

## Wissenschaftliche Publikationen – Scientific Publications

### Atemmuskeltraining bei Gesunden

### Respiratory Muscle Training in Healthy Subjects

#### A1 Übersichtsarbeiten – Reviews

A1.07	<p>HajGhanbari B, Yamabayashi C, Sheel AW, Reid WD et al.  <u><b>Effects of respiratory muscle training on performance in athletes: a systematic review with meta-analyses</b></u>                      Department of Physical Therapy, University of British Columbia, Vancouver, Canada  <i>J Strength Cond Res, Jul 25, 2012</i></p>
A1.06	<p>Illi SK, Held U, Frank I, Spengler CM  <u><b>Effect of respiratory muscle training on exercise performance in healthy individuals a systematic review and meta-analysis</b></u>                      Exercise Physiology, Institute of Human Movement Sciences, ETH Zurich, Switzerland  <i>Sports Med, 42: 707-724, 2012</i></p>
A1.05	<p>Spengler CM  <u><b>Atmungsmuskeltraining und Leistungsfähigkeit</b></u>                      Exercise Physiology, Institute of Human Movement Sciences, ETH Zurich, Switzerland  <i>Schweizerische Zeitschrift für Sportmedizin und Sporttraumatologie 59:34-39, 2011</i></p>
A1.04	<p>Verges S, Boutellier U, Spengler CM  <u><b>Effect of respiratory muscle endurance training on respiratory sensations, respiratory control an exercise performance: a 15-year experience</b></u>                      Exercise Physiology, Institute of Human Movement Sciences, ETH Zurich, Switzerland  <i>Respir Physiol Neurobiol, 161: 16 – 22, 2008</i></p>
A1.03	<p>Spengler CM, Boutellier U  <u><b>Breathless Legs? Consider Training your Respiration</b></u>                      Exercise Physiology, Institute of Human Movement Sciences, ETH Zurich, Switzerland  <i>News Physiol Sci, 15: 101-105, 2000</i></p>
A1.02	<p>Boutellier U  <u><b>Respiratory muscle fitness and exercise endurance in healthy humans</b></u>                      Exercise Physiology, Institute of Human Movement Sciences, ETH Zurich, Switzerland  <i>Med Sci Sports Exerc, 30: 1169-1172, 1998</i></p>

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A1.01	<p>Boutellier U  <b>Auch die Atmung limitiert die körperliche Leistung bei gesunden Personen</b>                  Exercise Physiology, Institute of Human Movement Sciences, ETH Zurich, Switzerland  <i>Naturforschende Gesellschaft in Zürich 142/4 153-159, 1997</i></p>
A1.00	<p>Boutellier U  <b>Die Atmung als leistungslimitierender Faktor bei Normalpersonen und Sportlern</b>                  Exercise Physiology, Institute of Human Movement Sciences, ETH Zurich, Switzerland  <i>Deutsche Zeitschrift f Sportmedizin, 47 (Sonderheft): 216-219, 1996</i></p>

**A2 Originalarbeiten – Original Publications**

A2.09	<p>Lemaitre F, Coquart JB, Chavallard F, Castres I, Mucci P, Costalat G, Chollet D  <b><u>Effect of additional respiratory muscle endurance training in young well-trained swimmers</u></b>                  Activité Physique-Muscle-Santé, Faculté des Sciences du Sport, Ronchin, France  <i>J Sports Sci Med. 12(4): 630-638, 2013</i></p>
A2.08	<p>Sartorio A, Agosti F, Patrizi A, Tringali G, Marazzi N, Giunta M, Muller EE, Rigamonti AE  <b><u>GH responses to two consecutive bouts of respiratory muscle endurance training in healthy adults</u></b>                  Istituto Auxologico Italiano, IRCCS, Experimental Laboratory for Auxo-endocrinological Research, Milan and Verbania, Italy  <i>J Endocrinol Invest, 36(4): 255-260, 2012</i></p>
A2.07	<p>Sartorio A, Agosti F, Patrizi A, Compri E, Muller EE, Cella SG, Rigamonti AE  <b><u>Growth hormone response induced by a respiratory muscle endurance training in healthy subjects</u></b>                  Istituto Auxologico Italiano, IRCCS, Experimental Laboratory for Auxo-endocrinological Research, Milan and Verbania, Italy  <i>Horm Metab Res. 44: 319–324, 2012</i></p>
A2.06	<p>Vergès S, Renggli AS, Notter DA, Spengler CM  <b><u>Effects of different respiratory muscle training regimes on fatigue-related variables during volitional hyperpnoea</u></b>                  Exercise Physiology, Institute of Human Movement Sciences, ETH Zurich, Switzerland  <i>Respir Physiol Neurobiol. 31;169:282-289, 2009</i></p>
A2.05	<p>Holm P, Sattler A, Fregosi RF  <b><u>Endurance training of respiratory muscles improves cycling performance in fit young cyclists</u></b>                  Department of Physiology, The University of Arizona, Tucson, USA  <i>BMC Physiology, 4:9, 2004</i></p>

