

Dokumentasjon av litteratursøk

Prosedyrens tittel eller arbeidstitel	Mekanisk hostestøtte – pasienter (voksne og barn) med sekretstagnasjon og nedsatt hostekraft
Spørsmål fra PICO-skjema	<ul style="list-style-type: none">• Kan bruk av hostemaskin redusere/forhindre akutt lungeproblematikk m/sekretstagnasjon hos barn med sekretstagnasjon og nedsatt hostekraft.• Kan bruk av hostemaskin redusere/forhindre akutt lungeproblematikk m/sekretstagnasjon hos inneliggende voksne pasienter med sekretstagnasjon og nedsatt hostekraft.• Kan bruk av hostemaskin med oscillerende funksjon redusere/forhindre akutt lungeproblematikk m/sekretstagnasjon hos voksne pasienter med sekretstagnasjon og nedsatt hostekraft.
Kontaktdetaljer prosedyremakere	Elisabeth Bø elisbo@ous-hf.no
Bibliotekar som utførte/veiledet søket:	Marie Isachsen marie.isachsen@medisin.uio.no
Dato for søk:	11. november 2020

Database/ressurs:	Fagprosedyrer som er lokalt utviklet og godkjent i de enkelte helseforetak (på nettsiden til Helsebiblioteket)
Søkehistorie og treff	Søkt i hele nettstedet: cough, hoste, hostestøtte Mekanisk hostestøtte – pasienter (voksne og barn) med sekretstagnasjon og nedsatt hostekraft Oslo universitetssykehus https://www.helsebiblioteket.no/fagprosedyrer/ferdige/hostemaskin-cough-assist-handtering-hos-inneliggende-voksne-pasienter-med-sekretstagnasjon-og-nedsatt-hosteevne Fysioterapi for forebygging av lungekomplikasjoner ved sternotomi, thoracotomi, laparotomi og thoracolaparotomi Oslo universitetssykehus http://www.helsebiblioteket.no/fagprosedyrer/ferdige/fysioterapi-for-forebygging-av-lungekomplikasjoner-ved-sternotomi-thoracotomi-laparotomi-og-thoracolaparotomi

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Database/ressurs:	Nasjonale retningslinjer fra Helsedirektoratet
Søkehistorie og treff:	<p>Sett gjennom liste</p> <p>Er disse aktuelle?</p> <p>Nasjonal faglig retningslinje for langtids mekanisk ventilasjon(LTMV) er en kortversjon av Nasjonal veileder for langtids mekanisk ventilasjon (LTMV), her er lenke til begge:</p> <p>Nasjonal faglig retningslinje for langtids mekanisk ventilasjon (LTMV) – 2012 Helsedirektoratet</p> <p>Nasjonal veileder for langtids mekanisk ventilasjon (LTMV) – 2012 Helsedirektoratet</p>

Database/ressurs:	Folkehelseinstituttet - rapporter og trykksaker
Søkehistorie og treff:	<p>Søkt i hele nettstedet: hostemaskin, hostestøtte</p> <p>Effekt av lungefunksjonstrening i akutfasen for pasienter med traumatisk, høy ryggmargsskade: en systematisk oversikt Folkehelseinstituttet - 2017 https://www.fhi.no/publ/2017/effekt-av-lungefunksjonstrening-i-akutfasen-for-pasienter-med-traumatisk-h/</p> <p>Øvrige aktuelle?:</p> <p>Effekt av langtids mekanisk ventilasjon (LTMV) del 1 – nevromuskulær sykdom eller svikt i sentral respirasjonsstyring Rapport fra Kunnskapsenteret - 2012 https://www.fhi.no/publ/2012/effekt-av-langtids-mekanisk-ventilasjon-ltmv-del-1---nevromuskular-sykdom-e/</p> <p>Effekt av langtids mekanisk ventilasjonsstøtte (LTMV) del 2 – brystvegglidelser eller adipositas hypoventilasjonssyndrom Rapport fra Kunnskapsenteret - 2012 https://www.fhi.no/publ/2012/effekt-av-langtids-mekanisk-ventilasjonsstotte-ltmv-del-2--brystvegglidels/</p> <p>Effekt av langtids mekanisk ventilasjon (LTMV) del 3 – kols og cystisk fibrose Rapport fra Kunnskapsenteret - 2014 https://www.fhi.no/publ/2014/effekt-av-langtids-mekanisk-ventilasjon-ltmv-del-3--kols-og-cystisk-fibrose/</p>

