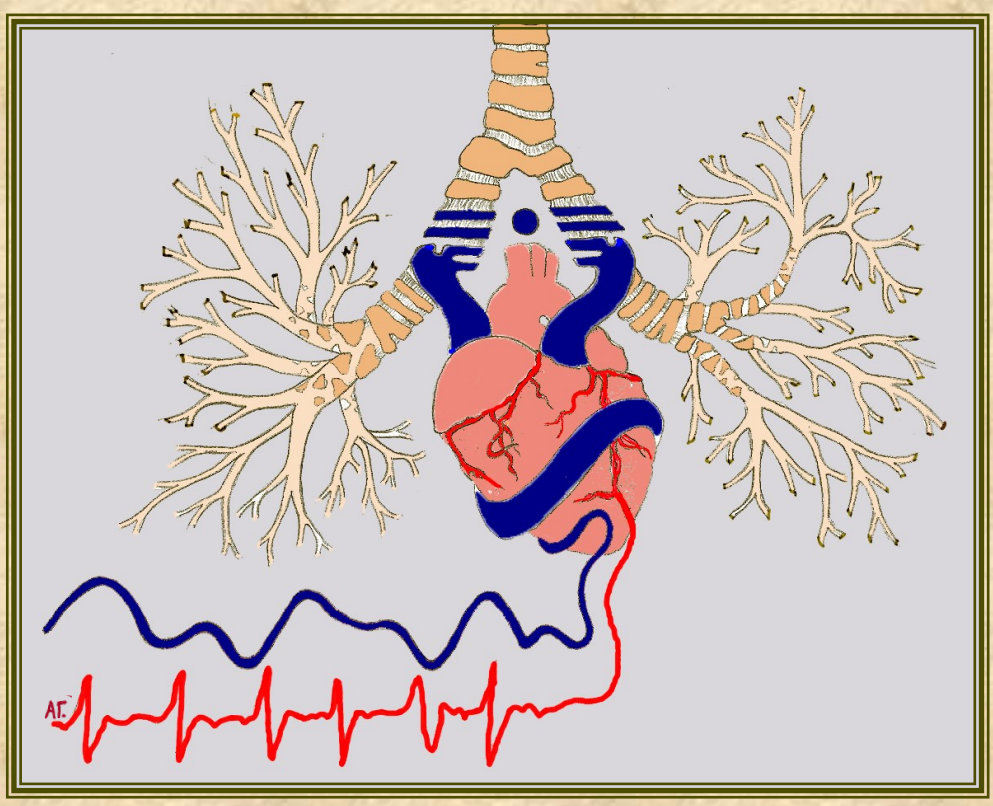
Καρδιοαγγειακή & Αναπνευστική Φυσικοθεραπεία - Αποκατάσταση

ΕΠΙΣΗΜΗ ΕΚΔΟΣΗ ΤΟΥ ΕΤΚΑΦΑ ΠΣΦ



36ο ΕΝΗΜΕΡΩΤΙΚΟ ΔΕΛΤΙΟ - 14ο Τεύχος

Οκτώβριος - Νοέμβριος - Δεκέμβριος 2023

ΑΦΙΕΡΩΜΑ: ERS, ΠΗΓΑΜΕ-ΕΙΔΑΜΕ

-ΣΑΣ ΜΕΤΑΦΕΡΟΥΜΕ

ΠΕΡΙΟΔΙΚΟ ΕΤΚΑΦΑ

ΠΛΗΡΟΦΟΡΙΕΣ ΕΤΚΑΦΑ - ΤΟ ΠΕΡΙΟΔΙΚΟ ΜΑΣ

Αρ. Τεύχους 14 - Οκτώβριος-Νοέμβριος-Δεκέμβριος 2023

ΠΛΗΡΟΦΟΡΙΕΣ ΕΠΙΣΤΗΜΟΝΙΚΟΥ ΤΜΗΜΑΤΟΣ ΕΤΚΑΦΑ - ΠΣΦ

ΠΑΝΕΛΛΗΝΙΟΣ ΣΥΛΛΟΓΟΣ ΦΥΣΙΚΟΘΕΡΑΠΕΥΤΩΝ - ΠΣΦ

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ΕΤΚΑΦΑ
Επιστημονικό Τμήμα Καρδιοαγγειακής και Αναπνευστικής Φυσικοθεραπείας - Αποκατάστασης

Σκοπός Επιστημονικού Τμήματος

Η προαγωγή της κλινικής εφαρμογής, αναγνώρισης, έρευνας και εκπαίδευσης της Καρδιοαγγειακής και Αναπνευστικής Φυσικοθεραπείας -Αποκατάστασης στην Ελλάδα

ΠΛΗΡΟΦΟΡΙΕΣ ΤΕΥΧΟΥΣ

- **ΟΜΑΔΑ ΣΥΝΤΑΞΗΣ**
  ΚΩΝΣΤΑΝΤΙΝΟΣ ΓΡΗΓΟΡΙΑΔΗΣ
  ΑΝΝΑ ΧΡΗΣΤΑΚΟΥ
  ΕΙΡΗΝΗ ΠΑΤΣΑΚΗ
  ΑΘΗΝΑ ΣΕΪΤΑΡΙΔΗ
  ΠΕΤΡΟΣ ΑΥΤΖΟΓΛΟΥ
- **ΕΠΙΜΕΛΕΙΑ ΤΕΥΧΟΥΣ**
  ΚΩΝΣΤΑΝΤΙΝΟΣ ΓΡΗΓΟΡΙΑΔΗΣ
  ΥΠΕΥΘΥΝΟΣ ΔΗΜ. ΣΧΕΣΕΩΝ ΕΤΚΑΦΑ
- **ΣΕΛΙΔΟΠΟΙΗΣΗ**
  ΚΩΝΣΤΑΝΤΙΝΟΣ ΓΡΗΓΟΡΙΑΔΗΣ
  ΥΠΕΥΘΥΝΟΣ ΔΗΜ. ΣΧΕΣΕΩΝ ΕΤΚΑΦΑ
- **ΕΞΩΦΥΛΛΟ**
  ΑΝΝΑ ΓΡΗΓΟΡΙΑΔΟΥ
  ΦΥΣΙΚΟΘΕΡΑΠΕΥΤΡΙΑ $MSc_{(C)}$ & ΜΕΛΟΣ ΤΟΥ ΕΠΙΜΕΛΗΤΗΡΙΟΥ ΕΙΚΑΣΤΙΚΩΝ ΤΕΧΝΩΝ ΕΛΛΑΔΟΣ

ΛΙΓΑ ΛΟΓΙΑ ΓΙΑ ΤΟ ΠΕΡΙΟΔΙΚΟ ΜΑΣ

Σας καλωσορίζουμε στη διαδικτυακή έκδοση του 12ου Τεύχους του Περιοδικού μας και σας ευχαριστούμε για την ενθάρρυνσή σας στην προσπάθεια που καταβάλλουμε για την κατά το δυνατό καλύτερη ενημέρωση των Μελών του Επιστημονικού μας Τμήματος.

Η Ομάδα Σύνταξης

Στείλτε μας τις προτάσεις σας

Η Ομάδα Σύνταξης καλεί όλα τα μέλη του Επιστημονικού μας Τμήματος να διατυπώσουν τις σκέψεις και τις ιδέες τους σχετικά με τη θεματολογία του Περιοδικού.

