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# News

STS Press Release

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## Statins May Improve Wound Healing Following Cardiac Surgery *Cholesterol-managing drug appears to influence inflammatory response*

Chicago – Statin therapy may help to improve wound healing in patients following cardiac surgery and reduce overall recovery time, especially in patients who are prone to healing complications, according to a review article in the August 2014 issue of *The Annals of Thoracic Surgery*.

“Statins have become one of the most widely prescribed medications in the world. While they are typically used to manage high cholesterol levels, a number of researchers have been investigating the benefits of statins in other conditions, such as severe infections or following organ transplantation,” said lead author Gerard J. Fitzmaurice, MRCSI, MSc, from Our Lady’s Children’s Hospital in Dublin, Ireland.

Fitzmaurice, Mark E. O’Donnell, MD, and colleagues reviewed existing literature, most of which included laboratory-based studies on animals, and found that statins appear to affect the inflammatory response, thereby reducing the length of time needed to heal following surgery (13.0 days versus 18.7 days) and potentially resulting in smaller scars.

### Key Points

- Statin therapy may improve wound healing in patients following cardiac surgery and reduce overall recovery time.
- The statins appear to work by influencing the inflammatory response.
- The authors advocate for further research and a randomized clinical trial to examine the use of statins in wound healing.

Wounds that may benefit from statin therapy include those resulting from cardiac surgery, such as surgical chest wounds from a sternotomy, leg wounds from a long saphenous vein harvest, or forearm wounds from a radial artery harvest; however the researchers said that any surgical wound could benefit from statins.

“Normal wound healing involves a series of phases that ultimately leads to a scar. Many things can affect this process and it’s difficult to determine exactly how statins might improve wound healing, but it would appear that they influence a number of factors in the inflammatory response,” said Fitzmaurice. “Our analysis also shows that some statins are better at it than others.”

The authors noted that the overall rate of chest wound infections remains low (around 1%) but there is a significant number of cardiac surgery patients whose wounds heal slowly due to underlying conditions, such as diabetes. Wound healing problems are also common in the lower limb vein harvest site, where complication rates have been reported between 10% and 20%.

“Based on the encouraging results in the systematic review, we would recommend consideration of an appropriately conducted, randomized-controlled double-blind clinical trial to comprehensively assess the potential role of topical statins in the promotion of post-operative wound healing,” concluded Fitzmaurice.

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For a copy of the article contact Cassie McNulty at 312-202-5865 or [cmcnulty@sts.org](mailto:cmcnulty@sts.org).

Founded in 1964, The Society of Thoracic Surgeons is a not-for-profit organization representing more than 6,800 cardiothoracic surgeons, researchers, and allied health care professionals worldwide who are dedicated to ensuring the best possible outcomes for surgeries of the heart, lung, and esophagus, as well as other surgical procedures within the chest. The Society’s mission is to enhance the ability of cardiothoracic surgeons to provide the highest quality patient care through education, research, and advocacy.

*The Annals of Thoracic Surgery* is the official journal of STS and the Southern Thoracic Surgical Association.