Database/ressurs:	Helsebibliotekets retningslinjebase
Søkehistorie og treff:	Sett gjennom emnegruppe Luftveier 0

Database/ressurs:	NICE Guildance (UK)
Søkehistorie og treff:	<p>Cough assist Mechanical coughing Insufflation Exsufflation m.fl.</p> <p>Motor neurone disease: assessment and management NICE guideline [NG42] Published date: February 2016 Last updated: July 2019 https://www.nice.org.uk/guidance/NG42</p> <p>Prospect Hospice (UK) Audit proposal to address cough augmentation for people with Motor Neurone Disease (MND) - a shared resource tool https://www.nice.org.uk/sharedlearning/audit-proposal-to-address-cough-augmentation-for-people-with-motor-neurone-disease-mnd-a-shared-resource-tool</p> <p>(I teksten: "The audit criteria were based upon the NICE guideline: NG42 Motor Neurone Disease: assessment and management")</p>

Database/ressurs:	Socialstyrelsen (Sve) - Nationella riktlinjer
Søkehistorie og treff:	<p>Sett gjennom liste</p> <p>Ser ikke ut til å omtale hostemaskin:</p> <p>Nationella riktlinjer för vård vid astma och kroniskt obstruktiv lungsjukdom (KOL). Socialstyrelsen - 2018 https://www.socialstyrelsen.se/regler-och-riktlinjer/nationella-riktlinjer/slutliga-riktlinjer/astma-och-kol/</p>

Database/ressurs:	Vårdhandboken (SE)
Søkehistorie og treff:	<p>Fulgt stien: Vård och behandling > Luftvägar > Andningsvård</p> <p>Fra lenken over finner dere bl.a disse:</p> <p>Andningsvård - Översikt</p>

	<p>Vårdhandboken (SE) https://www.vardhandboken.se/vard-och-behandling/luftvagar/andningsvard/oversikt/</p> <p>Andningsbefremjande tekniker Vårdhandboken (SE) https://www.vardhandboken.se/vard-och-behandling/luftvagar/andningsvard/andningsbeframjande-tekniker/</p> <p>Andningsbefremjande atgarder Vårdhandboken (SE) https://www.vardhandboken.se/vard-och-behandling/luftvagar/andningsvard/andningsbeframjande-atgarder/</p>
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Database/ressurs:	Sundhedsstyrelsen - National kliniske retningslinjer
Søkehistorie og treff:	<p>Sett gjennom emnegruppene Hjerne og nerver, og Lunger</p> <p>Finner ingen som omtaler hostemaskin/hostestøtte.</p>

Database/ressurs:	Center for kliniske retningslinjer (DK)
Søkehistorie og treff:	<p>Sett gjennom Godkente retningslinjer</p> <p>Klinisk retningslinje for fysioterapi til pasienter med Amyotrofisk Lateral Sclerose (ALS) - 2014 http://www.kliniskeretningslinjer.dk/media/346427/kr_fysioterapi_final_220414_.pdf</p>

Database/ressurs:	Nursing Reference Center
Søkehistorie og treff:	<p>Søkt i All text:</p> <p>"mechanical coughing" or "mechanical cough" or "cough assist" or coughassist or "assisted coughing" or "assisted cough" or "cough assistance" or "cough augmentation" or "Augmenting cough" or "Cough aid" or "oscillating device" or "oscillating devices" or "insufflation exsufflation" or "insufflator exsufflator" or "Mechanical in-exsufflator" or "Mechanical in-exsufflators" or "nippy clearway" or (pegaso and cough*) or ("airway clearance technique" and cough*) or ("airway clearance techniques" and cough*)</p> <p>Avgrenset til publikasjonstypene: Evidence Based Care Sheets og Skills.</p> <p><i>For å få fulltekstlenkene til å virke: det kan være nødvendig å kopiere og lime inn lenkene inn i nettleserens adressefelt (URL-feltet), istedet for bare å klikke på dem</i></p>