Θα χαρούμε να συνεργαστούμε μαζί σας!

Στείλτε μας email στο: info@tkafa.gr

Υιοθετείστε μια στήλη!

Καλούνται όλα τα Μέλη του Επιστημονικού Τμήματος ΚΑΦΑ που επιθυμούν, να συμμετάσχουν ενεργά στην αρθρογραφία του ηλεκτρονικού μας εντύπου υιοθετώντας μια μόνιμη στήλη.

Προϋπόθεση: εγγραφή στο ΕΤΚΑΦΑ

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Διαδικασία εγγραφής στο ΕΤΚΑΦΑ

Στο κεντρικό menu της ιστοσελίδας του ΠΣΦ, https://www.psf.org.gr, επιλέξτε το πεδίο ***«Είσοδος Μελών»*** και δώστε τα στοιχεία που ζητούνται. Όταν εμφανιστεί η καρτέλα με τα στοιχεία σας, στο πεδίο ***«Menu Επιλογών Μέλους»*** επιλέξτε ***«Συμμετοχή σε Επιστημονικά Τμήματα»*** και συμπληρώστε την Αίτηση του **Επιστημονικού Τμήματος Καρδιοαγγειακής και Αναπνευστικής Φυσικοθεραπείας - Αποκατάστασης.**

ΠΕΡΙΕΧΟΜΕΝΑ ΤΕΥΧΟΥΣ

FACEBOOK ΕΤΚΑΦΑ

Αρ. Τεύχους 14 - Οκτώβριος-Νοέμβριος-Δεκέμβριος 2023

ΚΑΝΟΝΙΣΜΟΣ ΛΕΙΤΟΥΡΓΙΑΣ ΤΗΣ ΟΜΑΔΙΚΗΣ ΣΕΛΙΔΑΣ FACEBOOK

Photo
Brett Jordan

ΑΝΑΛΥΤΙΚΑ

Την 19 Μαρτίου 2022 αναρτήθηκε στην σελίδα Facebook του ΕΤΚΑΦΑ ένας γενικός κανόνας προκειμένου να γίνει δεκτή μια ανάρτηση. Θεωρούμε απαραίτητο να τον αναρτήσουμε και στο περιοδικό μας προκειμένου να γίνει ευρύτερα γνωστός ο κανονισμός αυτός στα μέλη μας.

Παρακάτω παρατίθενται οι ενότητες που θα πρέπει να πληρούν οι αναρτήσεις:

Οι αναρτήσεις θα πρέπει να

1. είναι σχετικές με το αντικείμενο του ΕΤΚΑΦΑ
2. προάγουν την επιστήμη της Φυσικοθεραπείας
3. συμβάλουν στην ενημέρωση και κατάρτισή των μελών του ΕΤΚΑΦΑ
4. είναι κόσμιες και να μην αναφέρουν προσβλητικά ή υβριστικά σχόλια για οποιοδήποτε φυσικό πρόσωπο.
5. μην έχουν πολιτικό ή θρησκευτικό περιεχόμενο.
6. μην έχει πέσει στην αντίληψή της ΣΕ ότι περιέχουν ψευδή ή αμφισβητούμενα στοιχεία από την επιστημονική κοινότητα.
7. είναι σύντομες και περιεκτικές όπως αρμόζει σε μια τέτοιου είδους ανάρτηση
8. μην καταπατούν πνευματικά δικαιώματα δημιουργών
9. μην καταπατούν προσωπικά δεδομένα
10. μην προβάλουν αποκλειστικά φυσικά πρόσωπα ή εμπορικά προϊόντα χωρίς οποιαδήποτε άλλη χρησιμότητα στην επιστημονική κοινότητα
11. μην περιλαμβάνουν ήδη δημοσιευμένο λύμα

Τέλος στο Participants Requests του Facebook για να γίνει αποδεκτή μια αίτηση μέλους θα πρέπει να υπάρχει αντιστοιχία του ονοματεπίθετου στην λίστα φυσικοθεραπευτών του ΠΣΦ.

Τ.Κ.Α.Φ.Α.

ΑΦΙΕΡΩΜΑ ERS

Αρ. Τεύχους 14 - Οκτώβριος-Νοέμβριος-Δεκέμβριος 2023

ERS Πήγαμε - Είδαμε - Σας μεταφέρουμε

Οι καλύτερες περιλήψεις για την αναπνευστική Φυσικοθεραπεία

1. Paediatric MI-E therapy; three treatment strategies' impact on comfort and cough flows

B. Hov (Oslo, Norway), T. Andersen (Bergen, Norway), M. Toussaint (Brussels, Belgium), C. Brunborg (Oslo, Norway), I. Mikalsen (Stavanger, Norway), M. Vollsæter (Bergen, Norway), V. Hovland (Oslo, Norway)

Mechanical insufflation-exsufflation (MI-E) is used to augment cough in children with neurodisability. The optimal settings are unknown. We aimed to determine the superiority between three MI-E strategies regarding comfort and cough flows. This multicentre, crossover, randomised trial was conducted at four regional hospitals in Norway. Children with neurodisability using long-term MI-E via mask were enrolled and, in a randomised order, tested three different MI-E settings strategies: (In-/exsufflation pressure [cmH2O] / In vs. exsufflation time) A-symmetric (±50, In=Ex) B-asymmetric (+25-30)/-40, In>Ex) C-personalised - as set by their therapist The primary outcomes were user-reported comfort on a Visual Analog Scale (VAS)(0=max) and peak cough flow (PCF)(l/min) measured by a p neumotachograph in the MI-E circuit. VAS comfort scores of <4, 4-6, 7-10 was defined as mild moderate or strong discomfort, respectively. PCF of 160 l/min was used as therapeutic threshold in cildren above 12 years. We recruited 74 children mean (SD) age 9.4 (5.3) years (range 0.6 to 17.9), and analysed 218 MI-E sequences. The mean (SD) VAS comfort score was 4.7 (2.96), 2.9 (2.44) and 3.2 (2.46) for strategies A, B and C, respectively (A versus B and C, p=0.0001). The mean (SD) PCF registered during strategies A, B and C were 203 (46.87), 171 (49.44), and 166 (46.05) l/min, respectively (A vs B and C, p<0.0001). An asymmetric or personalised MI-E treatment strategy resulted in superior comfort scores, but lower peak cough flows than a symmetric approach utilising symmetric high pressures. All three strategies generated cough flows above the terapeutic threshold. The children rated the MI-E as slightly to moderately uncomfortable.

2. Heart rate and oxygen consumption post-exercise recovery kinetics before and after eight weeks of resistance training in people with COPD versus matchedcontrols

A. Nyberg (Umeå, Sweden), J. Buekers (Barcelona, Spain), J. De Brandt (Umeå, Sweden), L. Desroches (Quebec, Canada), D. Saey (Quebec, Canada), M. Martin (Quebec, Canada), F. Maltais (Quebec, Canada)

Introduction: The impact of resistance training on heart rate (HR) and oxygen consumption (V̇ O2) kinetics during post-exercise recovery, which informs on the physiological adaptation to training, is uncertain.
Method: We analyzed the HR and V̇ O2 kinetics during the recovery periods following six low load/high repetition resistance exercises (LLHR-RT) in 23 people with COPD (GOLD stage III/IV) before and after an 8-week LLHR-RT intervention. Baseline findings of 15 age- and sex-matched healthy participants served as controls.
Results: Recovery after 60s and 120s, and the shape (κ) of the HR but not the V̇ O2 recuperation curve was different between COPD and controls (P<0.05) at baseline. After the 8-week LLHR-RT intervention, HR and V̇ O2 end-of-exercise and absolute values at 60s and 120s were significantly reduced in COPD for the same total workload (Fig 1).
Conclusion: These findings suggest that 60-120s recovery during LLHR-RT seems insufficient in COPD to enablean HR and V̇ O2 recovery comparable to matched healthy controls. However, an 8-week intervention canimprove the recovery kinetics of both HR and V̇ O2 in COPD.

