

Glucagon-like peptide-1 receptor agonists in adolescents with overweight or obesity with or without type 2 diabetes multimorbidity—a systematic review and network meta-analysis

Muhammad Aaqib Shamim MBBS^{1†} | Amol N. Patil MD^{2†} |
 Ulfat Amin MSc^{3†} | Tuli Roy MPH⁴ | Krishna Tiwari MBBS¹ |
 Noor Husain MD⁵ | Jogender Kumar DM⁶ | Santenna Chenchula MMSc⁷ |
 Priyanka Rao MPH⁸ | Venkata Ganesh MD⁹ | Shoban Babu Varthya MD¹ |
 Surjit Singh DM¹ | Ravindra Shukla DM¹⁰ | Ashu Rastogi DM¹¹ |
 Aravind P. Gandhi MD¹² | Prakisini Satapathy PhD^{13,14} | Ranjit Sah MD^{15,16,17} |
 Bijaya Kumar Padhi PhD¹⁸ | Pradeep Dwivedi MD^{1,19} |
 Kamlesh Khunti F. MedSci^{20,21}

¹Department of Pharmacology, All India Institute of Medical Sciences, Jodhpur, India

²Department of Pharmacology, Postgraduate Institute of Medical Education and Research, Chandigarh, India

³Syed Mantaqile Memorial College of Nursing and Medical Technology (SMMONMT), Islamic University of Science and Technology (IUST), Awantipora, India

⁴Department of Nursing, GitaRam College of Nursing, Berhampore, India

⁵Department of Pharmacology, Indra Gandhi Institute of Medical Sciences, Patna, India

⁶Advanced Pediatric Center, Postgraduate Institute of Medical Education and Research, Chandigarh, India

⁷Department of Pharmacology, All India Institute of Medical Sciences, Bhopal, India

⁸Indian Institute of Public Health Gandhinagar, Gandhinagar, India

⁹Department of Anaesthesia and Intensive Care, Postgraduate Institute of Medical Education and Research, Chandigarh, India

¹⁰Department of Endocrinology and Metabolism, All India Institute of Medical Sciences, Jodhpur, India

¹¹Department of Endocrinology, Postgraduate Institute of Medical Education and Research, Chandigarh, India

¹²Department of Community Medicine, All India Institute of Medical Sciences, Nagpur, India

¹³Center for Global Health Research, Saveetha Institute of Medical and Technical Sciences, Saveetha University, Chennai, India

¹⁴Medical Laboratories Techniques Department, AL-Mustaqbal University, Hillah, Iraq

¹⁵SR Sanjeevani Hospital, Kalyanpur, Siraha, Nepal

¹⁶Department of Microbiology, Dr. D. Y. Patil Medical College, Hospital and Research Centre, Dr. D. Y. Patil Vidyapeeth, Pune, India

¹⁷Department of Public Health Dentistry, Dr. D.Y. Patil Dental College and Hospital, Dr. D.Y. Patil Vidyapeeth, Pune, India

¹⁸Department of Community Medicine and School of Public Health, Postgraduate Institute of Medical Education and Research, Chandigarh, India

¹⁹Centre of Excellence for Tribal Health, All India Institute of Medical Sciences, Jodhpur, India

²⁰Diabetes Research Centre, University of Leicester, Leicester General Hospital, Leicester, UK

²¹NIHR Applied Research Collaboration East Midlands, Leicester, UK

† Muhammad Aaqib Shamim, Amol N. Patil, Ulfat Amin these authors contributed equally and should be considered joint first authors.

Protocol registration: PROSPERO [CRD42023413694].