	<p><u>Evidence Based Care Sheets</u></p> <p>Assisted Coughing By: Mennella H, Schub T, Pravikoff D, CINAHL Nursing Guide, May 4, 2018 http://search.ebscohost.com/login.aspx?direct=true&db=nup&AN=T902979&site=nup-live&scope=site</p> <p><u>Skills</u></p> <p>Chest Physical Therapy: Performing -- an Overview By: Caple C, Schub E, Pravikoff D, CINAHL Nursing Guide, October 27, 2017 http://search.ebscohost.com/login.aspx?direct=true&db=nup&AN=T708111&site=nup-live&scope=site</p> <p>Chest Physical Therapy: Performing in Pediatric Patients -- an Overview By: Schub T, Oji O, Pravikoff D, CINAHL Nursing Guide, May 17, 2019 http://search.ebscohost.com/login.aspx?direct=true&db=nup&AN=T708113&site=nup-live&scope=site</p> <p>Postural Drainage: Performing By: Smith N, Schub T, Pravikoff D, CINAHL Nursing Guide, August 3, 2018 http://search.ebscohost.com/login.aspx?direct=true&db=nup&AN=T703848&site=nup-live&scope=site</p>
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Database/ressurs:	UpToDate
Søkehistorie og treff:	<p>Søkt separat på flere av disse kombinasjonene (hentet søkestrategi brukt til Nursing Reference Center Plus, og til Cochrane Database of Systematic Reviews)</p> <p>"mechanical coughing" or "mechanical cough" or "cough assist" or coughassist or "assisted coughing" or "assisted cough" or "cough assistance" or "cough augmentation" or "Augmenting cough" or "Cough aid" or "oscillating device" or "oscillating devices" or "insufflation exsufflation" or "insufflator exsufflator" or "Mechanical in-exsufflator" or "Mechanical in-exsufflators" or "nippy clearway" or (pegaso and cough*) or ("airway clearance technique" and cough*) or ("airway clearance techniques" and cough*)</p> <p>Her er noen av treffene:</p> <p>De to øverste har endret tittelen siden sist (men har samme lenke):</p> <p>Continuous noninvasive ventilatory support for patients with respiratory muscle dysfunction UpToDate. Waltham, MA. http://www.uptodate.com/contents/5116</p>

	<p>Duchenne and Becker muscular dystrophy: Management and prognosis UpToDate. Waltham, MA. http://www.uptodate.com/contents/6181</p> <p>Respiratory muscle weakness due to neuromuscular disease: Management UpToDate. Waltham, MA. http://www.uptodate.com/contents/5124</p> <p>Respiratory complications in the adult patient with chronic spinal cord injury UpToDate. Waltham, MA. http://www.uptodate.com/contents/5120</p> <p>Types of noninvasive nocturnal ventilatory support in neuromuscular and chest wall disease UpToDate. Waltham, MA. http://www.uptodate.com/contents/5114</p> <p>Practical aspects of nocturnal noninvasive ventilation in neuromuscular and chest wall disease UpToDate. Waltham, MA. http://www.uptodate.com/contents/5118</p> <p>Troubleshooting problems with noninvasive positive pressure ventilation UpToDate. Waltham, MA. http://www.uptodate.com/contents/5123</p> <p>Physiologic and pathophysiologic consequences of mechanical ventilation UpToDate. Waltham, MA. http://www.uptodate.com/contents/1628</p> <p>Spinal muscular atrophy UpToDate. Waltham, MA. http://www.uptodate.com/contents/6146</p>
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Database/ressurs:	<p>SveMed+</p> <p>OBS:</p> <p>Från och med januari 2020 uppdaterar Karolinska Institutet Universitetsbiblioteket inte längre SveMed+ med nytt material https://svemedplus.kib.ki.se/UpdateStatus.aspx</p> <p>Vurder derfor å søke aktuelle tidsskrifter på deres nettsider i tillegg.</p>
Søkehistorie og treff:	<p>1 exp:"Cough"</p> <p>2 cough*</p> <p>3 1 AND 2</p>