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A2.04	<p>Markov G, Spengler CM, Knöpfli C, Stuessi C, Boutellier U</p> <p><b><u>Respiratory muscle training increases cycling endurance without affecting cardiovascular responses to exercise</u></b></p> <p>Exercise Physiology, Institute of Human Movement Sciences, ETH Zurich, Switzerland</p> <p><i>Eur J Appl Physiol</i>, 85: 233-239, <b>2001</b></p>
A2.03	<p>Stuessi C, Spengler CM, Knöpfli C, Markov G, Boutellier U</p> <p><b><u>Respiratory muscle endurance training in humans increases cycling endurance without affecting blood gas concentrations</u></b></p> <p>Exercise Physiology, Institute of Human Movement Sciences, ETH Zurich, Switzerland</p> <p><i>Eur J Appl Physiol</i>, 84: 582-586, <b>2001</b></p>
A2.02	<p>Spengler CM, Roos M, Laube SM, Boutellier U</p> <p><b><u>Decreased exercise blood lactate concentrations after respiratory endurance training in humans</u></b></p> <p>Exercise Physiology, Institute of Human Movement Sciences, ETH Zurich, Switzerland</p> <p><i>Eur J Appl. Physiol</i>, 79: 299-305, <b>1999</b></p>
A2.01	<p>Boutellier U, Büchel R, Kundert A, Spengler CM</p> <p><b><u>The respiratory system as an exercise limiting factor in normal trained subjects</u></b></p> <p>Department of Physiology, University of Zurich, Switzerland</p> <p><i>Eur J Appl Physiol</i>, 65: 347-353, <b>1992</b></p>
A2.00	<p>Boutellier U, Piwko P</p> <p><b><u>The respiratory system as an exercise limiting factor in normal sedentary subjects</u></b></p> <p>Department of Physiology, University of Zurich, Switzerland</p> <p><i>Eur J Appl Physiol</i>, 64: 145-152, <b>1992</b></p>

**B1 Hintergründe Atmungsmuskulatur – Basics on Respiratory Muscles**

B1.07	<p>Vogiatzis I, Athanasopoulos D, Habazettl H, Kuebler WM, Wagner H et al.</p> <p><b><u>Intercostal muscle blood flow limitation in athletes during maximal exercise</u></b></p> <p>Departement of Critical Care Medicine and Pulmonary Services, University of Athens, Greece</p> <p><i>J Physiol</i>, 587: 3665-77, <b>2009</b></p>
B1.06	<p>Verges S, Kruttli U, Stahl B, Frigg R, Spengler CM</p> <p><b><u>Expiratory muscle fatigue impairs exercise performance</u></b></p> <p>Exercise Physiology, Institute of Human Movement Sciences, ETH Zurich, Switzerland</p> <p><i>Eur J Appl Physiol</i>, 101: 225-32, <b>2007</b></p>
B1.05	<p>Dempsey JA, Romer L, Rodman J, Miller J, Smith C</p> <p><b><u>Consequences of exercise-induced respiratory muscle work</u></b></p> <p>John Rankin Laboratory of Pulmonary Medicine, Department of Population Health Sciences, University of Wisconsin, Madison, USA</p>

