

KNOWLEDGE & INFORMATION FAST TRACK

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MORE RESEARCH NEEDED

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What it's all about...



The Cochrane Library and other sources regularly publish new reviews, some of which highlight the lack of good quality studies on which to base recommendations. This is a good starting point for identifying a new area of research.

**NOT SURE
WHERE TO
START?**

This bulletin highlights recently published work that requires further research to be undertaken - get your inspiration here...

**WANTING
TO DO
SOME
RESEARCH
?**

The second step is to find out what else has been published. If you would like a literature search on any of these topics please contact the Library Service on ext 53831.

Recently published

But more research is needed...



Surgical or radiological treatment for varicoceles in subfertile men

Authors' conclusions: Based on the limited evidence, it remains uncertain whether any treatment (surgical or radiological) compared to no treatment in subfertile men may be of benefit on live birth rates; however, treatment may improve the chances for pregnancy. The evidence was also insufficient to determine whether surgical treatment was superior to radiological treatment. However, microscopic subinguinal surgical treatment probably improves pregnancy rates and reduces the risk of varicocele recurrence compared to other surgical treatments. High-quality, head-to-head comparative RCTs focusing on live birth rate and also assessing adverse events and quality of life are warranted.

Approaches for discontinuation versus continuation of long-term antidepressant use for depressive and anxiety disorders in adults

Authors' conclusions: Currently, relatively few studies have focused on approaches to discontinuation of long-term antidepressants. We cannot make any firm conclusions about effects and safety of the approaches studied to date. The true effect and safety are likely to be substantially different from the data presented due to assessment of relapse of depression that is confounded by withdrawal symptoms. All other outcomes are confounded with withdrawal symptoms. Most tapering regimens were limited to four weeks or less. In the studies with rapid tapering schemes the risk of withdrawal symptoms may be similar to studies using abrupt discontinuation which may influence the effectiveness of the interventions. Nearly all data come from people with recurrent depression.

There is an urgent need for trials that adequately address withdrawal confounding bias, and carefully distinguish relapse from withdrawal symptoms. Future studies should report key outcomes such as successful discontinuation rate and should include populations with one or no prior depression episodes in primary care, older people, and people taking antidepressants for anxiety and use tapering schemes longer than 4 weeks.



Cough augmentation techniques for people with chronic neuromuscular disorders

People with neuromuscular disorders may have a weak, ineffective cough predisposing them to respiratory complications. Cough augmentation techniques aim to improve cough effectiveness and mucous clearance, reduce the frequency and duration of respiratory infections requiring hospital admission, and improve quality of life.

Authors' conclusions: We are very uncertain about the safety and efficacy of cough augmentation techniques in adults and children with chronic neuromuscular disorders and further studies are needed.

PARP (Poly ADP-Ribose Polymerase) inhibitors for locally advanced or metastatic breast cancer

Authors' conclusions: In people with locally advanced or metastatic HER2-negative, BRCA germline mutated breast cancer, PARP inhibitors offer an improvement in progression-free survival, and likely improve overall survival and tumour response rates. This systematic review provides evidence supporting the use of PARP inhibitors as part of the therapeutic strategy for breast cancer patients in this subgroup. The toxicity profile for PARP inhibitors is probably no worse than chemotherapy but

more information is required regarding quality of life outcomes, highlighting the importance of collecting such data in future studies. Future studies should also be powered to detect clinically important differences in overall survival and could focus on the role of PARP inhibitors in other relevant breast cancer populations, including HER2-positive, BRCA-negative/homologous recombination repair-deficient and Programmed Death-Ligand 1 (PDL1) positive.

Digital interventions for the management of chronic obstructive pulmonary disease

Authors' conclusions: There is insufficient evidence to demonstrate a clear benefit or harm of digital technology interventions with or without supported self-management, or multi-component interventions compared to usual care in improving the 6MWD or self-efficacy. We found there may be some short-term improvement in quality of life with digital interventions, but there is no evidence about whether the effect is sustained long term. Dyspnoea symptoms may improve over a longer duration of digital intervention use. The evidence for multi-component interventions is very uncertain and as there is little or no evidence for adverse events, we cannot determine the benefit or harm of these interventions. The evidence base is predominantly of very low certainty with concerns around high risk of bias due to lack of blinding. Given that variation of interventions and blinding is likely to be a concern, future, larger studies are needed taking these limitations in consideration. Future studies are needed to determine whether the small improvements observed in this review can be applied to the general COPD population.

A clear understanding of behaviour change through the BCT classification is important to gauge uptake of digital interventions and health outcomes in people with varying severity of COPD. Currently there is no guidance for interpreting BCT components of a digital

intervention for changes to health outcomes. We could not interpret the BCT findings to the health outcomes we were investigating due to limited evidence that was of very low certainty. In future research, standardised approaches need to be considered when designing protocols to investigate effectiveness of digital interventions by including a standardised approach to BCT classification in addition to validated behavioural outcome measures that may reflect changes in behaviour.

Antidepressants for people with epilepsy and depression

Authors' conclusions: Existing evidence on the effectiveness of antidepressants in treating depressive symptoms associated with epilepsy is still very limited. Rates of response to antidepressants were highly variable.