3. Effects of intrapulmonary percussive ventilation in critical care patients: A randomised controlled trial

A. Hassan (Kingswood, NSW, Australia), F. Fitzsimons (Kingswood, NSW, Australia), D. Shetty (Kingswood,
NSW, Australia), R. Evans (Kingswood, NSW, Australia), J. Alison (Camperdown, NSW, Australia), S. Huang
(Kingswood, NSW, Australia), M. Milross (Camperdown, NSW, Australia)

Introduction: Intrapulmonary percussive ventilation (IPV) has been used in critical care to promote airway clearance, prevent or reverse atelectasis and improve gas exchange in various clinical conditions. However, research evidence to support the use of IPV is weak and conflicting.
Aims: To evaluate the effectiveness of IPV intervention in non-ventilated critically ill patients in reducing ICU length of stay (ICU-LOS), preventing pulmonary complications, and reducing readmission rates.
Methods: Non-ventilated, critically ill patients with impaired respiratory function were randomised to receive either IPV (using Metaneb device) or routine chest physiotherapy (CPT) twice daily for the duration of ICU stay. Outcome measures included ICU -LOS, radiological atelectasis scores (RAS), adverse events during treatment, ICU readmissions and mortality. Data were analysed using t-test and two-way ANCOVA.
Results: 106 patients were randomised, of which 100 completed the study (IPV=51, CPT=49). ICU-LOS was significantly shorter in the IPV group compared to the CPT group (median = 3.4 [IRQ 1.96 – 5.95] vs 5.49 [IRQ 3.41– 10.9]days); mean difference was 0.6 (CI=0.44 – 0.81, p= 0.0012) days. RAS (score: 0-4) improved (reduced) significantly post-intervention in both groups (IPV= -0.49 [CI=0.14, 0.81], CPT= - 0.5 [CI=0.08, 0.91]), with no difference between groups (p=0.65). There were no between groups differences in ICU readmission rate or
mortality and no adverse events in either groups.
Conclusions: IPV intervention resulted in shorter ICU-LOS. Improvements in pulmonary complications were seen
in both IPV and CPT groups. No adverse events were recorded during IPV or CPT intervention.

4. Longtime follow-up on exercise capacity and quality of life in people with Cystic Fibrosis receiving Elexacaftor, Tezacaftor and Ivacaftor – a Copenhagen cohorte

L. Katrine Drasbæk Philipsen (Copenhagen, Denmark)

Background: People with Cystic Fibrosis (PwCF) have decreased exercise capacity and quality of life (HRQoL).Since 2020 third generation CF transmembrane conductance regulator modulator, Elexacaftor, Tezacaftor, Ivacaftor (ETI) was approved for PwCF from the age of 12 in Denmark. The results of the treatment over short time show among other increased FEV_1, HRQoL and BMI. The effect regarding the new treatment is to date not fully evaluated especially not regarding exercise capacity. Objective: To evaluate exercise capacity using gold standard objective measure, Cardio Pulmonary Exercise Test (CPET) and HRQoL in a cohort of Danish PwCF after more than a year of receiving treatment with ETI. Method: Retrospective cohorte including people with CFfrom the age of 12, receiving ETI for more than a year. CPET and CFQ-R is performed at baseline and follow-up.
Statistics are presented including paired sample t-test. VO_2 peak (ml/kg/min) and VO_2 peak (ml/min) and scores from CFQ-R will be evaluated. Results: 156 PwCF performed CPET. Mean follow-up time 15 month (10-22 month), median age 28, 51% female and 59% with chronic infections. Mean BMI and FEV_1% pred at baseline 22.0 and 74% respectively. Mean VO_2 peak (ml/kg/min) at baseline and follow-up 31.9 and 32.5 respectively. Mean diff 0.6, 95% CI [0.008; 2.00], p = 0.05. Mean VO_2 peak (ml/min) at baseline and follow-up 1972.5 a nd 2138.3respectively, mean diff 165.7, 95% CI [124.39; 207.12] p < 0.001. Conclusion: Significant change was shownafter 15 month of ETI treatment. The results are preliminary and more results will be presentet ar ERS.

5. Effects of core stabilization exercises on respiratory muscle strength in children with cystic fibrosis

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Turkey), E. Calik-Kutukcu (Ankara, Turkey), N. Emiralioglu (Ankara, Turkey), E. Yalcin (Ankara, Turkey), U. Ozcelik
(Ankara, Turkey), N. Kiper (Ankara, Turkey), D. Inal-Ince (Ankara, Turkey)

Background: Respiratory muscle dysfunction can occur due to hyperinflation and increased airway resistance in cystic fibrosis (CF) patients.
Aims and Objectives: The purpose of this study was to evaluate core stabilization exercise on respiratory muscle strength in CF.
Methods: Sixteen children with CF were included in the study. Patients were randomly allocated to either the core stabilization exercise group (EG) (n=8) or the control group (CG) (n=8). The exercise protocol included breathing exercises, sit-ups, plank, bridge, and lateral plank. Exercises were applied three days per week for eight weeks with a physiotherapist remotely. The importance of physical activity and recommendations was provided to the
control group. Respiratory muscle strength was assessed using maximal inspiratory and expiratory pressures (MIP and MEP, respectively) and sniff nasal inspiratory pressure (SNIP).
Results: Childrens' mean age were 10.8±1.7 years. MIP, MEP, and SNIP values were similar between the two groups at the baseline (p>0.05). MEP (ΔEG=14.3±8.4 cm H2O; ΔCG=-6.5±19.4 cm H2O) and SNIP (ΔEG=22.1±17.1 cm H2O; ΔCG=-2.1±23.8 cm H2O) values increased in the exercise training group compared to the control group at the end of the study (p=0.01; p=0.03 respectively) .
Conclusions: Core stabilization exercises improve respiratory muscle strength. These exercises focus on lumbopelvic stability, which includes various muscles such as abdominal muscles, lower and middle back muscles,

6. Comparison of respiratory muscle activations in different dyspnea reduction positions in individuals with COPD

C. TOPCUOĞLU (ANKARA, Turkey), E. Tütün Yümin (BOLU, Turkey), M. Sağlam (ANKARA, Turkey), T. Çankaya (BOLU, Turkey), S. Konuk (BOLU, Turkey), E. Özsarı(BOLU, Turkey), M. Başol Göksülük (KAYSERİ, Turkey)

Introduction: In individuals with COPD, respiratory muscle activations increase to maintain gas exchange and respiratory mechanics and the perception of dyspnea occurs with increased workload. It was aimed to compare respiratory muscle activations in different dyspnea reduction positions and which position can be more effective in reducing dyspnea.
Methods: Sixteen male individuals (60.69±6.92 years) with COPD were included in the study. Pulmonary functions were measured by pulmonary function test and muscle activations by surface electromyography (EMG). Muscle activations were evaluated in the diaphragm, scalene, sternocleidomastoid, and parasternal muscles and were used as the percentage of maximum voluntary contraction. The evaluation was performed in seated erect, sit leaning forward, sit leaning forward at table, forward lean with back against wall, stand leaning forward, supine, high and side lying positions.
Results: There was no significant difference in muscle activations between sit leaning forward and sit leaning forward at table (p>0.05); however, these two positions were lower than the other positions (p0.05).
Conclusions: Sit leaning forward and sit leaning forward at table may be more beneficial than other positions in reducing the perception of dyspnea by reducing respiratory muscle activations in individuals with COPD.

