

SpiroTiger® Medical Purposes and Areas of Use



Medical sub-sections	Relationship	SpiroTiger®-Medical training Effects
Pneumology paediatrics	COPD (Chronic Obstructive Pulmonary Disease)	Performance Improvement combats loss of breath, Increased quality of life. Functional Mechanics: Improved oxygen uptake, strengthened respiratory muscles including better neuromuscular coordination. [T.Scherer et. al., 2000; P. Weiner et. al., 2000; R.J.H. Koppers et. al., 2006]
	CF (Cystic Fibrosis; Mucoviscidoses)	Increased mucus discharge; improved lung function values (FEV ₁ , vital capacity, etc.); performance increase; reduced infection risk due to mucus mobilization. Functional Mechanics: Mucus mobilization due to strong breast and ribcage movement during training; Improved lung function values due to reduced non-ventilated lung sections and strengthened respiratory muscles. [W. Kamin, ERS 2006]
Nutrition paediatrics	Adiposis Weight Loss	A weakened loss of breath as preparation for a weight loss program. For overweight children and adults. Functional Mechanics: Increased aerobic performance due to strengthened respiratory muscles; heightened athletic body feeling; increased calorie burn during respiratory training.
Anaesthesia Chest-OP's (ex. Heart surgery) Pre und post operation Training	Prevention of complications during chest and sternum region operations.	Preventive (prophylactic) respiratory training for operation; especially for chest and sternum region operations. Functional Mechanics: Increased respiratory muscles efficiency; Prevention or cessation of Atelectases; quickened Rehabilitation. Recommended for cardiac-surgery patients (Bypass etc.).
Oncology	Cancer Patients	Increased performance and motivational aid during tumor therapy. Functional Mechanics: Aerobes Training, increased oxygen delivery to tissue; increased respiratory perception without cardiovascular training (can be done at home). [K.U. Hanusch 2005]

Rheumatology Orthopaedics Child Orthopaedics	Whiplash	<p>For acute or chronic whiplash: stabilization of neck muscles.</p> <p>Functional Mechanics: Stabilization and improved coordination of the respiratory and respiratory auxiliary muscles, which also act as stabilizer muscles for the neck and back.</p>
	M. Bechterew	Increased flexibility and mobilization of the thorax region and a build up of proper posture muscles and their aerobic capacity, maintenance of lung volume.
	Scoliosis	Stability training; endurance training for proper posture muscles; maintenance of lung volume.
	Chronic Back Pain (lower back pain etc.)	<p>For hyper mobility and poor posture in the LWS, BWS or HWS; as stabilization training and to increase muscular coordination; reduces chronic back pain.</p> <p>Functional Mechanics: Strengthening of proper posture muscles.</p>
Neurology	Paraplegic Muscle Dystrophy Muscular Atrophy	For paraplegics (and Tetraplegics) to maintain lung volume; important performance and coordination training; for mucus discharge assistance; for muscle dystrophy in children and to youth to slow down muscular atrophy.
Cardiology	Prevention und Therapy	Prevention, as an aerobic training for patients at risk; Post heart attack therapy, as rehabilitation assistance; against loss of breath (anxiety reduction); performance and coordination improvement; Self confidence and body feeling improvement; warm-up for cardiovascular training. [P.Gianuzzi, L.Tavazzi, 2000]
Further Areas Apnoea Snoring Music Incontinence Depression Etc.	Prevention Therapy Strengthening Stress Hypoxia	For snoring and apnoea by strengthening throat and neck muscles and increased muscle tension during sleep periods. [E.Furrer-Boschung, 1997]
		For wind instrument players or singers, as an endurance or coordination training of the respiratory system. [M. Müller, 2004]
		Prevention of general performance loss (ex. Persons 40 years or older; De-conditioning-Syndrome).
		For incontinence patients for the strengthening of the pyramidal muscles and the lower abdominals.
		For depression, as an aerobic training and to increase quality of life.
		For stress hypoxia, to optimize and regulate respiratory coordination.