POEMs

Patient-Oriented Evidence That Matters

Limited Data Suggest That Music Improves Sleep Quality in Older Adults

Clinical Question

Does music improve sleep quality in older adults?

Bottom Line

This study suggests that listening to music, especially sedative music, can improve sleep quality in older adults, but the underlying data are limited and of mixed quality. (Level of Evidence = 1a–)

Synopsis

The authors searched several databases and registries to identify English- or Chinese-language publications of randomized trials of music to improve sleep in adults 60 years and older. They excluded studies that evaluated people with cognitive dysfunction and those with impaired hearing. The team used the Cochrane Collaboration tool to assess the risk of bias of the included studies, and included five small trials with 288 total patients, all from community settings. The music interventions included a range of live and recorded music, 30 to 60 minutes long, and the intervention periods ranged from two days to three months. The primary outcome measure was the Pittsburgh Sleep Quality Index (point range: 0 to 21; scores higher than 5 indicate poor sleep quality; the minimum clinically important difference is 3.0). The studies were of mixed quality. Music modestly improved sleep quality more than no music (mean difference [MD] = –1.96; 95% CI, –3.23 to –0.69), but there was heterogeneity in the data. Sedative music (e.g., slow tempo, soft volume, smooth melody) was more effective than rhythmic music (MD = –2.35; 95% CI, –3.59 to –1.10 vs. MD = –0.25; 95% CI, –2.23 to 1.73, respectively). Studies that were longer than four weeks found greater improvements than shorter studies (MD = –2.61; 95% CI, –4.72 to –0.50 vs. MD = –2.00; 95% CI, –3.99 to –0.00). On average, none of the studies resulted in clinically important improvements. The authors do not report adverse events.

Study design: Meta-analysis (randomized controlled trials)

Funding source: Self-funded or unfunded

Setting: Various (meta-analysis)

Reference: *Chen C, Tung H, Fang C, et al. Effect of music therapy on improving sleep quality in older adults: a systematic review and meta-analysis.* J Am Geriatr Soc. *2021;69(7):1925-1932.*

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Universal Depression Screening in Primary Care: 77% False Positives

Clinical Question

To what extent does universal screening for depression in primary care improve the lives of patients?

Bottom Line

There is considerable uncertainty, which is reflected in the disparate guidelines, about whether screening for depression is helpful to patients (rather than a way to label them as being depressed or not). Most of the positive scores on the Patient Health Questionnaire-9 tool will be falsely positive (77%) for patients screened in primary care and many of those who have mild depression will not benefit from treatment. (Level of Evidence = 5)

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Synopsis

Universal screening of primary care patients for depression is not recommended by the U.K.'s National Institute for Health and Care Excellence or the Canadian Task Force, but is recommended by the U.S. Preventive Services Task Force if adequate systems for follow-up are in place. The authors used systematic reviews from these groups as the basis for their analysis, augmenting them with a search for randomized trials that evaluated the benefits associated with screening. The available studies used various screening tools and outcomes, the latter ranging from general mental health to depression symptoms to meeting diagnostic criteria for major or minor depression. The screening was designed to cast a wide net and emphasized not missing anyone. This approach resulted in a higher rate of false positives. The authors then provided an estimate: assuming 5% of patients screened in primary care will have undiagnosed depression at any visit, 18 patients will screen positive (a score of at least 10 on the Patient Health Questionnaire-9), but 77% of these results will be falsely positive (i.e., only four of those 18 patients will have depression). Only a small proportion of these patients will have moderate to severe depression that necessitates drug treatment.

Study design: Systematic review

Funding source: Self-funded or unfunded

Setting: Other

Reference: *Thombs BD, Markham S, Rice DB, et al. Does depression screening in primary care improve mental health outcomes?* BMJ. *2021;374:n1661.*

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Predictive Values for Six Common Abdominal Symptoms

Clinical Question

Which patients with vague abdominal symptoms should be referred for further workup?