7. Inspiratory muscle training for dyspnea management in people with unilateral diaphragm dysfunction

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Unilateral diaphragm dysfunction (UDD) is an important underdiagnosed cause of dyspnea. Inspiratory muscle training (IMT) is the only conservative treatment for UDD, but the clinical utility and mechanisms of improvement are unknown. We characterized the effects of IMT on respiratory muscle function, activity-related dyspnea, and exercise tolerance in people with UDD. 15 people (73% male, 61±8yrs) were randomized to a 6-month IMT (45±6% of maximal inspiratory mouth pressure (PI,max), n=10) or sham program (6±2% PI,max , n=5) consisting of 30 breaths against an external load twice daily. UDD was confirmed by magnetic phrenic nerve stimulation and persisted throughout the intervention. PI,max was measured using a mouth pressure device and maximal transdiaphragmatic pressure during a sniff manuever (Pdi,sniff) with a dual-balloon esophageal catheter. Change in dyspnea was captured by the Transitional Dyspnea Index (TDI) and exercise tolerance by constant load cycle tests performed pre- and post-training. The IMT group completed an average of 330 sessions (92% prescribed) and progressed to 62±23% PI,max . The sham group completed an average of 310 sessions (86%) without progression. PI,max and Pdi,sniff improved more with IMT vs. sham (p=0.003 and p=0.046, respectively). Improvements in TDI score and cycle endurance time were also greater with IMT vs. sham (p=0.008 and p=0.04, respectively). IMT yielded meaningful improvements in respiratory muscle function, dyspnea, and exercise tolerance in people with UDD. The benefits were not related to improvement in isolated diaphragm function, but may reflect increased strength and/or better coorindation of the extra-diaphragmatic inspiratory muscles.

8. Exertional Desaturation During the 6-Minute Walking Test Versus Daily Life in People with Fibrotic Interstitial Lung Disease

M. Hoffman (Melbourne (VIC), Australia), N. Wong (Melbourne (VIC), Australia), A. T. Burge (Melbourne (VIC), Australia), A. E. Holland (Melbourne, Australia)

Background: Exertional desaturation is an important marker of disease severity in people with fibrotic interstitial lung disease (fILD). The 6-minute walking test (6MWT) is used to identify exertional desaturation and justify the prescription of ambulatory oxygen therapy (AOT). It is unclear if it reflects daily desaturation in patients with fILD.
Aim: To compare exertional desaturation during 6MWT and during daily life in patients with fILD.
Methods: Participants performed two 6MWT and underwent home oximetry during waking hours for two consecutive days. The relationship between 6MWT exertional desaturation and daily desaturation was evaluated. The impact of physical activity (steps per day) on daily desaturation was also assessed. Parametric tests, Pearson's correlation coefficients and multiple linear regression analysis were used.
Results: Eighty-two people with fILD were recruited and 58 recordings were analyzed. Participants had moderately severe lung disease and low physical activity. The 6MWT nadir SpO2 was higher than daily minimum SpO2 (82 ± 4% vs 75 ± 5%; P< .001). Lower daily SpO2 correlated with shorter 6MWT distance [P= .036], lower 6MWT nadir SpO2 [P= .019] and fewer steps per day [P = .025). The number of steps per day (β = 0.001; P = .045) and 6MWT nadir SpO2 (β = 0.31; P = .027) were independent predictors of daily minimum SpO2 . Conclusion: The 6MWT can accurately identify exertional desaturation in people with fILD but, may underestimate its extent. Lowest daily SpO2 may be predicted by 6MWT nadir SpO2 and physical activity, parameters that should be considered for AOT prescription.

Αρ. Τεύχους 14 - Οκτώβριος-Νοέμβριος-Δεκέμβριος 2023

Οι καλύτερες περιλήψεις στην αποκατάσταση του αναπνευστικού συστήματος και στην φροντίδα των χρονίως πασχόντων

1. Blood-flow restricted cycling maximizes leg muscle effort with less ventilatory work compared to work-matched free-flow exercise: A randomized crossover study

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Introduction: Endurance training with blood flow restriction (BFR-EN) can improve muscular function and aerobic capacity. We investigated the acute cardiorespiratory response between BFR-EN and traditional interval endurance exercise (TRA-EN). We hypothesized that BFR-EN elicits lower minute ventilation (VE, primary endpoint) while exacerbating perceived leg exertion compared to work-matched TRA-EN. Methods: We conducted a randomized crossover study. The protocol involved three cycling intervals interspersed by 1 min resting periods (Figure 1). Respiratory parameters were collected by breath-by-breath analysis. Heart rate (HR) and rate of perceived exertion (RPE, scale from 0 to 10) were assessed. BFR-EN intervals were workmatched to TRA-EN.

Results: Twenty-four healthy individuals (male/female: 15/9, mean (SD) age: 30.5±8.3 yrs) completed the study. TRA-EN elicited higher VE (2.4 L/min [0.98 to 3.82]), oxygen consumption (2.47 mL/kg/min [2.02. to 2.93]), carbon dioxide production (0.2 L/min [0.17 to 0.22]) and RPE Dyspnea (0.7 [0.55 to 0.85]) compared to BFR-EN. RPE Leg (-1.24 [-1.46 to -1.03]) was lower in TRA-EN compared to BFR-EN.

Conclusion: BFR-EN resulted in lower VE and perceived dyspnoea compared to TRA-EN. For people with lung disease, BFR-EN could provide endurance training with less respiratory effort while augmenting leg muscle effort.

2. Survival following pulmonary rehabilitation (PR): the effect of achieving the minimal important difference (MID) in walking distance.

T. Ward (Leicester, United Kingdom), N. Greening (Leicester, United Kingdom), C. Bolton (Nottingham, United Kingdom), S. Singh (Leicester, United Kingdom), W. Man (London, United Kingdom), M. Steiner (Leicester, United Kingdom), R. Evans (Leicester, United Kingdom)

Background: Completing PR is positively associated with survival1 , but whether due to a direct effect or unmeasured confounding is unknown. We aimed to investigate the association between survival and achieving the MID in walking distance (WD) following PR.

Methods: PR services across England and Wales provided data to a national audit programme (NACAP) for consenting patients assessed between Jan – April 2015. Mortality data from national records until Jan 2017 were used. Cox proportional hazard regression, unadjusted and adjusted for multiple covariates, was performed comparing time to death between achieving the MID or not using 25m for the six-minute WD (6MWD) and 35m for the incremental shuttle WD (ISWD). Missing data were imputed.