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	<i>Respir Physiol Neurobiol</i> , 151:242-50, <b>2006</b>
B1.04	Romer L, Lovering AT, Haverkamp HC, Pegelow DF, Dempsey JA <u><b>Effect of inspiratory muscle work on peripheral fatigue of locomotor muscles in healthy humans</b></u> John Rankin Laboratory of Pulmonary Medicine, Department of Population Health Sciences, University of Wisconsin, Madison, USA <i>J Physiol</i> , 571: 425-439, <b>2006</b>
B1.03	Dempsey JA, Sheel AW, St. Croix CM, Morgan BJ <u><b>Respiratory influences on sympathetic vasomotor outflow in humans</b></u> John Rankin Laboratory of Pulmonary Medicine, Department of Population Health Sciences, University of Wisconsin, Madison, USA <i>Respir Physiol Neurobiol</i> , 130: 3-20, <b>2002</b>
B1.02	Seals DR <u><b>Robin Hood for the lungs? A respiratory metaboreflex that 'steals' blood from locomotor muscles</b></u> Department of Kinesiology and Applied Physiology, University of Colorado, Boulder, USA <i>J Physiol</i> , 537:1, <b>2001</b>
B1.01	Perret C, Spengler CM, Egger G, Boutellier U <u><b>Influence of endurance exercise on respiratory muscle performance</b></u> Exercise Physiology, Institute of Human Movement Sciences, ETH Zurich, Switzerland <i>Med Sci Sports Exerc</i> , 32(12): 2052 – 2058, <b>2000</b>
B1.00	Johnson BD, Babcock MA, Suman OE, Dempsey JA <u><b>Exercise-induced diaphragmatic fatigue in healthy humans</b></u> John Rankin Laboratory of Pulmonary Medicine, Department of Preventive Medicine, University of Wisconsin, Madison, USA <i>J Physiol</i> , 460: 385-405, <b>1993</b>

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## Atemmuskeltraining bei spezifischen Patientengruppen Respiratory Muscle Training in Specific Groups of Patients

### C1 Chronisch Obstruktive Lungenerkrankung (COPD) Chronic Obstructive Pulmonary Disease (COPD)

C1.03	Gosselink R, De Vos J, van den Heuvel SP, Segers J, Decramer M, Kwakkel G <b><u>Impact of inspiratory muscle training in patients with COPD: what is the evidence?</u></b> University Hospitals KU Leuven, Respiratory Rehabilitation and Respiratory Division, Belgium <i>Eur Respir J</i> , 37: 416-425, 2011
C1.02	Geddes EL, O'Brien K, Reid WD, Brooks D, Crowe J <b><u>Inspiratory muscle training in adults with chronic obstructive pulmonary disease: An update of a systematic review</u></b> School of Rehabilitation Science, Institute of Applied Health Science, McMaster University, Hamilton, Canada <i>Respir Med</i> 102: 1715-29, 2008
C1.01	Boutellier U <b>Wirkungen eines Atmungstrainings bei COPD unter spezieller Berücksichtigung des Atmungsausdauertrainings (SpiroTiger®)</b> Exercise Physiology, Institute of Human Movement Sciences, ETH Zurich, Switzerland <i>Übersichtsartikel</i> , 2007
C1.00	Scherer TA, Spengler CM, Owassapian D, Imhof E, Boutellier U <b><u>Respiratory muscle endurance training in chronic obstructive pulmonary disease</u></b> Department of Internal Medicine, Triemli Hospital, Zurich, Switzerland <i>Am J Respir Crit Care Med</i> , 162: 1709-1714, 2000

### C2 Cystische Fibrose – Cystic Fibrosis (CF)

C2.01	Sartori R, Barbi E, Poli F, Ronfani L, Marchetti F, Amaddeo A, Ventura A <b><u>Respiratory training with a specific device in cystic fibrosis: A prospective study</u></b> Clinica Pediatrica, University of Trieste, Italy <i>J Cyst Fibros</i> , 7 (4): 313 – 319, 2008
C2.00	Kamin W <b>Improved pulmonary function and increased sputum expectoration in CF patients after additional training with SpiroTiger® compared to supervised conventional physiotherapy alone</b> Pediatrics Pneumonology, University of Mainz, Germany <i>Eur Resp J</i> , 28, Suppl. 50, 7169, 2006

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**C3 Neuromuskuläre Erkrankungen – Neuromuscular Disorders**

C3.01	Rassler B, Marx G, Hallebach S, Kalischewski P, Baumann I <b><u>Long-term respiratory muscle endurance training in patients with myasthenia gravis: first results after four months of training</u></b> Carl Ludwig Institute of Physiology, University of Leipzig, Germany <i>Autoimmune Dis, Jul 7, 2011 [Epub]</i>
C3.00	Rassler B, Hallebach G, Kalischewski P, Baumann I, Schauer J, Spengler CM <b><u>The effect of respiratory muscle endurance training in patients with myasthenia gravis</u></b> Carl Ludwig Institute of Physiology, University of Leipzig, Germany <i>Neuromuscul Disord, 17 (5): 385-391, 2007</i>

