

Training System To Strengthen Muscles

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The human body is complex — compensations need to be accounted for, as well as changes in strategy or equipment. People with muscle problems suffer various degrees of muscles weakness; they often lack balance and poor postural control and hip problems. That's likely because those patients affects the main muscle in walking (quadriceps) and they suffer from many obstacles and they can't do their everyday tasks. The purpose of this device is to make safe, low cost training system device, to strengthen muscles and improve them after whether traumatic injuries or surgical operations by backward walking or force against resistance (forwardly) . Moreover the aim is to straight patients' posture to reach finally the correctly walking and to recover the ability of walking and depending on muscles. The range of patients' ages was determined between 10 and 15 years old that have low muscle tone or balance weaknesses, post-trauma patients or post-surgical patients. As a starting point, the patient will wear the device and choose which phase he wants to practice with. , the patient will start the training session walking backward or forward by the help of motors that connected to the vest (which straight the patient's posture), the hip will send the kinetic energy to the industrial joint then it will move reversely or straightly so the leg will move backward or forward. One possible conclusion is that the training system by its phases (backward walking, forward walking with resistance) enhance muscles strength and increase the balance of the body also straight their postures with shorter time and better results with guarantee of safety and efficiency work.