Results: Walk tests before and after PR were completed by 3721/4159 (89%) patients (55% male, mean age 70.3 (SD 8.8) years, FEV1 1.38 (0.58)L). Mean (SE) change in ISWD and 6MWD was 63 (2)m and 57 (2)m, respectively. 273 patients (7.3%) died by Jan 2017. Unadjusted and adjusted mortality rates were lower for those achieving the MID in either walk test, HR 95%CI 0.40 (0.29–0.56) and HR 0.57 (0.45–0.72), respectively , $p<0.001$.

Conclusion: In this large, real-life dataset improved walking distance more than the MID following PR is positively associated with survival potentially indicating a direct of completing PR

3. Low-load blood-flow restriction strength training in patients with COPD: a randomised controlled pilot study

D. Kohlbrenner (Zurich, Switzerland), M. Kuhn (Zurich, Switzerland), A. Manettas (Zurich; Trikala (Greece), Switzerland), C. Aregger (Zurich, Switzerland), M. Peterer (Zurich, Switzerland), N. Greco (Zurich, Switzerland), N. Sievi (Zurich, Switzerland), C. Clarenbach (Zurich, Switzerland)

Introduction Patients with COPD often struggle tolerating the high-load strength training (HL-ST) required for muscle adaptations during pulmonary rehabilitation (PR). Low-load blood-flow restriction strength training (LL-BFR-ST) allows substantial reductions in training load for equal gains in muscle mass and strength. Aim We aimed to investigate the effects of LL-BFR-ST vs HL-ST on leg muscle strength in patients with stable COPD.
Methods COPD patients participating in outpatient PR (24 sessions, 2x/week) were randomly assigned to lower limb LLBFR-ST (70% occlusion pressure, 30% 1-repetition maximum) or HL-ST (70% 1-repetition maximum). Primary outcome was isometric leg strength. We secondarily investigated dynamic strength, functional capacity, physical activity, health-related quality-of-life, adverse events, perceived exertion and subjective feedback.
Results We recruited 30 patients (63 [59,68] years, FEV1 49 [35,67]% pred.), 6 did not complete the study. No adverse events associated with the intervention occured. Isometric strength of knee extensor (data are pre-post median [quartiles] changes for HL-ST and LL-BFR-ST groups; right leg: 8.9 [-1.3,35.5] and 8.4 [-2.0,16.6] Nm; left leg: 8.3 [- 0.6,20.4] and 8.6 [5.6,11.8] Nm) and flexor (right leg: 6.3 [-3.9,13.9] and 8.7 [-3.8,12.8] Nm; left leg: 2.4[-3.7,9.6] and 11.8[-7.6,16.4] Nm) muscles improved in both groups with no clinically and statistically relevant between-group differences.Physical activity improved only in the LL-BFR-ST group (165[-645,1414] and 1854[1564,2805] steps/day).
Conclusions Similar strength gains were achieved in the LL-BFR-ST and the HL-ST group with LL-BFR-ST eliciting less exercise-induced dyspnoea.

4. Muscle mRNAand protein responses to aerobic exercise training (AET) in COPD and health

L. Latimer (Leicester, United Kingdom), D. Constantin (Nottingham, United Kingdom), L. Houchen-Wolloff (Nottingham, United Kingdom), B. Popat (Derby, United Kingdom), D. Constantin-Teodosiu (Nottingham, United Kingdom), C. Bolton (Nottingham, United Kingdom), M. Steiner (Nottingham, United Kingdom), P. Greenhaff (Nottingham, United Kingdom)

Eight weeks AET reduced respiratory exchange ratio (RER) during steady-state submaximal exercise in healthy older (HO), healthy young (HY) and COPD volunteers, signifying a shift towards lipid oxidation and prompted mRNA expression changes in muscle of similar magnitude in all groups (Latimer et al, ERJ, 2022). We assessed whether muscle mRNA changes were paralleled by changes in protein abundance, and if responses differed between groups. We retrospectively analysed abundance of quadriceps protein products for 9 highly responsive mRNAs (Western blot) after 1,4 & 8 weeks of AET (30min cycling at 65% WPEAK, 3/wk) in HY(n=10, 28+5yr), HO (n=10, 71+5yr) and COPD (n=20, 70+6yr, FEV1 56%). Change in muscle mRNA and protein product abundance did not correlate in HY, HO or COPD ($p>0.05$ at all time points), nor did early changes in mRNA abundance predict subsequent protein abundance changes with large inter-subject variability apparent in protein responses to training (Fig1). Robust and consistent muscle mRNA responses to AET in HO, HY& COPD were not reflected by muscle protein abundance changes. This may be attributable to variable protein translation efficiency between individuals and the semi-quantitative nature of Western blotting. Collectively the data suggest the decline in RER during steady-state exercise probably reflects changes in substrate availability and mobilisation with AET rather than muscle level protein adaptation.

5. Mortality in COPD: Physical capacity of physical activity?

A. Vaes (Horn, Netherlands), N. Sievi (Zurich, Switzerland), C. Clarenbach (Zurich, Switzerland), A. Van 'T Hul (Nijmegen, Netherlands), M. Spruit (Horn, Netherlands)

Background A recent study established threshold values for 6 minute walk distance (6MWD) and steps/day for predicting mortality (i.e. 404 m and 4125 steps/day for men; 394 m and 4005 steps/day for women) in Dutch COPD patients. The 6-year mortality risk was significantly lower in patients with a preserved 6MWD, regardless of number of steps/day (Vaes et al. Chest 2022). We aimed to corroborate these findings in a Swiss cohort of COPD patients.
Methods Data were collected in 261 COPD patients (65% male, age: 63±8 years, FEV1 : 48±22% pred.). Allcause mortality was assessed for a median period of 67 (44-83) months. ROC curves were used to determine thresholds for 6MWD and steps/day to predict 6-year mortality.
Results Best thresholds were 401 m and 4028 steps/day for men and 394 m and 3457 steps/day for women. Using these cut-offs, patients were divided into the “can do, do do” quadrants: 1)"can’t do, don’t do” (n=75, 29%); 2)"can do, don’t do” (n=38, 15%); 3)“can’t do, do do” (n=42, 16%); and 4)“can do, do do” (n=106, 41%). After controlling for sex, age, FEV1 , MRC and BMI, patients in the “can do, do do” quadrant had a significantly lower allcause mortality compared to the “can’t do, don’t do” and "can't do, do do" quadrants; no differences were found with the "can do, don't do" quadrant.

6. Pulmonary rehabilitation and physical activity: a step in the right direction? A network meta-analysis

J. Manifield (Leicester, United Kingdom), Y. Chaudry (Leicester, United Kingdom), S. Singh (Leicester, United Kingdom), T. Ward (Leicester, United Kingdom), M. Whelan (Coventry, United Kingdom), M. Orme (Leicester, United Kingdom)

Introduction: Novel pulmonary rehabilitation (PR) models have led to innovations and adjuncts in PR components which may lead to differential responses in physical activity (PA). Aim: To examine the relative effectiveness of different PR-based interventions on PA.
Methods: Randomised trials in chronic respiratory disease populations, where at least one intervention arm performed some form of PR, were systematically searched for on three electronic databases. Network metaanalyses compared PR-based interventions against usual care (UC) and centre-based PR (CBPR) on pre-post change in average number of steps/day.
Results: Out of 2853 yielded articles, 31 studies were eligible (2404 participants; 94% COPD). The most common interventions were CBPR (n=23), CBPR+PA promotion (n=11), home-based PR (HBPR; n=10), and UC (n=8; Fig 1a). Step count data from 14 studies (COPD only; n=1060) were included within the network metaanalyses (Fig 1b). No significant change in step count was observed in any PR intervention versus UC (Fig 1c); however CBPR+PA promotion resulted in a significantly greater change (Δ+1442 steps) versus CBPR (Fig 1d).
Conclusion: Whilst no single intervention showed a statistical benefit to daily step count, CBPR+PA promotion may be more effective than CBPR. The small number of studies for each comparison limits the assessment of superiority of PR-based interventions to improve PA.