There is low certainty evidence from one small RCT (64 participants) that venlafaxine may improve depressive symptoms more than no treatment; this evidence is limited to treatment between 8 and 16 weeks, and does not inform longer-term effects. Moderate to low evidence suggests neither an increase nor exacerbation of seizures with SSRIs.

There are no available comparative data to inform the choice of antidepressant drug or classes of drug for efficacy or safety for treating people with epilepsy and depression.

RCTs of antidepressants utilising interventions from other treatment classes besides SSRIs, in large samples of patients with epilepsy and depression, are needed to better inform treatment policy. Future studies should assess interventions across a longer treatment duration to account for delayed onset of action, sustainability of treatment responses, and to provide a better understanding of the impact on seizure control.

Thrombolytic therapy for pulmonary embolism

Authors' conclusions: Low-certainty evidence suggests that thrombolytics may reduce death following acute pulmonary embolism compared with heparin (the effectiveness was mainly driven by one trial with massive PE).

Thrombolytic therapy may be helpful in reducing the recurrence of pulmonary emboli but may cause more major and minor haemorrhagic events, including haemorrhagic stroke. More studies of high methodological quality are needed to assess safety and cost effectiveness of thrombolytic therapy for people with pulmonary embolism.



A systematic review of fear of cancer recurrence related healthcare use and intervention cost-effectiveness

Conclusions: FCR appears to be associated with greater use of certain healthcare resources, and FCR may be treated cost-effectively. Thus, appropriate FCR treatments may not only reduce the individual burden, but also the strain on the healthcare system.

Further high-quality research is needed to confirm this and ensure the future implementation of efficient and sustainable FCR treatments.



Efficacy and Safety of Direct Oral Anticoagulants Versus Vitamin K Antagonists in the Treatment of Left Ventricular Thrombus: A Systematic Review and Meta-analysis

Conclusions: DOACs seem to be more efficacious in achieving LVT resolution compared with VKAs. However, there was no significant difference between the 2 groups in thromboembolic events, major bleeding, and all-cause mortality. Randomized controlled trials are needed to confirm our findings.



Laparoscopic appendectomy versus antibiotic treatment for acute appendicitis-a systematic review

Conclusions: To date, there are no studies comparing antibiotic treatment to laparoscopic appendectomy for patients with acute uncomplicated appendicitis, thus emphasizing the lack of evidence and need for further investigation.

Diabetes Technologies in People with Type 1 Diabetes mellitus and Disordered Eating: A Systematic Review on Continuous Subcutaneous Insulin Infusion, Continuous Glucose Monitoring and Automated Insulin Delivery.

Conclusions: Results on possible (dis)advantages of diabetes technology use in people with T1DM and disordered eating are based on observational data, small pilot trials and anecdotal evidence from case reports. Prospective data from larger samples are needed to reliably determine potential effects of diabetes technology on disordered eating in T1DM.

Breastfeeding and wheeze-related outcomes in high-risk infants: A systematic review and meta-analysis

Conclusions: Breastfeeding was associated with reduced odds of wheezing in high-risk infants, with the strongest protection in the first 6 months. More research is needed to understand the impact of breastfeeding intensity on wheezing and to examine additional respiratory outcomes, including wheeze severity.

Diagnostic accuracy of screening questionnaires for obstructive sleep apnea in children: A systematic review and meta-analysis

This systematic review and meta-analysis evaluated the diagnostic accuracy of screening questionnaires for pediatric obstructive sleep apnea (OSA). Studies comparing any questionnaire with polysomnography for OSA detection in subjects aged ≤ 18 y were considered eligible for qualitative analysis. The quality assessment of diagnostic accuracy studies (QUADAS-2) tool was used for bias assessment. Only questionnaires adopted by at least four studies using the currently accepted diagnostic threshold of apnea-hypopnea index (AHI) ≥ 1 were included for further selective quantitative analyses.

A bivariate meta-analysis was performed to calculate sensitivity, specificity, positive and negative likelihood ratios, diagnostic odds ratio; summary receiver operator characteristic curves were constructed. 37 studies (20 questionnaires) were eligible for qualitative analysis; none were considered of low quality. Among these articles, 13 studies and two questionnaires (sleep-related breathing disorder scale of the pediatric sleep questionnaire (SRBD-PSQ) and OSA-18) satisfied the criteria for quantitative synthesis. SRBD-PSQ had higher sensitivity (0.76) than OSA-18 (0.56), while OSA-18 exhibited higher specificity (0.73) than SRBD-PSQ (0.43). SRBD-PSQ performed well and was the most sensitive screening questionnaire using the diagnostic threshold of AHI ≥ 1 for pediatric OSA. However, further well-designed studies are still required to assess the role of SRBD-PSQ in real-world clinical populations.



GET IN TOUCH

If you would like to get involved with research or have an idea for a project contact the R&D Department who can offer advice and support on getting started.

The Clinical Research Centre is located on the Second Floor within Area 5 of Blackpool Victoria Hospital.

**For general enquiries, please call us on: 01253 65 5547
Or email: bfwh.researchideas@nhs.net**

For more information about this newsletter please contact Laura Sims, Electronic Services and Outreach Librarian on 01253 956688 / laura.sims2@nhs.net