Bottom Line

Using a cutoff of 3% risk (from The National Institute for Health and Care Excellence), dysphagia or changes in bowel habits in men and rectal bleeding in women should trigger referral for further workup to exclude cancer or inflammatory bowel disease (IBD). Symptoms such as abdominal pain, changes in bowel habits, or dyspepsia in patients older than 60 years should be investigated because they predict cancer or IBD in more than 3% of men and women. (Level of Evidence = 1b)

Synopsis

The authors worked with routinely collected electronic health record data of 1.9 million patients from 742 general practices in the United Kingdom collected between the years 2000 and 2017. They included data of all patients who had at least one visit for a vague abdominal symptom and looked to see whether that patient was given a diagnosis of cancer or IBD in the subsequent year. For patients with two or more symptoms, one symptom was chosen randomly as the primary symptom. The median age ranged from 54 to 63 years at first consultation. Changes in bowel habits in men were associated with a cancer diagnosis in 4.64% of cases and an IBD diagnosis in 2.82% of cases. Dysphagia in men was associated with cancer in 4.28% of cases, mainly esophageal cancer. In women, rectal bleeding was the greatest predictor: 2.39% for cancer and 2.57% for IBD. Dyspepsia was the symptom least likely to be associated with cancer or IBD. Abdominal bloating/distension and abdominal pain were associated with cancer or IBD less than 2% of the time. In patients 60 years or older, abdominal pain, changes in bowel habits, and dyspepsia predicted cancer or IBD in more than 3% of men and women.

Study design: Descriptive

Funding source: Government

Setting: Population-based

Reference: *Herbert A, Rafiq M, Pham TM, et al. Predictive values for different cancers and inflammatory bowel disease of 6 common abdominal symptoms among more than 1.9 million primary care patients in the UK: a cohort study.* PLoS Med. *2021;18(8):e1003708.*

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Salt Substitute Reduces Mortality and Stroke in Older Adults Who Have a History or Are at Risk of Stroke

Clinical Question

Does the use of a partial salt substitute improve health outcomes in older adults at risk of stroke?

Bottom Line

For older adults who have a history or are at risk of stroke, the use of a salt substitute safely reduces their risk of death or stroke. (Level of Evidence = 1b–)

Synopsis

Although salt substitutes have been shown to reduce blood pressure, their effect on patient-oriented outcomes is not known. In this cluster-randomized trial from China, approximately 600 rural villages were randomized to the use of a salt substitute (75% sodium chloride, 25% potassium chloride) or regular salt (100% sodium chloride). The authors recruited approximately 35 people in each village who had a history of stroke or were 60 years or older with hypertension (N = 20,995). Participants were excluded if they or anyone in the household had a contraindication to potassium chloride, such as kidney disease, use of a potassium-sparing drug, or use of potassium supplements. The mean age of participants was 65 years, one-half were women, and 73% had a history of stroke. The groups were balanced at baseline and analysis was by intention to treat. Patients were followed up at six-month intervals for five years (follow-up was delayed for some participants because of the pandemic, but the participants continued to use their assigned compound during that time). Follow-up was 100% for vital status and more than 99% for cardiovascular events. At five years, blood pressure was reduced in the salt substitute group by a mean of 3 mm Hg/1 mm Hg. The risk of stroke was significantly decreased in the salt substitute group (29.1 vs. 33.7 per 1,000 person-years; number needed to treat [NNT] = 217 per year), as was the risk of fatal stroke (6.8 vs. 8.8 per 1,000 person-years; NNT = 500 per year). All-cause mortality was also significantly reduced in the salt substitute group (39.3 vs. 44.6 per 1,000 person-years; NNT = 189 per year). The effect was consistent across subgroups by age, sex, and comorbidities. There was no difference in the likelihood of hyperkalemia between groups.

Study design: Randomized controlled trial (nonblinded)

Funding source: Industry

Allocation: Concealed

Setting: Population-based

Reference: *Neal B, Wu Y, Feng X, et al. Effect of salt substitution on cardiovascular events and death.* N Engl J Med. *2021;385(12):1067-1077.*

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