	<p>Blant treffene er:</p> <p>Midgren B. Hostmaskinen – en manick med drag. Lung & Allergi Forum. 2017;1:19-20.</p> <p>Hov B, Hellem E, Nilsson BB. Airstacking med bag til barn og unge med nevromuskulær sykdom: Med eller uten ventil? Fysioterapeuten. 2016;83(2):18-23. https://fysioterapeuten-ebblad.no/dm/fysioterapeuten-2-16/files/assets/basic-html/page-18.html</p> <p>Siewers V, Holmöy T, Frich JC. Experiences with using mechanical in-exsufflation in amyotrophic lateral sclerosis. European Journal of Physiotherapy. 2013;15(4):201-7. https://www.tandfonline.com/doi/full/10.3109/21679169.2013.834513</p>
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Database/ressurs:	The Cochrane Library (delbasen Cochrane Database of Systematic Reviews)
Søkehistorie og treff:	<p>Søkt i All text:</p> <p>"mechanical coughing" or "mechanical cough" or "cough assist" or coughassist or "assisted coughing" or "assisted cough" or "cough assistance" or "cough augmentation" or "Augmenting cough" or "Cough aid" or "oscillating device" or "oscillating devices" or "insufflation exsufflation" or "insufflator exsufflator" or "Mechanical in-exsufflator" or "Mechanical in-exsufflators" or "nippy clearway" or (pegaso and cough*) or ("airway clearance technique" and cough*) or ("airway clearance techniques" and cough*)</p> <p>Avgrenset til 2010-</p> <p>Finner bl.a de 18 systematiske oversiktene nedenfor.</p> <p>Tallene ved hver artikkel refererer til den unike Cochrane-ID-en.</p> <p>Hvis dere raskt vil se abstrakt, evt lenke videre til fulltekst: tast dette tallet inn i søkeboksen til PubMed: https://pubmed.ncbi.nlm.nih.gov/?otool=inouolib</p> <p>OBS!! Velg da den nyeste versjonen, eldre versjoner av Cochrane Reviews kommer også opp i PubMed.</p> <ol style="list-style-type: none"> CD006842 Morrison L, Milroy S. Oscillating devices for airway clearance in people with cystic fibrosis. Cochrane Database Syst Rev. 2020(4). CD011231 Wilson LM, Morrison L, Robinson KA. Airway clearance techniques for cystic

fibrosis: an overview of Cochrane systematic reviews. Cochrane Database Syst Rev. 2019(1).

3. **CD003147**

McIlwaine M, Button B, Nevitt SJ. Positive expiratory pressure physiotherapy for airway clearance in people with cystic fibrosis. Cochrane Database Syst Rev. 2019(11).

4. **CD010277**

Chaves GSS, Freitas DA, Santino TA, Nogueira P, Fregonezi GAF, Mendonça K. Chest physiotherapy for pneumonia in children. Cochrane Database Syst Rev. 2019(1).

5. **CD010297**

Freitas DA, Chaves GSS, Santino TA, Ribeiro CTD, Dias FAL, Guerra RO, et al. Standard (head-down tilt) versus modified (without head-down tilt) postural drainage in infants and young children with cystic fibrosis. Cochrane Database Syst Rev. 2018(3).

6. **CD011833**

Rose L, Adhikari NKJ, Leasa D, Fergusson DA, McKim D. Cough augmentation techniques for extubation or weaning critically ill patients from mechanical ventilation. Cochrane Database Syst Rev. 2017(1).

7. **CD004427**

Radunovic A, Annane D, Rafiq MK, Brassington R, Mustafa N. Mechanical ventilation for amyotrophic lateral sclerosis/motor neuron disease. Cochrane Database Syst Rev. 2017(10).

8. **CD002769**

Moran F, Bradley JM, Piper AJ. Non-invasive ventilation for cystic fibrosis. Cochrane Database Syst Rev. 2017(2).

9. **CD009595**

McCormack P, Burnham P, Southern KW. Autogenic drainage for airway clearance in cystic fibrosis. Cochrane Database Syst Rev. 2017(10).

