There has been increasing interest in identifying medical strategies to reduce perioperative cardiovascular risk in noncardiac surgery. Nearly one fourth of non-cardiac surgical procedures (major intra-abdominal, thoracic, vascular, and orthopaedic procedures) performed in persons older than 65 years have been found to be associated with significant perioperative cardiovascular morbidity and mortality. The association of inflammatory mediators, cardiovascular disease, and postoperative outcome (short and long term) is increasingly recognized. The perioperative period is characterized by tissue injury and proinflammatory events. The relationship between the type, depth of anesthesia, surgery, the inflammatory response, and short or long-term outcome may exist. Compelling evidence indicates that aggressive management in the perioperative period may substantially decrease the adverse consequences of myocardial ischemia and infarction. The anesthesiologist has to be aware of the factors useful to estimate the perioperative cardiovascular risk, and of the medical preventive treatment or further interventions to adopt in patients candidate to surgery. The objective of this presentation is to review the pathophysiology of perioperative cardiac complications and cardiac risk assessment and risk reduction strategies. The updated guidelines on perioperative cardiac evaluation and care of cardiac patients undergoing non cardic surgery are included in the presentation. ACC/AHA task force on practice guidelines and its modification till 2007 offers suggestions for evaluating and reducing risk for such events, as well as for timing of cardiac interventions. The updated version incorporates recent clinical trial evidence (evidence based medicine). The direct impact of hyperglycemia, on cardiovascular mortality during the perioperative period in patients with or without diabetes, and the use of β-Blockers are a central interest of the review. Statins are another class of cardioprotective agents, which need to be discussed in the presentation, because of its direct anti-inflammatory effects. Coronary revascularization should be reserved for high-risk patients who have a clearly defined need for revascularization independent of the need for major noncardiac surgery. It was proved that, in low risk cardiac patients there is no difference in outcomes between those who had good medical therapy and those who received CABG beforehand.