ΔΡΑΣΕΙΣ ΕΤΚΑΦΑ

Δράσεις που πραγματοποιήθηκαν

Αρ. Τεύχους 14 - Οκτώβριος-Νοέμβριος-Δεκέμβριος 2023

Πανελλήνιο Καρδιολογικό Συνέδριο από 12/10/2023 μέχρι την 14/10/2023

ΑΝΑΛΥΤΙΚΑ

Το ετήσιο καρδιολογικό συνέδριο, στο οποίο λαμβάνει μέρος το επιστημονικό μας τμήμα, πραγματοποιείται στην Θεσσαλονίκη στο Μέγαρο Μουσικής Θεσσαλονίκης το οποίο βρίσκεται επί της οδού 25ης Μαρτίου, στην παραλία της πόλης, στην περιοχή Ντεπώ. Το συνέδριο πραγματοποιήθηκε από την Ελληνική Καρδιολογική εταιρεία 12 με 14/10/2023. Το ΕΤΚΑΦΑ κατόπιν προκήρυξης ενδιαφέροντος των μελών του, συγκέντρωσε τις ομιλίες που προτάθηκαν και τις κατέταξε σε τράπεζες.

Θα θέλαμε θερμά να ευχαριστήσουμε το ΔΣ της Ελληνικής Καρδιολογικής Εταιρείας, τον εξαιρετικό κ. Πουλημένο που με χαρά αποδέχτηκε, μας τίμησε με την παρουσία του στο Προεδρείο της τράπεζας με τα εποικοδομητικά σχόλια του καθώς και τους 5 καταπληκτικούς ομιλητές μας με την σειρά ομιλιών τους την κα. Πετρίδου, την κα. Αντωνίου, την κα. Ανδριοπούλου, την κα Δημάκη και τον κ. Μήτσιου. Η καρδιαγγειακή φυσικοθεραπεία προχωρά με σταθερά βήματα την ανοδική της πορεία καθιστώντας αναγκαία της ύπαρξής της στην αποκατάσταση του ασθενούς.

Πιο συγκεκριμένα τα θέματα που παρουσιάστηκαν ήταν:

Συσχέτιση εργοσπιρομετρικών δεικτών και υπερηχογραφικών παραμέτρων στη διαστολική καρδιακή ανεπάρκεια. Πετρίδου Μ. Φυσικοθεραπεύτρια MSc, PhD cand.

Διερεύνηση των εμποδίων στην καρδιακή αποκατάσταση. Αντωνίου Β. Φυσικοθεραπεύτρια, MSc, PhD cand

Δυσλειτουργία εισπνευστικών μυών στη καρδιακή ανεπάρκεια. Ανδριοπούλου Μ Φυσικοθεραπεύτρια ΓΝ Ασκληπιείο Βούλας MSc PhD Εργαστήριο Καρδιολογικής Αποκατάστασης

Άσκηση και & cardiac remodeling στα καρδιαγγειακά νοσήματα

Δημάκη Ν. Φυσικοθεραπεύτρια ΓΝ Ασκληπιείο Βούλας MSc Υπεύθυνη Εργαστηρίου Καρδιολογικής

Αποκατάστασης

Παράμετροι βελτίωσης της αγγειακής λειτουργίας κατά την άσκηση σε ασθενείς με καρδιαγγειακές παθήσεις

Μήτσιου Γ. Φυσικοθεραπευτής, MSc. PhD.

Προσεχείς Δράσεις

Αρ. Τεύχους 14 - Οκτώβριος-Νοέμβριος-Δεκέμβριος 2023

Πανελλήνιο Πνευμονολογικό Συνέδριο

ΑΝΑΛΥΤΙΚΑ

Το Ετήσιο συνέδριο της Ελληνικής Πνευμονολογικής εταιρείας φιλοξενεί τα τελευταία χρόνια μια σημαντική φυσικοθεραπευτική ενότητα υπό μορφήν επιστημονικής τράπεζας με την συμμετοχή αρκετών συναδέλφων που σχετίζονται ιδιαίτερα με την αναπνευστική φυσικοθεραπεία.

Φέτος το 32ο Πνευμονολογικό συνέδριο θα πραγματοποιηθεί για μια ακόμη φορά στο ξενοδοχείο Athenaeum Intercontinental από τις 7 μέχρι τις 10 Δεκεμβρίου του 2023.

Το επιστημονικό μας τμήμα έχει οργανώσει επιστημονική τράπεζα με γενικό τίτλο «Ειδικά θέματα Αναπνευστικής Φυσικοθεραπείας και Αποκατάστασης σε παιδιά και ενήλικες».

Τα επιμέρους θέματα έχουν ως εξής:

1. «Τεχνικές κινητοποίησης διαφράγματος στο άσθμα και στη ΧΑΠ» από τον συνάδελφο Δημήτρη Τσιμούρη, Φυσικοθεραπευτή MSc, PhD cand

2. «Αναπνευστική φυσικοθεραπεία και αποκατάσταση μετά από χειρουργείο θώρακος», από την συνάδελφο Ευστρατία Γιαννίκου MSc Φυσικοθεραπεύτρια ΓΝΝΘΑ «Η Σωτηρία»

3. «Ψηφιοποιημένες υπηρεσίες αναπνευστικής φυσικοθεραπείας σε παιδιά με χρόνια αναπνευστικά νοσήματα», από την συνάδελφο Βάγια Σαπουνά, Φυσικοθεραπεύτρια MSc PhD cand

4. «Η επίδραση της άσκησης αναπνευστικών μυών σε εφήβους και νεαρούς ενήλικες με εγκεφαλική παράλυση», από την συνάδελφο Αφροδίτη Ευαγγελοδήμου Φυσικοθεραπεύτρια MSc PhD cand

5. «Η αξία της αναπνευστικής φυσικοθεραπείας σε ασθενείς με αγγειακό εγκεφαλικό επεισόδιο» από την συνάδελφο Άννα Γρηγοριάδου Φυσικοθεραπεύτρια MSc cand

Στο τέλος των παρουσιάσεων θα ακολουθήσει συζήτηση.