10. **CD008380**

Luo F, Annane D, Orlikowski D, He L, Yang M, Zhou M, et al. Invasive versus non-invasive ventilation for acute respiratory failure in neuromuscular disease and chest wall disorders. Cochrane Database Syst Rev. 2017(12).

11. **CD011699**

Lee AL, Burge AT, Holland AE. Positive expiratory pressure therapy versus other airway clearance techniques for bronchiectasis. Cochrane Database Syst Rev. 2017(9).

12. **CD004873**

Roqué i Figuls M, Giné-Garriga M, Granados Rugeles C, Perrotta C, Vilaró J. Chest physiotherapy for acute bronchiolitis in paediatric patients between 0 and 24

	<p>months old. Cochrane Database Syst Rev. 2016(2).</p> <p>13. CD007862 McKoy NA, Wilson LM, Saldanha IJ, Odelola OA, Robinson KA. Active cycle of breathing technique for cystic fibrosis. Cochrane Database Syst Rev. 2016(7).</p> <p>14. CD001401 Warnock L, Gates A. Chest physiotherapy compared to no chest physiotherapy for cystic fibrosis. Cochrane Database Syst Rev. 2015(12).</p> <p>15. CD008351 Lee AL, Burge AT, Holland AE. Airway clearance techniques for bronchiectasis. Cochrane Database Syst Rev. 2015(11).</p> <p>16. CD001941 Annane D, Orlikowski D, Chevret S. Nocturnal mechanical ventilation for chronic hypoventilation in patients with neuromuscular and chest wall disorders. Cochrane Database Syst Rev. 2014(12).</p> <p>17. CD010044 Morrow B, Zampoli M, van Aswegen H, Argent A. Mechanical insufflation-exsufflation for people with neuromuscular disorders. Cochrane Database Syst Rev. 2013(12).</p> <p>18. CD008328 Osadnik CR, McDonald CF, Jones AP, Holland AE. Airway clearance techniques for chronic obstructive pulmonary disease. Cochrane Database Syst Rev. 2012(3).</p>
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Database/ressurs:	Ovid MEDLINE
Søkehistorie og treff:	<ol style="list-style-type: none"> 1 Mechanical coughing.ti,ab. 2 Mechanical cough.ti,ab. 3 Cough assist.ti,ab. 4 Coughassist.ti,ab. 5 Assisted coughing.ti,ab. 6 Assisted cough.ti,ab. 7 Cough assistance.ti,ab. 8 Cough augmentation.ti,ab. 9 Augmenting cough.ti,ab. 10 Cough aid.ti,ab. 11 oscillating device.ti,ab. 12 oscillating devices.ti,ab. 13 insufflation exsufflation.ti,ab. 14 insufflator exsufflator.ti,ab. 15 Mechanical in-exsufflator*.ti,ab.

- 16 nippy clearway.ti,ab.
- 17 (pegaso and cough*).ti,ab.
- 18 (airway clearance technique* and cough*).ti,ab.
- 19 or/1-18
- 20 limit 19 to yr="2015 -Current"
- 21 limit 20 to (danish or english or norwegian or swedish)
- 22 [cochrane*.jn.](#)
- 23 21 not 22 (**180 artikler**)

Kommentar:

Har her [fjernet systematiske oversikter fra Cochrane Database of Systematic Reviews](#) (se disse i den basen over).

Treffliste med 180 artikler:

Tallene ved hver artikkel refererer til den unike ID-en til artikkelen i PubMed/Medline.

Hvis dere raskt vil se abstrakt, evt lenke videre til fulltekst: tast dette tallet inn i søkeboksen til PubMed:

<https://pubmed.ncbi.nlm.nih.gov/?otool=inouolib>

1. **32991486**

Zhu T, Gu H, Vinturache A, Ding G, Lu M. Bronchiectasis with secondary pulmonary infection in a child: A case report. *Medicine*. 2020;99(39):e22475.

2. **32071855**

Yasokawa N, Tanaka H, Kurose K, Abe M, Oga T. Mechanical insufflation-exsufflation-related bilateral pneumothorax. *Respir Med Case Rep*. 2020;29:101017.

