

MAYO CLINIC
PROCEEDINGS

In the Limelight: September 2022



This month's feature highlights three articles that appear in the current issue of *Mayo Clinic Proceedings*. These articles are also featured on the *Mayo Clinic Proceedings*' YouTube Channel (https://youtu.be/QqLYU_LeAAg).

WALKING FOR A CAUSE – DO IT BRISKLY!

There is a certain sense of collectedness, even cheerfulness, that comes from walking, derived, in part, either from the companionable engagement of accompanying family and friends or, when alone, from the unfettered and welcomed opportunity to mull over the cares and concerns of the passing or coming day. Walking is also salutary as recognized as far back as the times of Hippocrates who emphasized the pacifying effect of walking (“If you are in a bad mood, go for a walk; if you are still in a bad mood, go for another walk”) and who regarded walking as “the best medicine.” However, as pointed out by the study of Boonpor et al in the current issue of *Mayo Clinic Proceedings*, simply walking *per se* is not enough. These authors analyzed data from the UK Biobank prospective cohort study that recruited more than 150,000 participants between 2006 and 2010. The rate of walking was categorized as slow, average, or brisk, and was self-reported. The median follow-up of participants was 7.4 years. The findings demonstrate that the risk for type 2 diabetes (T2D) was higher in participants with an average walking pace, and especially so for individuals with a slow walking pace, when compared with individuals with a brisk walking pace; this was true for both men and women. Additional analyses indicated that these associations were still significant when

adjusted for various demographic factors, dietary factors, adiposity, and overall physical activity. Furthermore, greater physical activity and longer walking time did not mitigate the increased overall risk for T2D associated with slow walking. Finally, the analyses of Boonpor et al demonstrate that brisk walkers will exhibit an incidence rate of T2D comparable to that exhibited by slow walkers, but, remarkably, this is delayed in brisk walkers by approximately 19 years in women and 16 years in men. The authors discuss brisk walking as a lifestyle modification that may decrease the risk for and delay the onset of T2D and the relevance of self-reported walking rate in risk prediction and stratification for T2D. This important study supports Hippocrates' recognition of and enthusiasm for the health benefits of walking, but emphasizes that, at least for risk reduction for T2D, walking needs to be done with brio and briskness.

Boonpor J, Ho FK, Gray SR, Celis-Morales CA. Association of self-reported walking pace with type 2 diabetes incidence in the UK Biobank prospective cohort study. *Mayo Clin Proc.* 2022;97(9):1631-1640. doi.org/10.1016/j.mayocp.2022.02.028

EVIDENCE-BASED GUIDELINES FOR THE PREOPERATIVE MANAGEMENT OF CARDIOVASCULAR MEDICATIONS

Cardiovascular medications are among the most commonly prescribed drugs, and thus an understanding of how these medications should be managed perioperatively is of considerable interest to many disciplines. This is particularly so as anesthesia itself may exert cardiovascular effects. In the article by Sahai et al in the current issue of



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Mayo Clinic Proceedings, the Society for Perioperative Assessment and Quality Improvement provides evidence-based recommendations regarding the perioperative management of 21 classes of cardiovascular medications, focusing on those used in the management of hypertension, cardiac arrhythmias, ischemic heart disease, and heart failure. Not included in these guidelines are anticoagulant, antithrombotic, or antiplatelet medications, or medications employed in the management of dyslipidemia. To generate these guidelines the executive leadership of this society selected 13 national experts from relevant and complementary disciplines to serve on a consensus committee. Using a modified Delphi process, the committee members undertook multiple Delphi rounds during an 18-month period of dialogue by teleconferences and e-mails. This process culminated in consensus regarding medication management and in the guidelines paper by Sahai et al. Notable considerations in developing these guidelines by this panel of experts include the following: the foundational concept of first do no harm; comprehensiveness in gathering and distilling the relevant and available literature, recognizing that in several instances high quality data are not available; and in-depth consideration of the pharmacologic actions and pharmacokinetics of the various drugs discussed. Discussion of each medication in the paper by Sahai et al concludes with a consensus recommendation whether to continue or hold on the morning of surgery, and a very helpful table in the paper distills the key considerations for each class of medications. For some classes of medications a varied approach is recommended; for example, loop diuretics are generally held, whereas thiazide diuretics are continued on the morning of surgery. The authors also discuss their general conceptual approach as regards combination medications, polypharmacy, and minor procedures. Finally, the authors emphasize individualization of care by the managing team based on such considerations as, among others, the nature of the surgical procedure, the type of anesthesia, and the patient's coexisting medical

conditions. Sahai and colleagues are to be commended for providing these instructive and so helpful evidence-based recommendations on a topic of broad and timely interest.

Sahai SK, Balonov K, Bentov N, et al. Preoperative management of cardiovascular medications: A Society for Perioperative Assessment and Quality Improvement (SPAQI) consensus statement. *Mayo Clin Proc.* 2022;97(9):1734-1751. doi.org/10.1016/j.mayocp.2022.03.039

HOLDING FAST AGAINST THE DELTA SURGE

Surges during a pandemic are especially worrisome because they bespeak weakening containment and increasing infiltration of the infectious agent into the vulnerable population. In the fall of 2021, an overriding concern in this phase of the COVID-19 pandemic was the surge caused by the delta variant, one due to this variant's transmissibility and pathogenicity. The study by Razonable and colleagues in this issue of *Mayo Clinic Proceedings* extends the series of contributions by this team of clinical scholars that has steadily and substantively illumined COVID-19 and relevant management strategies. Their current report presents clinical outcomes following treatment of high-risk patients with anti-spike neutralizing monoclonal antibodies during the period August 1, 2021, to December 1, 2021; this retrospective analysis involved more than 10,000 such patients treated with bamlanivimab-etesevimab, casirivimab-imdevimab, or sotrovimab for mild to moderate COVID-19. The outcomes indicate that relatively few patients so treated exhibited disease progression to severe disease, as indicated by the need for hospitalization, oxygen supplementation, or death in the following 30 days after such therapy. Rates of admission to the ICU were similar among patients treated, irrespective of the type of treatment, and were 1.0% or less. A notable difference among the three treatment groups was that rates of more severe outcomes were significantly higher for patients treated with casirivimab-imdevimab (2.9%) as compared with those treated with bamlanivimab-etesevimab (1.2%) or

sotrovimab (1.6%), a finding for which the authors offer the quite plausible explanation that patients treated with casirivimab-imdevimab had a significantly lower rate of COVID-19 vaccination. Interestingly in antibody-treated patients, all deaths occurred in unvaccinated patients, and unvaccinated patients were also, overwhelmingly, the ones in whom progression to more severe disease occurred. This important real-world study by Razonable et al underscores the efficacy of antibody treatment in high-risk patients in delaying the progression of mild to moderate

COVID-19 to severe disease, and the benefit derived from prior vaccination.

Razonable RR, O'Horo JC, Challener DW, et al. Curbing the delta surge: clinical outcomes after treatment with bamlanivimab-etesevimab, casirivimab-imdevimab, or sotrovimab for mild to moderate coronavirus disease-2019. *Mayo Clin Proc.* 2022;97(9):1641-1648. doi.org/10.1016/j.mayocp.2022.06.015

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