

Search Strategy

Efficacy and safety of sodium-glucose cotransporter 2 inhibitors in perioperative management: a systematic review and meta-analysis

Search date: 18 August 2026

Databases: PubMed, Europe PMC, ClinicalTrials.gov, OpenAlex, CNKI, Wanfang, VIP

Language: no restrictions | From inception to 18 August 2026

PubMed search strategy

(gliflozin*[tiab]

OR "SGLT2 inhibitor"[tiab]

OR "SGLT-2 inhibitor"[tiab]

OR "SGLT2 inhibitors"[tiab]

OR "SGLT-2 inhibitors"[tiab]

OR "SGLT2i"[tiab]

OR "sodium-glucose cotransporter 2 inhibitor"[tiab]

OR "sodium-glucose cotransporter 2 inhibitors"[tiab]

OR "sodium glucose cotransporter 2 inhibitor"[tiab]

OR "sodium-glucose cotransporter-2 inhibitor"[tiab]

AND

(perioperative[tiab]

OR "peri-operative"[tiab]

OR "perioperative period"[tiab]

OR preoperative[tiab]

OR "pre-operative"[tiab]

OR postoperative[tiab]

OR "post-operative"[tiab]

OR periprocedural[tiab]

OR "peri-procedural"[tiab]

OR intraoperative[tiab]

OR "intra-operative"[tiab]

OR "cardiac surgery"[tiab]

OR "cardiothoracic surgery"[tiab]

OR "coronary artery bypass"[tiab]

OR CABG[tiab]

OR "valve surgery"[tiab]

OR "heart surgery"[tiab]

OR "non-cardiac surgery"[tiab]

OR "major surgery"[tiab]

OR "surgical patients"[tiab]

OR "surgical stress"[tiab]

OR "percutaneous coronary intervention"[tiab]

OR PCI[tiab]

OR "transcatheter aortic valve"[tiab]

OR TAVR[tiab]

OR TAVI[tiab]

OR anesthesia[tiab]

OR anaesthesia[tiab]

OR "surgery"[tiab])

<https://pubmed.ncbi.nlm.nih.gov/?term=%28gliflozin%2A%5Btiab%5D%20OR%20%22SGLT2%20inhibitor%22%5Btiab%5D%20OR%20%22SGLT-2%20inhibitor%22%5Btiab%5D%20OR%20%22SGLT2%20inhibitors%22%5Btiab%5D%20OR%20%22SGLT-2%20inhibitors%22%5Btiab%5D%20OR%20%22SGLT2i%22%5Btiab%5D%20OR%20%22sodium-glucose%20cotransporter%20%20inhibitor%22%5Btiab%5D%20OR%20%22sodium-glucose%20cotransporter%20%20inhibitors%22%5Btiab%5D%20OR%20%22sodium%20glucose%20cotransporter%20%20inh%20ibitor%22%5Btiab%5D%20OR%20%22sodium-glucose%20cotransporter-2%20inhibitor%22%5Btiab%5D%20OR%20%22%E5%AE%89%E8%BE%BE%E5%94%90%22%5Btiab%5D%20OR%20%22%E6%AC%A7%E5%94%90%E9%9D%99%22%5Btiab%5D%20OR%20%22%E6%80%A1%E5%8F%AF%E5%AE%89%22%5Btiab%5D%20OR%20%22%E6%8D%B7%E8%AF%BA%E5%A6%A5%22%5Btiab%5D%20OR%20%22%E7%91%9E%E6%B2%81%22%5Btiab%5D%20OR%20%22%E6%81%92%E6%A0%BC%E5%88%97%E5%87%80%22%5Btiab%5D%20OR%20%22%E5%8A%A0%E6%A0%BC%E5%88%97%E5%87%80%22%5Btiab%5D%20OR%20%22%E5%A5%A5%E6%B4%9B%E6%A0%BC%E5%88%97>

SGLT2 inhibitors in perioperative management - Search Strategy (PROSPERO)