3. **32712584**

Volpe MS, Guimaraes FS, Morais CC. Airway Clearance Techniques for Mechanically Ventilated Patients: Insights for Optimization. *Respir Care*. 2020;65(8):1174-88.

4. **31909568**

Veldhoen ES, Verweij-van den Oudenrijn LP, Ros LA, Hulzebos EH, Papazova DA, van der Ent CK, et al. Effect of mechanical insufflation-exsufflation in children with neuromuscular weakness. *Pediatr Pulmonol*. 2020;55(2):510-3.

5. **32228015**

Spinou A. A Review on Cough Augmentation Techniques: Assisted Inspiration, Assisted Expiration and Their Combination. *Physiol Res*. 2020;69(Suppl 1):S93-S103.

6. **32163365**

Scala R, Ciarleglio G, Maccari U, Granese V, Salerno L, Madioni C. Ventilator Support and Oxygen Therapy in Palliative and End-of-Life Care in the Elderly. *Turk*. 2020;21(1):54-60.

<p>7. 32658385 Sawnani H, Mayer OH, Modi AC, Pascoe JE, McConnell K, McDonough JM, et al. Randomized trial of lung hyperinflation therapy in children with congenital muscular dystrophy. <i>Pediatr Pulmonol.</i> 2020;13:13.</p> <p>8. 32166088 Satici C, Lopez-Padilla D, Schreiber A, Kharat A, Swingwood E, Pisani L, et al. ERS International Congress, Madrid, 2019: highlights from the Respiratory Intensive Care Assembly. <i>ERJ open res.</i> 2020;6(1).</p> <p>9. 33082217 Sancho J, Bures E, Ferrer S, Lahosa C, Signes-Costa J, Servera E. Mechanical Insufflation-Exsufflation With Oscillations in Amyotrophic Lateral Sclerosis With Home Ventilation via Tracheostomy. <i>Respir Care.</i> 2020;20:20.</p> <p>10. 31719190 Sancho J, Bures E, Ferrer S, Bondia E, Servera E. Usefulness of Oscillations Added to Mechanical In-Exsufflation in Amyotrophic Lateral Sclerosis. <i>Respir Care.</i> 2020;65(5):596-602.</p> <p>11. 32029825 Ren S, Li W, Wang L, Shi Y, Cai M, Hao L, et al. Numerical Analysis of Airway Mucus Clearance Effectiveness Using Assisted Coughing Techniques. <i>Sci Rep.</i> 2020;10(1):2030.</p> <p>12. 31792719 Racca F, Vianello A, Mongini T, Ruggeri P, Versaci A, Vita GL, et al. Practical approach to respiratory emergencies in neurological diseases. <i>Neurol Sci.</i> 2020;41(3):497-508.</p> <p>13. 32276665 Pradat PF, Bernard E, Corcia P, Couratier P, Jublanc C, Querin G, et al. The French national protocol for Kennedy's disease (SBMA): consensus diagnostic and management recommendations. <i>Orphanet J Rare Dis.</i> 2020;15(1):90.</p> <p>14. 32392656 Park J, Kang SW, Choi WA, Lee Y, Cho HE. Precise Pulmonary Function Evaluation and Management of a Patient With Freeman-Sheldon Syndrome Associated With Recurrent Pneumonia and Chronic Respiratory Insufficiency. <i>Ann.</i> 2020;44(2):165-70.</p> <p>15. 32671000 Marpole R, Blackmore AM, Gibson N, Cooper MS, Langdon K, Wilson AC. Evaluation and Management of Respiratory Illness in Children With Cerebral Palsy. <i>Front.</i> 2020;8:333.</p> <p>16. 32746877 Longhini F, Bruni A, Garofalo E, Ronco C, Gusmano A, Cammarota G, et al. Chest physiotherapy improves lung aeration in hypersecretive critically ill patients: a pilot randomized physiological study. <i>Crit Care.</i> 2020;24(1):479.</p> <p>17. 32160809</p>

Lommatzsch ST. Infection prevention and chronic disease management in cystic fibrosis and noncystic fibrosis bronchiectasis. *Ther Adv Respir Dis.* 2020;14:1753466620905272.

