

Since the early 1980s the concept of mucoadhesion has gained considerable interest in pharmaceutical technology. The various advantages associated with these systems as a novel route of drug administration. Buccal mucosa is the preferred site for both systemic and local drug action. In addition to this, studies have been conducted on the development of controlled or slow release delivery systems for systemic and local therapy of diseases in the oral cavity. The mucosa has a rich blood supply and it is relatively permeable. This review highlights the anatomy and structure of oral cavity and mucosa, mechanism and theories of mucoadhesion [Mucoadhesion is currently explained by six theories: electronic, adsorption, wettability, diffusion, fracture and mechanical ], factors affecting mucoadhesion, characteristics and properties of desired mucoadhesive polymers, various types of dosage forms, and general considerations in design of mucoadhesive buccal dosage forms, permeation enhancers, and evaluation methods. The buccal region of the oral cavity is an attractive target for administration of the drug of choice, particularly in overcoming deficiencies associated with the latter mode of administration. Mucoadhesive polymers are used to improve drug delivery by enhancing the dosage form's contact time and residence time with the mucous membranes. These systems remain in close contact with the absorption tissue, the mucous membrane, and thus contribute to improved and/or better therapeutic performance of the drug and of both local and systemic effects. Mucoadhesion may be defined as the process where polymers attach to biological substrate or a synthetic or natural macromolecule, to mucus or an epithelial surface. To prevent accidental swallowing of drugs adhesive mucosal dosage forms were suggested for oral delivery, which included adhesive tablets, adhesive gels, adhesive patches and many other dosage forms with various combinations of polymers, absorption enhancers. The effective physiological removal mechanisms of the oral cavity that take the formulation away from the absorption site are the other obstacles that have to be considered. Natural polymers have recently gained importance in pharmaceutical field.