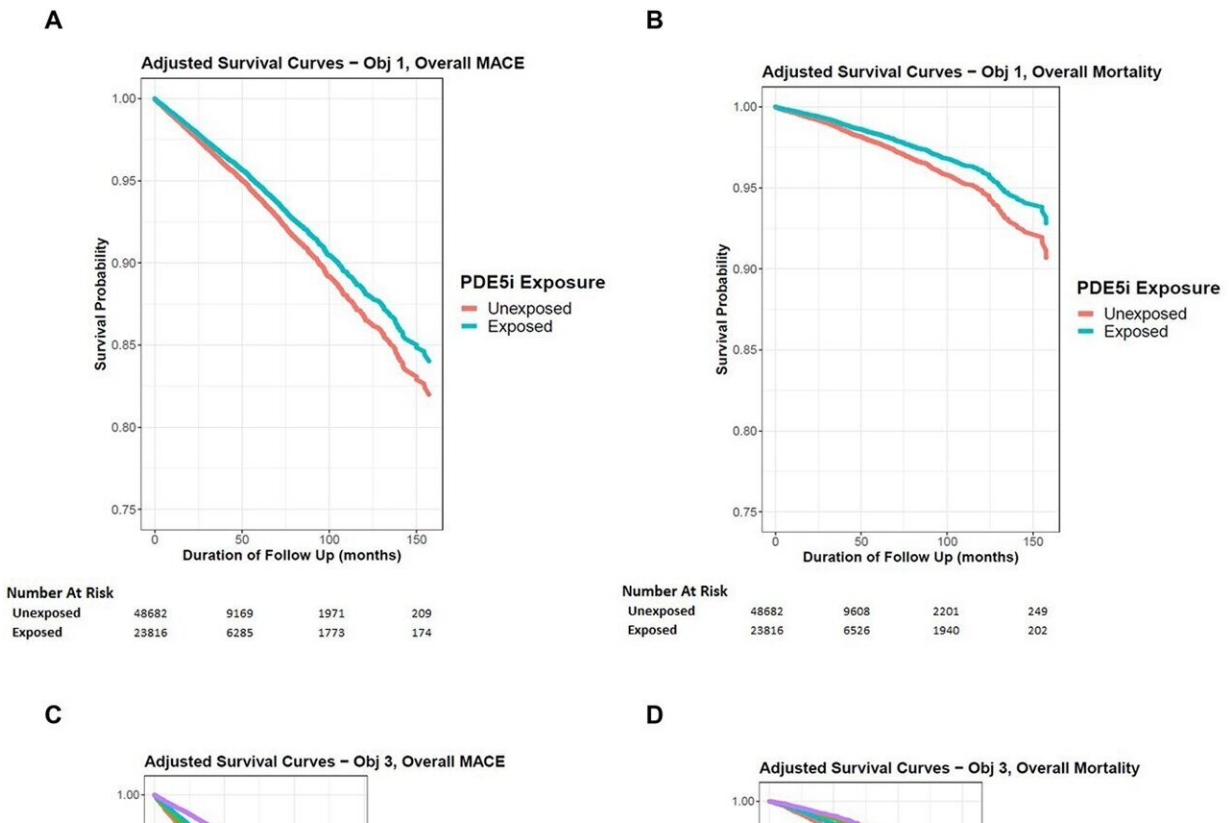


The significant impact of ED drugs on men's cardiac health

January 31 2023



Key Kaplan-Meier plots from matched plus multivariable adjusted analyses. Note that the first 2 adjusted survival curves for MACE (A) and overall mortality (B) show that exposed group had improved survival and that the lines continued to separate over time in favor of exposure extending to 150 months. C and D show a suggested dose response effect with improved survival for both MACE and overall mortality improved in the highest exposure quartile. MACE, major adverse cardiovascular events. Credit: *The Journal of Sexual Medicine* (2023). DOI: 10.1093/jsxmed/qdac005

A comprehensive research study manuscript examining the impact of erectile dysfunction drugs on major adverse cardiovascular events (MACE) and mortality has been published in *The Journal of Sexual Medicine* by scientists from Huntington Medical Research Institutes (HMRI) in Pasadena, HealthCore Inc. and the University of California San Francisco.

This study marks a significant medical milestone, as it's the first time the association between the use of PDE-5i drugs and [cardiovascular health](#) has been explored in a large population of relatively low-risk men with ED in the United States.

In this study, scientists analyzed health records of more than 70,000 men with ED. According to the findings of this large-population study, men who took Viagra, Cialis, Levitra and other drugs of the same class for [erectile dysfunction](#) (ED) experienced lower rates of major adverse cardiovascular events (MACE) including lower rates of heart failure and death due to [heart disease](#) compared to other men with ED not exposed to these drugs.

Among the men who took PDE-5i medications for ED compared to men with ED who did not take these drugs, Kloner's study identified:

- 39% lower rate of death due to heart disease,
- 22% lower rate of unstable angina,
- 17% lower rate of heart failure,
- 15% lower rate in the need for revascularization procedures such as angioplasty, stenting and [bypass surgery](#),
- 13% lower rate of MACE, and
- 25% lower rate of death due to any cause.

Principal investigator Robert A. Kloner, MD, Ph.D., chief science officer and scientific director of cardiovascular research at HMRI, and Professor of Medicine at the Keck School of Medicine of University of Southern California, and his co-investigators—Julia E. Bradsher of HMRI; Eric Stanek, Christopher L. Crowe, Mukul Singhal, and Rebecca S. Pepe of HealthCore Inc.; and Raymond Rosen of University of California San Francisco—drew anonymized patient records from a large U.S. commercial and Medicare insurance claims database. The study examined records over approximately 14 years.

The overall benefit in reduction of cardiac events was observed in men who also had risk factors for [cardiovascular disease](#) including diabetes. Due to the retrospective nature of the study, the research team cannot say anything about the cause of the benefit, only that there was an association between the exposure to PDE 5 inhibitors and lower rates of cardiovascular events. These results raise the possibility that the PDE5 inhibitors may have cardioprotective properties. Large scale prospective, placebo controlled, randomized clinical trials are needed.

More information: Robert A Kloner et al, Effect of phosphodiesterase type 5 inhibitors on major adverse cardiovascular events and overall mortality in a large nationwide cohort of men with erectile dysfunction and cardiovascular risk factors: A retrospective, observational study based on healthcare claims and national death index data, *The Journal of Sexual Medicine* (2023). [DOI: 10.1093/jsxmed/qdac005](https://doi.org/10.1093/jsxmed/qdac005)

Provided by Huntington Medical Research Institutes

Citation: The significant impact of ED drugs on men's cardiac health (2023, January 31) retrieved 11 December 2023 from

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