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TEST

Answer True or False by clicking on the corresponding box. Each question answered in a wrong way will subtract 0.2 points.

1.- Neuroplasticity and learning can be driven by several factors. One important group of factors is related to the intensity of training while another group is related to the manner how a training and activity is carried out. Other factors include the psychological state or the amount of information provided during training.

True

2.- Motivation is very important for an effective therapy and can be increased by making the training enjoyable and goal-oriented.

True

3.- Non-actuator devices are devices with no motors that support or facilitate movement therapy. Examples would be body weight support systems which enable weakened patient to start with therapy already earlier.

True

4.- Brain stimulation is the usage of virtual environments to enhance therapy and increase patient's motivation and immersion.

False

5.- The robotic systems for rehabilitation can be divided accordingly their mechanical structure in three main groups: end-effector robots, exoskeleton robotic devices and parallel robots.

False

6.- **Definition of Exoskeleton robotic device.** A wearable robot or external structural mechanism with joints and links corresponding to those of the human body.

True

7.- One of the control strategies for rehabilitation robotic devices is “assist-as-needed”. In this strategy, patients receive as much support or guidance as needed to complete a movement.

False

8.- **The main drawbacks of exoskeleton robotic device are:** 1) robot axes have to align with anatomical axes, 2) the need of longer set-up times and 3) the limb posture not fully determined.

False

9.- The First therapeutic arm robot was MIT-Manus in 1991. MIT-MANUS proved an excellent tool for shoulder and elbow rehabilitation in stroke patients, showing in clinical trials a reduction of impairment in movements confined to the exercised joints.

True

10.- 2010 American Heart Association (AHA) guidelines for stroke care which recommended that: “Robot-assisted movement therapy can be used as an adjunct to conventional therapy in patients with deficits in arm function to improve motor skills”

True