%E5%87%80%22%5Btiab%5D%20OR%20%22%E8%B4%9D%E6%B2%99%E6%A0%BC%E5%88%97%E5%87%80%22%5Btiab%5D%29%20AND%20%28perioperative%5Btiab%5D%20OR%20%22peri-operative%22%5Btiab%5D%20OR%20%22perioperative%20period%22%5Btiab%5D%20OR%20preoperative%5Btiab%5D%20OR%20%22pre-operative%22%5Btiab%5D%20OR%20postoperative%5Btiab%5D%20OR%20%22post-operative%22%5Btiab%5D%20OR%20periprocedural%5Btiab%5D%20OR%20%22peri-procedural%22%5Btiab%5D%20OR%20intraoperative%5Btiab%5D%20OR%20%22intra-operative%22%5Btiab%5D%20OR%20%22cardiac%20surgery%22%5Btiab%5D%20OR%20%22cardiothoracic%20surgery%22%5Btiab%5D%20OR%20%22coronary%20artery%20bypass%22%5Btiab%5D%20OR%20CABG%5Btiab%5D%20OR%20%22valve%20surgery%22%5Btiab%5D%20OR%20%22heart%20surgery%22%5Btiab%5D%20OR%20%22non-cardiac%20surgery%22%5Btiab%5D%20OR%20%22major%20surgery%22%5Btiab%5D%20OR%20%22surgical%20patients%22%5Btiab%5D%20OR%20%22surgical%20stresses%22%5Btiab%5D%20OR%20%22percutaneous%20coronary%20intervention%22%5Btiab%5D%20OR%20PCI%5Btiab%5D%20OR%20%22transcatheter%20aortic%20valve%22%5Btiab%5D%20OR%20TAVR%5Btiab%5D%20OR%20TAVI%5Btiab%5D%20OR%20anesthesia%5Btiab%5D%20OR%20anaesthesia%5Btiab%5D%20OR%20%22surgery%22%5Btiab%5D%29

EuropePMC search strategy

(TITLE:"gliflozin" OR ABSTRACT:"gliflozin" OR TITLE:"SGLT2 inhibitor" OR ABSTRACT:"SGLT2 inhibitor" OR TITLE:"SGLT-2 inhibitor" OR ABSTRACT:"SGLT-2 inhibitor" OR TITLE:"sodium-glucose cotransporter 2" OR ABSTRACT:"sodium-glucose cotransporter 2" OR TITLE:"dapagliflozin" OR ABSTRACT:"dapagliflozin" OR TITLE:"empagliflozin" OR ABSTRACT:"empagliflozin" OR TITLE:"canagliflozin" OR ABSTRACT:"canagliflozin" OR TITLE:"ertugliflozin" OR ABSTRACT:"ertugliflozin" OR TITLE:"henagliflozin" OR ABSTRACT:"henagliflozin") AND (TITLE:"perioperative" OR ABSTRACT:"perioperative" OR TITLE:"preoperative" OR ABSTRACT:"preoperative" OR TITLE:"postoperative" OR ABSTRACT:"postoperative" OR TITLE:"peri-operative" OR ABSTRACT:"peri-operative" OR TITLE:"cardiac surgery" OR ABSTRACT:"cardiac surgery" OR TITLE:"surgery" OR ABSTRACT:"surgery" OR TITLE:"percutaneous coronary intervention" OR ABSTRACT:"percutaneous coronary intervention" OR TITLE:"transcatheter" OR ABSTRACT:"transcatheter" OR TITLE:"TAVR" OR ABSTRACT:"TAVR" OR TITLE:"TAVI" OR ABSTRACT:"TAVI")

(TITLE:"gliflozin" OR ABSTRACT:"gliflozin" OR TITLE:"SGLT2 inhibitor" OR ABSTRACT:"SGLT2 inhibitor" OR TITLE:"SGLT-2 inhibitor" OR ABSTRACT:"SGLT-2 inhibitor" OR TITLE:"sodium-glucose cotransporter 2" OR ABSTRACT:"sodium-glucose cotransporter 2" OR TITLE:"dapagliflozin" OR ABSTRACT:"dapagliflozin" OR TITLE:"empagliflozin" OR ABSTRACT:"empagliflozin" OR TITLE:"canagliflozin" OR ABSTRACT:"canagliflozin" OR TITLE:"ertugliflozin" OR ABSTRACT:"ertugliflozin" OR TITLE:"henagliflozin" OR ABSTRACT:"henagliflozin") AND (TITLE:"perioperative" OR ABSTRACT:"perioperative" OR TITLE:"preoperative" OR ABSTRACT:"preoperative" OR TITLE:"postoperative" OR ABSTRACT:"postoperative" OR TITLE:"peri-operative" OR ABSTRACT:"peri-operative" OR TITLE:"cardiac surgery" OR ABSTRACT:"cardiac surgery" OR TITLE:"surgery" OR ABSTRACT:"surgery" OR TITLE:"percutaneous coronary intervention" OR ABSTRACT:"percutaneous coronary intervention" OR TITLE:"transcatheter" OR ABSTRACT:"transcatheter" OR TITLE:"TAVR" OR ABSTRACT:"TAVR" OR TITLE:"TAVI" OR ABSTRACT:"TAVI")