Προσεχείς Δράσεις

Αρ. Τεύχους 14 - Οκτώβριος-Νοέμβριος-Δεκέμβριος 2023

Πανελλήνιο Συνέδριο Εντατικής Θεραπείας

ΑΝΑΛΥΤΙΚΑ

Όπως κάθε διετία, έτσι την τρέχουσα χρονιά η Ελληνική Εταιρία Εντατικής Θεραπείας θα φιλοξενήσει και πάλι το καθιερωμένο Φυσικοθεραπευτικό φροντιστήριο που πραγματοποιείται στο πλαίσιο του 19ου Πανελλήνιου Συνεδρίου Εντατικής Θεραπείας. Η εκδήλωση θα περιλαμβάνει τρείς επιστημονικές τράπεζες που θα περιλαμβάνουν τον μηχανικό αερισμό, την αναπνευστική φυσικοθεραπεία στη ΜΕΘ, την μυοσκελετική φυσικοθεραπεία στη ΜΕΘ και τέλος ειδικά θέματα νευρολογικής φυσικοθεραπείας και ποιότητας ζωής των βαρέως πασχόντων. Προκειμένου να πάρετε μια γεύση της επιστημονικής εκδήλωσης παραθέτουμε την θεματολογία της εκδήλωσης:

Χρηστάκου Α. Αιτίες μη επιτυχούς αποδέσμευσης από το μηχανικό αερισμό

Ευσταθίου Ι. Αφαίρεση τραχειοστομίας και φυσικοθεραπεία

Γρηγοριάδης Κ. Μη επεμβατικός μηχανικός αερισμός στην παρόξυνση της ΧΑΠ

Κολοφωτιά Γ. Σύνδρομο μυοπάθειας μονάδας και φυσικοθεραπεία

Κουτσιούμπα Ε. Λειτουργικές κλίμακες αξιολόγησης του βαρέως πάσχοντος ασθενούς

Πατσάκη Ε. Συνταγογράφηση πρώιμης κινητοποίησης στη ΜΕΘ

Μπεμπελέτση Π. Η δυσλειτουργία του αυτόνομου στο βαρέως πάσχοντα ασθενή

Ζαμπλάρα Α. Δυσφαγία και δυσκαταποσία. Ο ρόλος του φυσικοθεραπευτή

Κοκολιός Α. Συσχέτιση της μυονευροπάθειας της ΜΕΘ με τη δυσκαταποσία

Σακελλάρη Π. Η ποιότητα ζωής των ασθενών μετά τη νοσηλεία τους στη ΜΕΘ

Αρ. Τεύχους 14 - Οκτώβριος-Νοέμβριος-Δεκέμβριος 2023

31ο Πανελλήνιο Επιστημονικό Συνέδριο Φυσικοθεραπευτών

31° ΕΤΗΣΙΟ ΠΑΝΕΛΛΗΝΙΟ ΣΥΝΕΔΡΙΟ ΦΥΣΙΚΟΘΕΡΑΠΕΙΑΣ

ΑΝΑΛΥΤΙΚΑ

Στο πολεμικό μουσείο θα διεξαχθεί το 31ο Πανελλήνιο Επιστημονικό Συνέδριο Φυσικοθεραπευτών, από την 1η έως την 3η Δεκεμβρίου 2023

Το ΕΤΚΑΦΑ πρόκειται να συμμετάσχει με μια επιστημονική τράπεζα με γενικό τίτλο: «Νεότερα δεδομένα στην καρδιοαγγειακή και αναπνευστική φυσικοθεραπεία – αποκατάσταση»

Η εν λόγω τράπεζα θα απαρτίζεται από 4 ομιλίες οι οποίες θα είναι:

- ✓ Πρώιμη Κινητοποίηση στη ΜΕΘ (ICU Early mobilization), με ομιλήτρια την Δρ Άννα Χρηστάκου Επίκουρη Καθηγήτρια Τμήματος Φυσικοθεραπείας Πανεπιστήμιο Πελοποννήσου.
- ✓ Ο ηλεκτρικός νευρομυϊκός ερεθισμός σε ασθενείς μετά από καρδιοχειρουργική επέμβαση με ομιλήτρια την Βασιλική Ράιδου, Φυσικοθεραπεύτρια, MSc, Υποψήφια Διδάκτωρ ΕΚΠΑ, Επιστ. Συνεργάτης Ωνάσειου Καρδιοχειρουργικού Κέντρου
- ✓ Παράμετροι βελτίωσης της αγγειακής λειτουργίας μέσω της άσκησης σε ασθενείς με καρδιοαγγειακές παθήσεις, με ομιλητή τον Δρ Γεώργιο Μήτσιου Φυσικοθεραπευτή.
- ✓ Διαχείριση βρογχιεκτασιών σε ενήλικες και παιδιά (Bronchiectasis in adults and children) με ομιλήτρια την Ασπασία Μαυρονάσιου Φυσικοθεραπεύτρια MSc. Υποψήφια Διδάκτωρ Τμήματος Φυσικοθεραπείας, Πανεπιστήμιο Θεσσαλίας, Εργαστήριο Κλινικής Φυσιολογίας της Άσκησης και Αποκατάστασης.

Θα είμαστε όλοι εκεί για να ακούσουμε με χαρά τους συναδέλφους με την τόσο ενδιαφέρουσα θεματολογία.

https://www.medpagetoday.com/criticalcare/generalcriticalcare/101434

Extra Mobilization Doesn't Save Lives, Time in the ICU

Getting patients moving as much as possible while on mechanical ventilation in the intensive care unit (ICU) didn't improve their chances of survival or getting home sooner, the TEAM trial showed.

An early strategy of sedation minimization and daily physiotherapy didn't improve number of days alive and out of the hospital at 180 days after randomization compared with usual care (143 vs 145 days, 95% CI for difference -10 to 6, P=0.62).instruments that vibrate your chest.


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WORDOSIS Can you guess today's medical word? PLAY NOW

Critical Care > General Critical Care

Extra Mobilization Doesn't Save Lives, Time in the ICU

— Randomized trial may suggest that the "dose" from good usual care is enough

by Crystal Phend, Contributing Editor, MedPage Today October 26, 2022

synopsi

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Getting patients moving as much as possible while on mechanical ventilation in the intensive care unit (ICU) didn't improve their chances of survival or getting home sooner, the TEAM trial showed.

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https://patch.com/massachusetts/melrose/melrosewakefield-hospital-reopens-cardiac-rehabilitation-program


Health & Fitness

MelroseWakefield Hospital Reopens Cardiac Rehabilitation Program

The program was temporarily closed during the COVID-19 pandemic. Here's how the new-and-improved program will help Melrosians.

Annie Jonas, Patch Staff

Posted Thu, Jun 22, 2023 at 11:32 am ET

Replies (2)

MELROSE WAKEFIELD HOSPITAL

MelroseWakefield Hospital Reopens Cardiac Rehabilitation Program

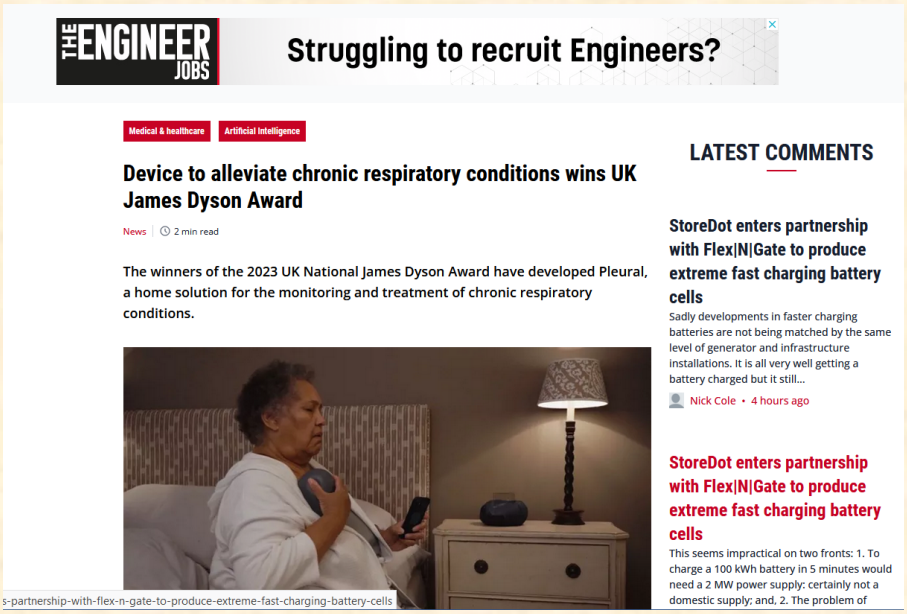
The program was temporarily closed during the COVID-19 pandemic. Here's how the new-and-improved program will help Melrosians.

