Exercise rehabilitation, work to revive the human becoming the driving force of the country

Yong-Seok Jee

All of the people want to live healthy during their lifetime. However, though they know the importance of health, it is easy for them to lose their health for various reasons. In fact, there are many ways to define health. Of a lot of definitions, health is defined as the level of functional efficiency of a living being. In humans, it is the general condition of a person's mind and body, usually meaning to be free from illness, injury or pain (Merriam-Webster, 2011). The World Health Organization also defined health in its broader sense in 1946 as “a state of complete physical, mental, and social well-being and not merely the absence of disease” (Grad, 2002). Other definition has been proposed a recent definition that correlates health and personal satisfaction (Bellieni and Buonocore, 2009). Currently, “healthy” is also widely used in the context of many types of non-living organizations and their impacts for the benefit of humans, such as in the sense of healthy communities, cities or environments. In addition to health care interventions and a person's surroundings, a number of other factors are known to influence the health status of individuals, including their background, lifestyle, and economic and social conditions. As a definition about health, the management of it is achieved through multidisciplinary approaches by doctors, nurses, psychologists, physical therapists, occupational therapists, exercise therapists, constructors and so on to pursue in our Institute of Exercise Rehabilitation.

Exercise rehabilitation, as shown in Fig. 1, aims to return to a phase of absence of disease or health status which deteriorated by genetic, metabolic or inactive reasons. It use exercise science to develop exercise programs to support people in their rehabilitation. Our institute also offers everyone an evidence-based approach to exercise, designed to help overcome illness or injury. Exercise rehabilitation has the evidence-based exercise science knowledge to address a wide range of physical and psychological problems, including: 1) musculoarticular rehabilitation after surgery, 2) chronic pain or fatigue, 3) neurological conditions such as post-concussion syndrome and traumatic brain injury, 4) metabolic conditions including diabetes, cancer, and obesity, 5) depression and anxiety.

No matter what exercise rehabilitation can be helpful to above patients, it is important to test or evaluate them. Test is broadly divided into two subfields: 1) basic research subfield and 2) clinical subfield. The one aims to provide an evidence for the effectiveness on exercise rehabilitation of various patients, the other aims to offer appropriate programs to each patient. In the basic research subfield, latest researches have interested in the brain unlike past times. The past century has been wasted, in my view, trying to find cardiovascular and skeletal muscle determinants of fatigue. Recently, a lot of laboratory research centers focus on identifying mechanisms of neurophysiology such as neurogenesis and apoptosis. Most of the researches focus on the hippocampus of the brain involved in memory and learning and on the hypothalamus involved in psychophysiological change and on identifying phenomena mainly caused by various stimuli and disease through molecular biological or electrical physiological methods. On the other hand, in the clinical subfield, an initial baseline assessment consists of an interview and physical capacity testing. It is essential to ensure that it is safe for each patient to exercise. As part of interview process, background health information is included in that. Here is relevant medical history, work status, previous exercise ex-
experience, rehabilitation goals, and expectations. Physical capacity testing specifically tailored to individual needs and requirements will be conducted. This may cover body composition, aerobic capacity, physical strength and endurance, range of joint motion, peak torque and total work, and power and balance. Based on the findings of this assessment, an in depth report and subsequent recommendations for an individualized rehabilitation program are developed. Supervised rehabilitation sessions are conducted to implement the program and ensure ongoing adherence and improvements are made. A progress assessment is conducted 4-12 weeks from the initial assessment to track changes in physical and psychological measures and make ongoing recommendations for individual’s program.

From now on, in addition to mentioned above, I would like to say what exercise rehabilitation plays a role in this country, how it works at the national level, and what the country should fill the needs of us. Nowadays, the scientific exercise improves the performances of the athletes representing our country, and then they usher the reputation of the country to the world. As well as it is the means that makes the people do healthy in the aspect of life

sports and reduces the economic burden resulted in medical expenses. In the clinical field, however, it should be used only the programs proven to a basic research. Otherwise, most of the patients cannot find their proper direction of rehabilitation and improve their goal of health and wellness. As most researchers know, a basic research is needed quite a few funding. But then the allocation of funding is very limited, very small. As well as the economic viability of the researchers, too poor, so the majority of researchers aspire to go to the university. In fact, the university in our country emphasizes on education and service than the basic research. Because of this, establishing the reputation of the country and reducing the burden of the national economy is weakening. To prevent this phenomenon, it is essential to provide the basic researchers with a stable foundation to establish a national competitiveness that is crucial to overcome the upcoming crisis. In other words, exercise rehabilitation is an important tool that recovers a person for national competitiveness. And the role of our Institute of Exercise Rehabilitation will be forced to become more in the future. It is up to all of us to make sure it stays that way.

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Associate Editor
Department of Exercise Physiology · Prescription, Graduate School of Health Promotion, Hanseo University, 360 Daegok-ri, Haemi-myun, Seosan 356-706, Korea
E-mail: jeeys@hanseo.ac.kr