**C4 Querschnittlähmung – Spinal Cord Injuries**

C4.03	Vergès S, Flore P, Nantermoz G, Lafaix PA, Wuyam B <b><u>Respiratory muscle training in athletes with spinal cord injury</u></b> Exercise Research Unit and REX-S Laboratory CHU and Joseph Fourier University, Grenoble, France <i>Int J Sports Med, 30: 1 - 7, 2009</i>
C4.02	Mueller G, Perret C, Hopman MTE <b><u>Effects of respiratory muscle endurance training on wheelchair racing performance in athletes with paraplegia: a pilot study</u></b> Swiss Paraplegic Research, Nottwil, Switzerland <i>Clin J Sport Med, 18: 85 - 88, 2008</i>
C4.01	Van Houtte S, Vanlandewijck Y, Kiekens C, Spengler CM, Gosselink R <b><u>Patients with acute spinal cord injury benefit from normocapnic hyperpnoea training</u></b> Department of Rehabilitation Sciences, Katholieke Universiteit Leuven, Belgium <i>J Rehabil Med, 40: 119 – 125, 2008</i>
C4.00	Mueller G, Perret C, Spengler CM <b><u>Optimal intensity for respiratory muscle endurance training in patients with spinal cord injury</u></b> Swiss Paraplegic Research, Nottwil, Switzerland <i>J Rehabil Med, 38: 381 – 386, 2006</i>

**C5 Krebs – Cancer**

C5.00	Hanusch K, Dörnhöfer M, Süsse B, Feldhaus S <b><u>Physiotherapeutisches Behandlungskonzept onkologischer Patienten während chemotherapeutischer Interventionen</u></b> Aeskulap Clinic, Brunnen, Switzerland
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	Zeitschrift Medizin für die Frau, 2: 42-46, 2007
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## C6 Schnarchen – Snoring

C6.00	<p>Furrer-Boschung E</p> <p><b>Training der Atmungsmuskulatur als Therapie des Schnarchens</b></p> <p>Department of Pneumology, Lindenhofspital Bern, Switzerland</p> <p><i>Dissertation Med. Fakultät der Universität Zürich (CH), 1997</i></p>
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## C7 Übergewicht – Overweight

C7.02	<p>Sartorio A, Agosti F, Patrizi A, Gattico A, Tringali G, Giunta M, Muller EE, Rigamonti AE</p> <p><b><u>GH and cortisol responses following an acute session of respiratory muscle endurance training in severely obese patients</u></b></p> <p>Istituto Auxologico Italiano, IRCCS, Experimental Laboratory for Auxo-endocrinological Research, Milan and Verbania, Italy</p> <p><i>Horm Metab Res, 45: 239-44, 2013</i></p>
C7.01	<p>Frank I, Briggs R, Spengler CM</p> <p><b><u>Respiratory muscles, exercise performance, and health in overweight and obese subjects</u></b></p> <p>Exercise Physiology, Institute of Human Movement Sciences, ETH Zurich, Switzerland</p> <p><i>Med Sci Sports Exerc, 43: 714-27, 2011</i></p>
C7.00	<p>Villiot-Danger JC, Villiot-Danger E, Borel JC, Pépin JL, Wuyam B, Vergès S</p> <p><b><u>Respiratory muscle endurance training in obese patients</u></b></p> <p>HP2 Laboratory / Joseph Fourier University / Grenoble University Hospital, France</p> <p><i>Int J Obes, 35: 692-9, 2011</i></p>

## C8 Nackenschmerzen – Neckpain

C8.01	<p>Wirt B, Amstalden M, Perk M, Boutellier U, Humphreys BK</p> <p><b><u>Respiratory Dysfunction in patients with chronic neck pain – influence of thoracic spine and chest mobility</u></b></p> <p>Institute for Human Movement Sciences and Sports, Department of Health Sciences and Technology, ETH Zurich, Switzerland</p> <p><i>Manual Therapy 19(5): 440-4, 2014</i></p>
C8.00	<p>H Obayashi, Y Urabe, Y Yamanaka, R Okuma</p> <p><b><u>Effects of Respiratory-Muscle Exercise on Spinal Curvature</u></b></p> <p>Graduate School of Health Science, Hiroshima University, Japan</p> <p><i>J Sport Rehabil. 21(1): 63-68, 2012</i></p>

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