POEMs

Patient-Oriented Evidence That Matters

Wrong Blood Pressure Cuff Size Can Falsely Increase or Decrease Readings

Clinical Question

To what extent does the wrong cuff size affect blood pressure readings?

Bottom Line

The study found that using a regular cuff on arms that are larger than average can falsely raise blood pressure readings by almost 5 mm Hg, and a regular cuff on an especially thin arm can lower readings by 3.6 mm Hg. More than one-half of the study group, which had a mean body mass index lower than the U.S. average, required a large or extra-large cuff. (Level of Evidence = 1b)

Synopsis

The researchers recruited 195 participants from the community and hypertension clinics. Each participant (mean body mass index = 28.8 kg per m^2) underwent four sets of triplicate automated blood pressure measurements with an appropriately sized, too small, or too large blood pressure cuff in random order, followed by a fourth set of triplicate measurements using an appropriately sized cuff only. The cuff size was based on the mid-upper arm circumference and matched to the appropriately labeled cuff. Only 28% of the participants in this sample were the right size for a regular cuff, and more than one-half (55%) required a large or extra-large cuff. Participants who required a large cuff had systolic readings that were 4.8 mm Hg (95% CI, 3.0 to 6.6) higher, on average, when a regular-sized cuff was used. Participants with small arms showed a reduced systolic pressure by 3.6 mm Hg (95% CI, −5.6 to −1.7), on average, with a regular-sized cuff.

Study design: Crossover trial (randomized)

Funding source: Foundation

Allocation: Concealed

Setting: Outpatient (any)

Reference: *Ishigami J, Charleston J, Miller ER III, et al. Effects of cuff size on the accuracy of blood pressure readings: the cuff(SZ) randomized crossover trial.* JAMA Intern Med. *2023;183(10):1061-1068.*

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Cognitive Behavior Therapy Effective in Patients With Fatigue Associated With Long COVID

Clinical Question

Does cognitive behavior therapy (CBT) improve fatigue in patients with long COVID?

Bottom Line

CBT offers significant improvement in symptoms vs. usual care in patients with severe fatigue for at least three months after having COVID-19. (Level of Evidence = 1b)

Synopsis

Severe fatigue is a prominent and potentially disabling component of post–COVID-19 condition, or long COVID. The trial identified 114 Dutch adults with severe fatigue beginning with, or worsened by, COVID-19 and persisting for three to 12 months after onset of infection. They were randomized to a mean of 18 weeks of CBT or usual care. The groups were balanced at baseline, with a mean age of 46 years, and 11% had been hospitalized for COVID-19, 99% were unvaccinated, and 73% were female. Analysis was by intention to treat, with only three or four patients lost to follow-up in each group. The CBT intervention included goal setting, targeting a regular sleep-wake pattern, developing helpful thinking patterns, developing social support, implementing

graded increases in activity, and several other components. It was delivered via online modules or telemedicine because of the pandemic. More details about the intervention can be found in an appendix to the study. The primary outcome was the score on the 20-item Checklist Individual Strength (CIS), with higher scores indicating worse fatigue (range = 8 to 56). At baseline, this score was 48 points in both groups. Clinical response was evaluated at 19 weeks (end of treatment) and at 26 weeks. The difference in fatigue scores at 19 weeks (–9.3 points; 95% CI, –13.2 to –5.3) and 26 weeks (–8.4 points; 95% CI, –13.1 to –3.7) both favored CBT and would be considered clinically significant. The percentage of patients who no longer had severe fatigue (CIS score < 35 points) was higher in the CBT group at 26 weeks (63% vs. 26%; $P < .001$; number needed to treat = 3). Other secondary outcomes also favored CBT, and no serious adverse events occurred.

Study design: Randomized controlled trial (nonblinded)

Funding source: Government

Allocation: Concealed

Setting: Outpatient (any)

Reference: *Kuut TA, Müller F, Csorba I, et al. Efficacy of cognitive-behavioral therapy targeting severe fatigue following coronavirus disease 2019: results of a randomized controlled trial.* Clin Infect Dis. *2023;77(5):687-695.*

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ACC/AHA Guideline for the Management of Patients With Chronic Coronary Disease

Clinical Question

What are the most recent guideline recommendations for the management of chronic coronary disease in adults?

Bottom Line

Key changes in the recommendations include shortening the duration of dual antiplatelet therapy and the use of beta blockers in patients with chronic coronary disease, not recommending fish oil or omega-3 fatty acids for primary or secondary prevention, not using e-cigarettes as first-line agents for smoking cessation, and incorporating sodium-glucose cotransporter-2 (SGLT-2) inhibitors and glucagon-like peptide-1 (GLP-1) receptor agonists for some patients with chronic coronary disease. (Level of Evidence = 1a)

Synopsis

The guideline states that recommendations are based on literature searches that focused on randomized trials and systematic reviews, but that the authors also commissioned their own systematic reviews as needed. They included 17 women, and only six authors reported consulting for relevant companies and one was on a speakers bureau. The authors helpfully summarize the 10 top take-home messages. They emphasize team-based care that considers social determinants, takes a shared decision-making approach, and emphasizes exercise and a healthy diet.

