

# Death rates same for diabetes and heart disease patients receiving drug therapy or surgery

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There is no difference in mortality among patients with type 2 diabetes and stable heart disease who received prompt bypass surgery or angioplasty compared to drug therapy alone, according to a landmark study focused exclusively on patients with both conditions. The study, which was led by investigators at the University of Pittsburgh Graduate School of Public Health, published in the June 11 issue of the *New England Journal of Medicine* and presented at the American Diabetes Association 69th Scientific Sessions, also found that while prompt bypass in patients with more severe heart disease did not lower mortality, it lowered their risk of subsequent major cardiac events.

"More than 20 million Americans suffer from type 2 diabetes and many of these people also have heart disease," said Sheryl F. Kelsey, Ph.D., principal investigator of the study and professor of epidemiology, University of Pittsburgh Graduate School of Public Health. "We began this study because we don't know how best to treat this deadly duo that is affecting more and more people at increasingly younger ages. Our results provide needed guidance about which approaches can best help these patients."

The Bypass Angioplasty Revascularization Investigation 2 Diabetes (BARI 2D) study began recruiting patients in 2001. The results are based on 2,368 patients with both [type 2 diabetes](#) and stable heart disease who were under a physician's care to control their cholesterol and blood

pressure. Patients were randomized to receive drug therapy plus undergo prompt revascularization to restore blood flow—either angioplasty to open blocked arteries or [bypass surgery](#)—or to receive drug therapy alone. The investigators also looked at which of two diabetes drug treatment strategies resulted in better outcomes - insulin-providing (increasing the amount of insulin) or insulin-sensitizing (lowering the body's resistance to its own insulin, such as metformin or rosiglitazone). The study was not a comparison between angioplasty and bypass surgery, but rather a comparison between a prompt procedure and medical therapy alone.

The results show that five-year survival rates did not differ significantly between the revascularization group (88.3 percent) and the drug therapy group (87.8 percent). In addition, there was no significant difference in survival between those who received insulin-providing drugs (87.9 percent) and those who received insulin-sensitizing drugs (88.2 percent). However, in the group that received bypass surgery, the rate of all major cardiovascular events (heart attacks, strokes and death) was significantly lower (22.4 percent) compared to those who received drug therapy alone (30.5 percent). This benefit appeared to be greatest in those who underwent bypass and received insulin-sensitizing drugs.

"We observed that patients with more severe heart disease did better over time when they received bypass early compared to those who received drug therapy alone," said Robert L. Frye, M.D., professor of cardiovascular medicine, Mayo Clinic College of Medicine, and BARI 2D study chairman. "Those who underwent bypass surgery seemed to do particularly well on insulin-sensitizing drugs. Although this result is preliminary because we did not set out to answer this question with our study design."

"Overall, the BARI 2D results reassure us that our current major drug treatments for diabetes are equally appropriate," said Saul Genuth, M.D.,

director of the diabetes management center of BARI 2D and professor of medicine, Case Western Reserve University. "They also indicate that when a patient with type 2 [diabetes](#) has more severe [heart disease](#) it may be better to do bypass surgery early than to wait and simply treat with medication. For patients with milder disease who are candidates for angioplasty, it is appropriate to treat with drug therapy first."

Source: University of Pittsburgh Schools of the Health Sciences ([news : web](#))

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