18. **33111497**

Lavie M, Diamant N, Cahal M, Sadot E, Be'er M, Fattal-Valevski A, et al. Nusinersen for spinal muscular atrophy type 1: Real-world respiratory experience. *Pediatr Pulmonol.* 2020;28:28.

19. **32499207**

Lan CC, Lai SR, Chien JY. Nonpharmacological treatment for patients with nontuberculous mycobacterial lung disease. *J Formos Med Assoc.* 2020;119 Suppl 1:S42-S50.

20. **32095889**

Kotwal N, Shukla PJ, Perez GF. Peak Cough Flow in Children with Neuromuscular Disorders. *Lung.* 2020;198(2):371-5.

21. **33027229**

Knudtzen FC, Sprehn M, Vestbo J, Johansen IS. Mechanical insufflation/exsufflation compared with standard of care in patients with pneumonia: A randomised controlled trial. *Eur J Anaesthesiol.* 2020;37(11):1077-80.

22. **32620174**

Kawaguchi A, Bernier G, Lacroix J, El Salti S, Cheng MP, Lee TC, et al. Comparison of two methods to clear the airways of critically ill children and adults with COVID-19 infection: a structured summary of a study protocol for a pilot randomized controlled trial. *Trials.* 2020;21(1):610.

23. **33020101**

Kawaguchi A, Bernier G, Adler A, Emeriaud G, Jouviet PA. Incremental effect of non-invasive oscillating device on chest physiotherapy in critically ill children: a cross-over randomised trial. *BMJ Open.* 2020;10(10):e038648.

24. **32250872**

Imam JS, Duarte AG. Non-CF bronchiectasis: Orphan disease no longer. *Respir Med.* 2020;166:105940.

25. **31856413**

Hov B, Andersen T, Toussaint M, Fondenes O, Carlsen KCL, Hovland V. Optimizing expiratory flows during mechanical cough in a pediatric neuromuscular lung model. *Pediatr Pulmonol.* 2020;55(2):433-40.

26. **32776649**

Helper N, Kodesh E, Sokol G, Hakimi R, Vilozni D, Efrati O. The benefits of mechanical insufflator-exsufflator compared to autogenic drainage in adults with cystic fibrosis. *Pediatr Pulmonol.* 2020;10:10.

27. **33144386**

Gonzalez-Bellido V, Velaz-Baza V, Blanco-Moncada E, Del Carmen Jimeno Esteo M,

Cuenca-Zaldivar JN, Colombo-Marro A, et al. Immediate Effects and Safety of High-Frequency Chest Wall Compression Compared to Airway Clearance Techniques in Non-Hospitalized Infants With Acute Viral Bronchiolitis. *Respir Care*. 2020;03:03.

28. **32350088**
Franks LJ, Walsh JR, Hall K, Morris NR. Measuring airway clearance outcomes in bronchiectasis: a review. *Eur*. 2020;29(156):30.

29. **32556323**
Felten-Barentsz KM, van Oorsouw R, Klooster E, Koenders N, Driehuis F, Hulzebos EHJ, et al. Recommendations for Hospital-Based Physical Therapists Managing Patients With COVID-19. *Phys Ther*. 2020;100(9):1444-57.

30. **32007647**
Duarte AC, Porter J, Leandro MJ. Bronchiectasis in rheumatoid arthritis. A clinical appraisal. *Joint Bone Spine*. 2020;87(5):419-24.

31. **32237239**
Driessen AK, McGovern AE, Behrens R, Moe AAK, Farrell MJ, Mazzone SB. A role for neurokinin 1 receptor expressing neurons in the paratrigeminal nucleus in bradykinin-evoked cough in guinea-pigs. *J Physiol*. 2020;598(11):2257-75.

32. **32606074**
Dale CM, McKim D, Amin R, Carbone S, Fisher T, Goldstein R, et al. Education Experiences of Adult Subjects and Caregivers for Mechanical Insufflation-Exsufflation at Home. *Respir Care*. 2020;30:30.

33. **33027217**
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