<https://www.ebi.ac.uk/europepmc/webservices/rest/search?query=%28TITLE%3A%22gliflozin%22%20OR%20ABSTRACT%3A%22gliflozin%22%20OR%20TITLE%3A%22SGLT2%20inhibitor%22%20OR%20ABSTRACT%3A%22SGLT2%20inhibitor%22%20OR%20TITLE%3A%22SGLT-2%20inhibitor%22%20OR%20ABSTRACT%3A%22SGLT-2%20inhibitor%22%20OR%20TITLE%3A%22sodium-glucose%20cotransporter%202%22%20OR%20ABSTRACT%3A%22sodium-glucose%20cotransporter%202%22%20OR%20TITLE%3A%22dapagliflozin%22%20OR%20ABSTRACT%3A%22dapagliflozin%22%20OR%20TITLE%3A%22empagliflozin%22%20OR%20ABSTRACT%3A%22empagliflozin%22%20OR%20TITLE%3A%22canagliflozin%22%20OR%20ABSTRACT%3A%22canagliflozin%22%20OR%20TITLE%3A%22ertugliflozin%22%20OR%20ABSTRACT%3A%22ertugliflozin%22%20OR%20TITLE%3A%22henagliflozin%22%20OR%20ABSTRACT%3A%22henagliflozin%22%29%20AND%20%28TITLE%3A%22perioperative%22%20OR%20ABSTRACT%3A%22perioperative%22%20OR%20TITLE%3A%22preoperative%22%20OR%20ABSTRACT%3A%22preoperative%22%20OR%20TITLE%3A%22postoperative%22%20OR%20ABSTRACT%3A%22postoperative%22%20OR%20TITLE%3A%22peri-operative%22%20OR%20ABSTRACT%3A%22peri-operative%22%20OR%20TITLE%3A%22cardiac%20surgery%22%20OR%20ABSTRACT%3A%22cardiac%20surgery%22%20OR%20TITLE%3A%22surgery%22%20OR%20ABSTRACT%3A%22surgery%22%20OR%20TITLE%3A%22percutaneous%20coronary%20intervention%22%20OR%20ABSTRACT%3A%22percutaneous%20coronary%20intervention%22%20OR%20TITLE%3A%22transcatheter%22%20OR%20ABSTRACT%3A%22transcatheter%22%20OR%20TITLE%3A%22TAVR%22%20OR%20ABSTRACT%3A%22TAVR%22%20OR%20TITLE%3A%22TAVI%22%20OR%20ABSTRACT%3A%22TAVI%22%29&format=json&pageSize=1000>

ClinicalTrials search strategy

("SGLT2 inhibitor" OR "SGLT-2 inhibitor" OR dapagliflozin OR empagliflozin OR canagliflozin OR ertugliflozin OR henagliflozin OR gliflozin) AND (perioperative OR preoperative OR postoperative OR "cardiac surgery" OR "coronary artery bypass" OR "percutaneous coronary intervention" OR "transcatheter aortic valve" OR surgery OR anesthesia)

<https://clinicaltrials.gov/api/v2/studies?query.term=%28%22SGLT2%20inhibitor%22%20OR%20%22SGLT-2%20inhibitor%22%20OR%20dapagliflozin%20OR%20empagliflozin%20OR%20canagliflozin%20OR%20ertugliflozin%20OR%20henagliflozin%20OR%20gliflozin%29%20AND%20%28perioperative%20OR%20preoperative%20OR%20postoperative%20OR%20%22cardiac%20surgery%22%20OR%20%22coronary%20artery%20bypass%22%20OR%20%22percutaneous%20coronary%20intervention%22%20OR%20%22transcatheter%20aortic%20valve%22%20OR%20surgery%20OR%20anesthesia%29&pageSize=200&format=json>

OpenAlex search strategy

Chinese-language databases

Chinese-language database search strategy

Search date: 18 August 2026

Databases: CNKI (China National Knowledge Infrastructure), Wanfang Data, VIP (China Science and Technology Journal Database)

Language: Chinese-language records

Search period: from inception to 18 August 2026

Search terms and results:

1. SGLT2 inhibitor AND perioperative (Chinese terms for both concepts): CNKI 11 records (after removing COX-2 inhibitor false positives); Wanfang 5 records
2. Dapagliflozin AND perioperative: CNKI 1; Wanfang 4; VIP 20
3. Empagliflozin AND perioperative: CNKI 0; Wanfang 1
4. Canagliflozin AND perioperative: VIP 8

Notes:

- Generic searches for the term inhibitor in CNKI retrieved records of other drug classes (e.g., COX-2 inhibitors); these were removed by manual screening.
- Records were verified by author and journal name; case reports, reviews, and animal studies were excluded.
- Only clinical studies with a comparator group and extractable effect estimates were considered for inclusion.