

FACT SHEET: TOBACCO AND GASTROINTESTINAL SYSTEM

Tobacco and Oral Diseases:

- The oral effects of smoking range from harmless stains of teeth and dental restorations to serious diseases such as oral cancer.¹
- The plausible mechanism for smoking leading to cancer is that carcinogens in tobacco smoke can induce changes in DNA through tumor suppressor gene coding for the protein p53.¹
- Smoking and excessive alcohol intake synergistically increase the risk of developing oral cancer.¹
- The majority of oral cancers, constituting 2–3% of all cancers worldwide, are squamous cell carcinomas developing from the mucosal surface epithelium.¹
- Oral leukoplakia, the most common premalignant lesion in the mouth, and periodontitis are far more common in smokers than in non-smokers.¹
- Implant failures attributable to smoking seem to be more common in the maxilla than in the mandible.¹
- A consistent finding in smokers is an increased concentration of thiocyanate in saliva.¹
- Smoking is associated with higher incidence of dental caries. Maternal smoking is associated with the occurrence of caries in preschool children.¹
- Smoking causes discoloration of teeth, dental restorations, and dentures, affecting the aesthetic appearance of the mouth.¹
- Smoking is a common cause of halitosis, and it affects the acuity of smell and taste.¹

Tobacco and Non-malignant GI Diseases

- Smoking stimulates basal acid output and pepsinogen secretion.²
- Smoking significantly decreases total mucous neck cell population and neck-cell mucus volume and increases bile salt reflux rate and gastric bile salt concentration, thereby increasing duodenogastric reflux.²
- Smoking not only induces ulceration but also potentiates ulceration caused by H. pylori, alcohol, and nonsteroidal anti-inflammatory drugs.²
- Smoking decreases prostaglandin generation in the gastric mucosa of smokers, thereby making the mucosa susceptible to ulceration.²
- Smoking or smoke extract impairs both spontaneous and drug-induced healing of ulcer.²
- Smoking weakens the lower oesophageal sphincter, which allows stomach acid to flow into the esophagus.³
- Smoking harms the liver's ability to process drugs, alcohol, and other toxins and worsens liver disease caused by drinking too much alcohol.³
- Among people with Crohn's disease, smoking is linked with a higher rate of relapse, repeat surgery, and the need for drug therapy.³

- Smoking may increase the risk of developing gallstones.³

REFERENCES FOR THE FACT SHEET:

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3. National Digestive Diseases Information Clearinghouse (NDDIC, a service of NIH), Smoking and your digestive system. NIH Publication No. 06–949, 2006. Available at: <http://digestive.niddk.nih.gov/ddiseases/pubs/smoking/#harm>.