Supplement 1 - Search strategy for MEDLINE database

(("Joints"[Mesh] OR articular[All Fields] OR joint*[All Fields] OR lymphatic[All Fields] OR "Lymphatic System"[Mesh] OR "Abdomen"[Mesh] OR abdominal[All Fields] OR abdomen[All Fields] OR "Thorax"[Mesh] OR thorax[All Fields] OR thoracic[All Fields] OR "Foot"[Mesh] OR foot[All Fields] OR pedal[All Fields] OR "Muscles"[Mesh] OR muscle*[All Fields] OR muscular*[All Fields] OR myofascial* OR technique* OR osteopathic* OR "manipulation, osteopathic"[MeSH Terms]) AND (pump*[All Fields] OR pompag*[All Fields])) OR pompag*[All Fields] NOT (proton OR insuline OR efflux OR on-pump OR off-pump) AND ("randomized controlled trials as topic"[MeSH Terms] OR (("randomized controlled trial"[Publication Type] OR "randomized controlled trials as topic"[MeSH Terms] OR "randomized controlled trial"[All Fields] OR "randomised controlled trial"[All Fields]) OR ("controlled clinical trial"[Publication Type] OR "controlled clinical trials as topic"[MeSH Terms] OR "controlled clinical trial"[All Fields])))

Supplement 2 – Details on the studies excluded from this review, with reasons

Author	**Title**
WRONG POPULATION (6)	
Creasy C. (2013)	Thoracic and Abdominal Lymphatic Pump Techniques Inhibit the Growth of S. pneumoniae Bacteria in the Lungs of Rats
Elnaggar, R. K. (2019)	Prospective Effects of Manual Diaphragmatic Release and Thoracic Lymphatic Pumping in Childhood Asthma
Hodge, L.M. (2010)	Lymphatic pump manipulation mobilizes inflammatory mediators into lymphatic circulation
Marty Knott, E. (2005)	Increased Lymphatic Flow in the Thoracic Duct During Manipulative Intervention
Schander, A. (2012)	Lymphatic pump manipulation mobilizes inflammatory mediators into lymphatic circulation
Schander, A. (2013)	Lymphatic Pump Treatment Repeatedly Enhances the Lymphatic and Immune Systems
INTERVENTION (42)	
Ajimsha M.S. (2013)	Effectiveness of myofascial release: Systematic review of randomized controlled trials
Arguisuelas M. (2017)	Effects of Myofascial Release in Nonspecific Chronic Low Back Pain
Basaran, S. (2009)	Breast Cancer Related Lymphedema and Conservative Therapies
Bergan, J. J (1998)	A comparison of compression pumps in the treatment of lymphedema
Bertelli, D. (2013)	Postural drainage and manual lymphatic drainage for lower limb edema in women with morbid obesity after bariatric surgery: A randomized controlled trial
Bjørnæs K. (2017)	The Effect of Osteopathic Manipulation Therapy (OMT) in Patients with Gastroesophageal Reflux Disease (GERD)
Brown, J. C. (2014)	Prescription and adherence to lymphedema self-care modalities among women with breast cancer-related lymphedema

