areas. For web-based information, only internet access and a fixed or mobile Internet device are required.<sup>2-4</sup> Physiotherapists continue their treatment as a home program, using written and oral methods, after the patients are discharged in traditional physiotherapy. In conventional physiotherapy, brochures are used, in which exercises are supported with pictures and graphic images, and instructions for exercise are used. However, thanks to current mobile platforms, experts can perform their treatments in the most appropriate way through the videos they watch and live video conferencing through smartphones and tablets. With the broader use and easier accessibility of the Internet, the idea has emerged that this interface may be a better way to provide patient education.<sup>2-5</sup> It is important to develop programs using a systematic approach based on learning theory to optimize the effectiveness of providing patient education over the Internet. Rheumatoid arthritis (RA) is a chronic inflammatory joint disease. RA limits the daily life activities and affects the person's function and quality of life.<sup>6</sup> A multidisciplinary treatment approach including pharmacological, non-pharmacological and / or surgical interventions is recommended in RA. Exercise is generally recommended as a preventive component for rehabilitation, including developing self-management strategies, to improve function and quality of life. In a chronic disease such as RA, necessary, regular rheumatology checks and timely access to treatments may not always be possible due to transportation difficulties, physical limitations, time constraints and geographical barriers. In order to overcome these difficulties, an up-to-date solution, low cost, easily accessible to more users over the internet, clinically effective health approaches can now be given as Web-based rehabilitation.<sup>2,5,6</sup>

Again, in stroke rehabilitation, exercise is applied to patients on a Web basis to relieve spasticity and increase function.<sup>1,7</sup> In addition, today there are various web-based approaches developed for a range of chronic health problems, including cardio-vascular disease, chronic obstructive pulmonary disease, cancer, and psychiatric disorders. To date, Web-based rehabilitation practices have been disclosed to be both feasible and acceptable for piloted individuals, other participants and physiotherapists. However, there are almost no explanations about the side effects related to the approaches. Especially in evaluation, questionnaire applications and qualitative interviews, web-based physiotherapy has been shown to be a suitable method and acceptable for SCI patients.<sup>1,5,6</sup>

The participants described these programs as easy to use, enjoyable to follow and useful at various stages of the disease, useful for health and well-being, especially for post-discharge rehabilitation and long-term health care.<sup>4,5,8</sup> Web-Based Rehabilitation provided convenience to individuals in many issues and in many diseases, and individuals with limited opportunities and time were able to obtain efficiency from rehabilitation.

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### Competing interest

Author declares that there are no conflicts of interest.

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