Introduction: Cardiovascular diseases (CVD) are the leading causes of death worldwide and kill a million Brazilians annually. In clinical practice, adherence to non-pharmacologic treatment is challenging for it involves a fine mix of competencies from healthcare professionals in prescribing and monitoring healthy habits and patients’ behavioral change to adhere to lifestyle modifications programs.

Objective: To evaluate the effectiveness of statins in primary prevention of cardiovascular diseases in patients who do not adhere to Lifestyle Modifications Programs (LMP) in Primary Health Care (PHC).

Methodology or experience description: We undertook a systematic review of studies published on SCIENCE DIRECT, EMBASE, SCIELO, BVS PORTAL and TRIP DATABASE about the effects of statins in patients with unhealthy lifestyle. Inclusion criteria: statins in adults or seniors with overweight, obesity, dyslipidemia, physical inactivity or resistance to LMP. Exclusion criteria: studies with children and patients with previous cardiovascular events. Study selection, data extraction, and quality appraisal were performed by two independent researchers and disagreements were solved through consensus.

Results: Six articles with moderate to high methodological quality were included (8 or 9 in 10 points in the CASP critical appraisal checklist). A non-systematic review and one randomized controlled trial demonstrated the efficacy of statins in patients resistant to LMP, but warn against high costs and side effects of statins. Two other non-systematic reviews showed that statins are beneficial if associated with LMP. There is moderate-quality evidence that statins compensate the increased risk for CVD in absence of LMP. Authors are unanimous on the need to promote greater adherence to LMP.

Conclusions or Hypothesis: There are scientific gaps in statins usage for primary prevention of CVD in people who do not adhere to LMP including biases in studies favoring statins. Adherence to LMP is poor, especially in elderly with multiple comorbidities, for whom it remains uncertain whether statins are effective, relying on shared-decision making to balance clinician’s responsibility with patients’ values, preferences and safety.