SGLT-2 inhibitors and GLP-1 receptor agonists should be considered for patients with chronic coronary disease, including those without comorbid diabetes mellitus. Long-term beta blockers are no longer routinely recommended and should be limited to patients with heart failure, myocardial infarction in the past year, or another indication. Beta blockers and calcium channel blockers are recommended as first-line agents for the treatment of chronic anginal symptoms. Dual antiplatelet therapy, similar to the use of beta blockers, should not be used for life. Dual antiplatelet therapy is recommended for one to three months after percutaneous coronary intervention in patients with a high risk of bleeding, for six months in patients with a low to moderate risk of bleeding, and for 12 months in those with prior acute coronary syndrome. Dual antiplatelet therapy is not recommended in patients without recent percutaneous coronary intervention or in those who have not had acute coronary syndrome in the past 12 months. Statins are the first-line lipid-lowering agent for patients with chronic coronary disease. Fish oil, omega-3 fatty acids, and vitamins are not recommended to reduce cardiovascular events based on a lack of benefit in randomized trials. Icosapent ethyl (Vascepa) may be considered in patients using maximally tolerated statin therapy with persistently elevated triglyceride levels. Routine surveillance using stress tests, coronary computed tomography, or angiography is not recommended in the absence of a change in symptoms or function. Finally, e-cigarettes get a qualified recommendation as second- or third-line agents for smoking cessation, but behavioral interventions combined with

bupropion, varenicline (Chantix), and/or nicotine replacement remain first-line agents.

Study design: Practice guideline

Funding source: Foundation

Setting: Various (guideline)

Reference: *Virani SS, Newby LK, Arnold SV, et al. 2023 AHA/ACC/ACCP/ASPC/NLA/PCNA guideline for the management of patients with chronic coronary disease: a report of the American Heart Association/American College of Cardiology Joint Committee on Clinical Practice Guidelines [published corrections appear in* Circulation. *2023;148(13):e148, and* Circulation. *2023;148(23):e186].* Circulation. *2023;148(9):e9-e119.*

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Amitriptyline as Second-Line Therapy Improves Symptoms in Adults With Irritable Bowel Syndrome

Clinical Question

Does titrated, low-dose amitriptyline improve symptoms of irritable bowel syndrome (IBS) in adults for whom first-line therapies have been ineffective?

Bottom Line

The study, comprised largely of adults with IBS with diarrhea (IBS-D) or IBS with diarrhea mixed with constipation (IBS-M) of at least moderate severity despite first-line therapy, found that titrated, low-dose amitriptyline was more effective than placebo in improving symptoms. (Level of Evidence = 1b)

Synopsis

The researchers recruited adults with IBS from primary care practices in the United Kingdom. The participants could have any subtype of IBS that was at least moderate severity on the IBS Severity Scoring System (IBS-SSS), and they had to have tried first-line treatments (i.e., diet, lifestyle, antispasmodics, laxatives, or antidiarrheals) that were ineffective. The researchers randomized the patients to receive titrated, low-dose amitriptyline (n = 232) or matching placebo (n = 231). More than 80% of the participants had IBS-D or IBS-M. The initial dosage of amitriptyline was 10 mg every evening, and the dose was increased over three weeks to a maximum of 30 mg. The researchers built in many overdose safeguards, such as assessing depression and suicidality and limiting the number of pills given to participants. During the six months of the study, in addition to completing the IBS-SSS, the participants were asked, "Have you had adequate relief of your IBS symptoms?" At the end of six months, 23% discontinued their trial medication (20% of patients taking amitriptyline and 26% of patients taking placebo), usually because of adverse events. After six months, participants in both groups improved, but the participants treated with amitriptyline had a greater degree of improvement: 27 points better in the intention-to-treat analysis; the authors report, however, that 35 points is the minimum clinically important difference. More importantly, 61% of the amitriptyline group reported meaningful improvement compared with 45% of the placebo group (number needed to treat = 7; 95% CI, 4 to 16). These findings are consistent with guidelines from the American College of Gastroenterology and the British Society of Gastroenterology. The authors also provide a patient guide to self-titration of amitriptyline.

Study design: Randomized controlled trial (double-blinded)

Funding source: Government

Allocation: Concealed

Setting: Outpatient (primary care)

Reference: *Ford AC, Wright-Hughes A, Alderson SL, et al.; ATLANTIS trialists. Amitriptyline at low-dose and titrated for irritable bowel syndrome as second-line treatment in primary care (ATLANTIS): a randomised, double-blind, placebo-controlled, phase 3 trial.* Lancet. *2023;402(10414):1773-1785.*

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