The program is designed to help improve patients who have had a heart attack, heart failure, or surgery through exercise and education. Nurses and exercise physiologists work with patients on various exercise equipment while their heart is monitored with an EKG system.

https://www.theengineer.co.uk/content/news/device-to-alleviate-chronic-respiratory-conditions-wins-uk-james-dyson-award/

Device to alleviate chronic respiratory conditions wins UK James Dyson Award

The winners of the 2023 UK National James Dyson Award have developed Pleural, a home solution for the monitoring and treatment of chronic respiratory conditions.

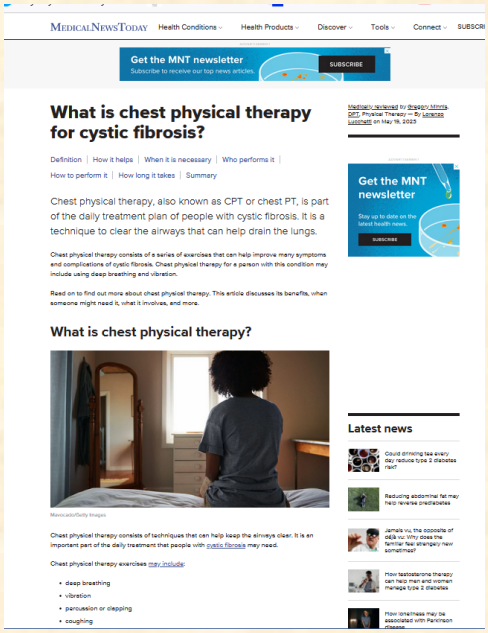


https://www.medicalnewstoday.com/articles/chest-physiotherapy-for-cystic-fibrosis

Chest physical therapy, also known as CPT or chest PT, is part of the daily treatment plan of people with cystic fibrosis. It is a technique to clear the airways that can help drain the lungs.

Chest physical therapy consists of a series of exercises that can help improve many symptoms and complications of cystic fibrosis. Chest physical therapy for a person with this condition may include using deep breathing and vibration.

Read on to find out more about chest physical therapy. This article discusses its benefits, when someone might need it, what it involves, and more.

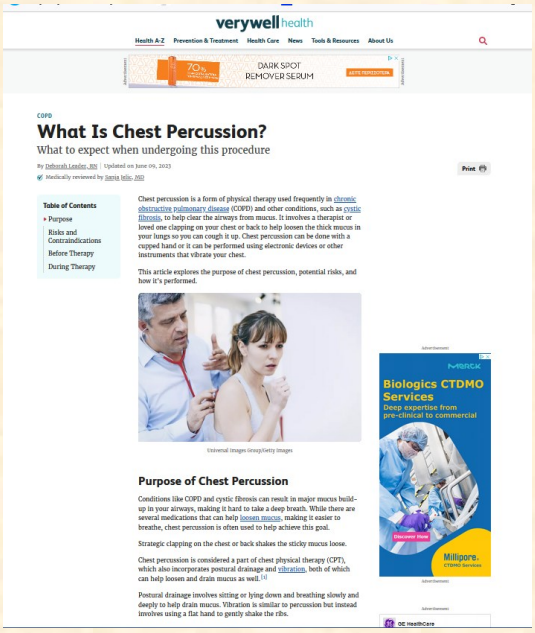


https://www.verywellhealth.com/chest-percussion-914775

What Is Chest Percussion?

What to expect when undergoing this procedure

Chest percussion is a form of physical therapy used frequently in chronic obstructive pulmonary disease (COPD) and other conditions, such as cystic fibrosis, to help clear the airways from mucus. It involves a therapist or loved one clapping on your chest or back to help loosen the thick mucus in your lungs so you can cough it up. Chest percussion can be done with a cupped hand or it can be performed using electronic devices or other instruments that vibrate your chest.



https://www.news9live.com/health/health-conditions/world-physiotherapy-day-techniques-can-help-manage-and-alleviate-asthma-symptoms-2278474

World Physiotherapy Day: Techniques can help manage and alleviate asthma symptoms

The goal of physiotherapy is multifaceted. It controls the symptoms of asthma, prevents further aggravation, and removes excessive secretion while maintaining and maximizing a normal breathing pattern and pulmonary function

New Delhi: The management of asthma is a multidimensional approach. Medications do essentially play a very important role, much more than that is compliance with the medication and adaptability with the inhaler technique. Dr Satyanarayana Mysore, HOD & Consultant – Pulmonology, Lung Transplant Physician, Manipal Hospital Old Airport Road said that to manage asthma, physiotherapy and pulmonary rehabilitation which can enhance the quality of life of an asthmatic.

Τ.Κ.Α.Φ.Α.

ΚΡΥΠΤΟΛΕΞΟ

Αρ. Τεύχους 14 - Οκτώβριος-Νοέμβριος-Δεκέμβριος 2023

Βρείτε 5 κρυμμένες λέξεις που σχετίζονται με την μυονευροπάθεια της ΜΕΘ

Α	Ψ	Φ	Φ	Α	Β	Ψ	Λ	Σ	Τ	Κ	Ο	Κ	Ε	Τ
Τ	Ν	Υ	Κ	Ν	Σ	Δ	Δ	Η	Σ	Ο	Ε	Ο	Δ	Ε
Ι	Ρ	Τ	Γ	Α	Α	Κ	Α	Ψ	Ο	Π	Ι	Ρ	Π	Ι
Η	Ψ	Κ	Ι	Τ	Α	Ι	Η	Η	Μ	Ω	Α	Τ	Ο	Ο
Β	Κ	Δ	Π	Β	Κ	Ν	Α	Σ	Ρ	Σ	Α	Ι	Ο	Ι
Φ	Δ	Ι	Α	Δ	Ι	Α	Β	Ι	Τ	Η	Σ	Κ	Λ	Δ
Φ	Α	Κ	Ε	Ε	Ν	Ω	Ρ	Α	Κ	Ι	Α	Ο	Ε	Η
Π	Α	Ν	Ε	Λ	Η	Η	Τ	Ι	Ο	Σ	Π	Ε	Ο	Μ
Ε	Ρ	Ε	Α	Σ	Σ	Κ	Ε	Ι	Α	Η	Ν	Ι	Κ	Α
Α	Π	Ο	Κ	Α	Ι	Α	Σ	Τ	Κ	Σ	Η	Δ	Ε	Κ
Ω	Ω	Ρ	Α	Τ	Α	Μ	Ο	Ν	Ε	Α	Η	Η	Ο	Α

Καλό Φθινόπωρο