Budgell B. (2006)	The effects of thoracic manipulation on heart rate variability: a controlled crossover trial
Castro-Sanchez A. (2011)	Benefits of Massage-Myofascial Release Therapy on Pain, Anxiety, Quality of Sleep,Espression, and Quality of Life in Patients with Fibromyalgia
Chen, Q. (2016)	Clinical efficacy of multi-pattern detumescence after total knee arthroplasty treated with acupoint massage and mild moxibustion
Crisostomo, R.S.D. (2015)	Influence of Manual Lymphatic Drainage on Health-Related Quality of Life and Symptoms of Chronic Venous Insufficiency: A Randomized Controlled Trial
Crisostomo, R.S.S. (2017)	Venous flow during manual lymphatic drainage applied to different regions of the lower extremity in people with and without chronic venous insufficiency: a cross-sectional study
De Carvalho, A. R. (2008)	Influence of manual techniques in the respiratory muscle strength, functional capacity and mobility of the costal grid of senior
De Macedo N. (2014)	The effect of manual therapy on lumbar disc protrusion
De Sousa (2014)	The myofascial release and the treatment of tension headache induced by trigger points
Devoogdt, N. (2011)	Is manual lymph drainage applied after axillary lymph node dissection for breast cancer effective to prevent arm lymphoedema?
Devoogdt, N. (2018)	Manual lymph drainage may not have a preventive effect on the development of breast cancer-related lymphoedema in the long term: a randomised trial
Dönmez, A.A. (2017)	The effectiveness of a clinical and home-based physical activity program and simple lymphatic drainage in the prevention of breast cancer-related lymphedema: A prospective randomized controlled study
Ergin, G. (2019)	Effectiveness of kinesio taping on anastomotic regions in patients with breast cancer-related lymphedema: A randomized controlled pilot study
Ezzo, J. (2015)	Manual lymphatic drainage for lymphedema following breast cancer treatment
Giles P. (2011)	Suboccipital Decompression Enhances Heart Rate Variability Indices of Cardiac Control in Healthy Subjects
Gurdal, S.O. (2012)	Comparison of intermittent pneumatic compression with manual lymphatic drainage for treatment of breast cancer-related lymphedema
Ha, K.J. (2017)	Synergistic effects of proprioceptive neuromuscular facilitation and manual lymphatic drainage in patients with mastectomy-related lymphedema
Heberle, A.B. (2014)	Assessment of techniques of massage and pumping in the treatment of breast engorgement by thermography
Henley C. (2008)	Osteopathic manipulative treatment and its relationship to autonomic nervous system activity as demonstrated by heart rate variability: a repeated measures study
Hruby R.J. (2006)	Avian influenza: an osteopathic component to treatment

Jonas, P. (2016)	Efficacy of the Stendo Pulsating suit in patients with leg lymphedema: a pilot randomized study
Khuman P. (2013)	Myofascial Release Technique in Chronic Lateral Epicondylitis: A Randomized Controlled Study
Lamba D. (2018)	Effect of myofascial release and stretching exercise on plantar fasciitis a randomize, comparative study
Marchuk C. (2010)	Repercusión de la maniobra lift de vejiga sobre el punto gatillo miofascial del músculo tibial anterior y de la apófi sis espinosa de lumbar 5
Martínez-Hurtado I. (2019)	Effects of diaphragmatic myofascial release on gastroesophageal reflux disease: a preliminary randomized controlled trial
McNeely, M.L. (2004)	The addition of manual lymph drainage to compression therapy for breast cancer related lymphedema: A randomized controlled trial
Molski, P. (2013)	Manual lymphatic drainage improves the quality of life in patients with chronic venous disease: A randomized controlled trial
Redjieski J. (1998)	Effect of osteopathic manipulative treatment on leght of stay for pancreatitis: a randomized pilot study
Smykla, A. (2013)	Effect of Kinesiology Taping on breast cancer-related lymphedema: A randomized single-blind controlled pilot study
Szuba, A. (2016)	Upper Extremity Lymphedema After Axillary Lymph Node Dissection: Prospective Lymphoscintigraphic Evaluation
Tastaban, E. (2020)	Role of intermittent pneumatic compression in the treatment of breast cancer-related lymphoedema: a randomized controlled trial
Theys, S. (2014)	Drainage pneumatique (i-press®) versus drainage manuel ide lymphoedeme secondaire du bras même compression, même benefice?
Theys, S. (2015)	I-Press® pneumatic drainage versus manual drainage in upper limb secondary lymphoedema same compression, same benefit?
Tsai, H.J. (2009)	Could Kinesio tape replace the bandage in decongestive lymphatic therapy for breast-cancer-related lymphedema? A pilot study
Uzkeser, H. (2013)	Intermittent pneumatic compression pump in upper extremity impairments of breast cancer-related lymphedema
Uzkeser, H. (2015)	Efficacy of manual lymphatic drainage and intermittent pneumatic compression pump use in the treatment of lymphedema after mastectomy: a randomized controlled trial
COMPARISON (2)	
Da Costa G. (2010)	Comparative study of a protocol of manual therapy applied in patients with cervical myofascial pain syndrome in two environments: water and ground
River W. (2008)	Short-Term Hematologic and Hemodynamic Effects of Osteopathic Lymphatic Techniques: A Pilot Crossover Trial
WRONG STUDY DESIGN (26)	
Alexander S. (2002)	Osteopathic manipulative treatment for postoperative pain
Almeida L.C. (2011)	The effect of myofascial technique of Pompage in the ankle passive stiffness

Antunes M.D. (2017)	Análise comparativa dos efeitos da massoterapia e pompage cervical na dor e qualidade de vida em mulheres
Bortolan A.S. (2009)	Fisioterapia respiratoria: uso de técnicas de reequilíbrio toracoabdominal e pompage
Cramer D. (2010)	Effect of Pedal Pump and Thoracic Pump Techniques on Intracranial Pressure
Da Silva D.A.M. (2017)	Treatment of mechanical cervicalgy by traction and pompage techniques: a case report
Da Silva D.A.M.(2019)	Efeito da pompage em pacientes com cefalea tensional
Dawood, R.S. (2013)	Effectiveness of Kinesio Taping versus cervical traction on mechanical neck dysfunction
De Sousa, R. C. (2014)	The myofascial release and the treatment of tension headache induced by trigger points
Franzini D. (2018)	Osteopathic Lymphatic Pump Techniques
Hodge, L.M. (2011)	Lymphatic pump treatment mobilizes leukocytes from the gut associated lymphoid tissue into lymph
Hodge, L.M. (2012)	Osteopathic lymphatic pump techniques to enhance immunity and treat pneumonia
Jarski R.W. (2000)	The effectiveness of osteopathic manipulative tretment as complementary therapy following surgery: a prospective, match-controlled outcome study
Kilgore T. (2012)	Adjuvant Lymphatic Osteopathic Manipulative Treatment in Patients With Lower-Extremity Ulcers: Effects on Wound Healing and Edema
Klucka G.(2012)	Effects of Abdominal Shape on Abdominal "Slosh" during Pedal Pump Osteopathic Manipulative Treatment
Lima, I.S. (2011)	Chest and neck mobilization effects on spirometric responses in healthy subjects
Mazzone N. (2008)	Temporomandibular joint disorders and maxillomandibular malformations: role of condylar "repositionin" plate
Noll, D.R. (2008)	Revisiting Castlio and Ferris-Swift's Experiments on Direct Splenic Stimulation in Patients With Acute Infectious Disease
Noll D.R. (2008)	Clinical and Research Protocol for Osteopathic Manipulative Treatment of Elderly Patients With Pneumonia
Noll, D.R. (2009)	The immediate effect of individual manipulation techniques on pulmonary function measures in persons with chronic obstructive pulmonary disease
Pandolfi (2017)	Efeito agudo da liberação miofascial cervical e do alongamento da cadeia posterior sobre a mobilidade da coluna vertebral: estudo randomizado
Patricio D. (2015)	The Effect of the Osteopathic Thoracic Lymphatic Pump Technique on Salivary

	Secretory Immunoglobulin A Levels in Adults withRecurrentUpper Respiratory Tract Complaints
Paesl (2014)	The effect of manual therapy on lumbar disc protrusion
Rudy A. (2018)	Osteopathic lymphatic pump treatment as an adjunctive therapy to protect agains infection and infammation
Schaverien, M.V. (2018)	Nonoperative Treatment of Lymphedema
Yao, S. (2014)	Osteopathic manipulative treatment as a useful adjunctive tool for pneumonia
FULL TEXT NOT AVAILABLE (5)	
Dugan, E.P. (2001)	Effect of lymphatic pump techniques on the immune response to influenza vaccine
Measel, J.W. (1982)	The effect of the lymphatic pump on the immune response: I. Preliminary studies on the antibody response to pneumococcal polysaccharide assayed by bacterial agglutination and passive hemagglutination
Mesina, J. (1998)	Transient Basophilia following the application of lymphatic pump techniques: a pilot study
Paul, RT. (1986)	Interferon levels in human subjects throughout a 24-hour period following thoracic lymphatic pump
Sales T.O.P.(2013)	Fisioterapia oncologica em pacientes mastectomizadas atraves de pompages e tecnicas cinesioterapicas