

Prescribed medications, non prescribed medications and recreational drugs



1

Objectives

- Understand the health risks of diet, drugs and substance misuse on oral and general health
- Explain how to provide appropriate advice and support for patients

2

Prescribed Drugs



General Health Risks:

- Gastrointestinal issues: NSAIDs (e.g., ibuprofen) can cause ulcers and bleeding.
- Organ damage: Long-term use of drugs like analgesics acetaminophen /paracetamol can damage the liver; some antibiotics may impact kidneys.
- Dependency: Certain medications, especially opioids or benzodiazepines, can lead to addiction.
- Immune suppression: Steroids or cancer drugs can reduce immune function.

3

Prescribed Drugs



Oral Health Risks:

- Xerostomia (dry mouth): Common with antidepressants, antihistamines, antihypertensives — can lead to decay, gum disease.
- Gingival hyperplasia: Drugs like phenytoin (for seizures) or cyclosporine (immunosuppressant) can cause gum overgrowth.
- Tooth discoloration: Tetracycline antibiotics can stain developing teeth.
- Oral candidiasis: Inhaled corticosteroids can cause fungal infections in the mouth.

4

Nonprescription (Over-the-Counter) Drugs

General Health Risks:

- Overdose: Acetaminophen toxicity is a leading cause of acute liver failure.
- Kidney damage: Chronic NSAID use can reduce kidney function.
- Drug interactions: OTC drugs can interact dangerously with prescription medications.

Oral Health Risks:

- Mouth ulcers: Aspirin held in the mouth can cause burns.
- Dry mouth: Antihistamines and decongestants often reduce saliva flow.
- Delayed healing: Some OTCs (e.g., NSAIDs) may impair wound healing after dental procedures.

5

Recreational Drugs

General Health Risks:

- Addiction and overdose: Especially with opioids, stimulants, and sedatives.
- Infectious disease: Injection drug use increases risk of HIV, hepatitis.
- Mental health deterioration: Chronic use can worsen anxiety, depression, and psychosis.
- Organ damage: Alcohol → liver; cocaine → heart; methamphetamine → brain.



6

Recreational Drugs

Oral Health Risks:

- "Meth mouth": Methamphetamine use causes severe decay, fractured teeth, gum disease.
- Bruxism (teeth grinding): Common with stimulants (e.g., MDMA, cocaine).
- Dry mouth and high sugar cravings: Cannabis and others lead to increased risk of cavities.
- Neglected oral hygiene: Users may ignore dental care.



7

Vaping



Inflammation and Irritation

- Nicotine and other chemicals in e-cigarette vapor can irritate the oral mucosa, leading to inflammation, redness, and discomfort.
- Common symptoms include burning sensation, dry mouth, or soreness, especially in heavy users.

Cytotoxic Effects

- E-liquids and aerosols can be cytotoxic (toxic to cells), particularly to oral epithelial cells.
- This can result in cellular damage, apoptosis (programmed cell death), and impaired wound healing in the oral cavity.

8

Oral Changes with Vaping



Changes in Oral Microbiome

- Vaping may shift the oral microbial balance, favouring pathogenic bacteria.
- This dysbiosis can increase the risk of periodontal disease, caries, and oral infections like candidiasis (oral thrush).
- Delayed wound healing

Increased Risk of Oral Lesions

- Vapers may develop white lesions, ulcerations, or hyperkeratotic changes on the mucosa.
- These lesions can sometimes mimic pre-cancerous conditions.
- Some studies suggest vaping reduces salivary flow

9

Role of the Dental Professional



10

For Patients Using Prescribed Medications

Advice:

- Disclose all medications: Encourage patients to bring a full list of medications, including dosages.
- Manage dry mouth: Recommend sugar-free gum, saliva substitutes, or increased hydration.
- Prevent oral complications:
 - Use high-fluoride toothpaste or rinses for patients at risk of decay.
 - Schedule more frequent cleanings if they're on medications causing gingival overgrowth or immunosuppression.
- Coordinate care: Collaborate with the patient's physician for adjustments if oral side effects are significant.

11

Patients Using Nonprescription (OTC) Drugs

Advice:

- Use only as directed: Warn against exceeding recommended doses of painkillers like paracetamol or ibuprofen.
- Monitor for dry mouth or ulcers: Discuss common side effects of decongestants, antihistamines, and encourage preventive care.
- Oral hygiene education: Reinforce the importance of regular brushing and flossing to offset OTC-induced dry mouth or inflammation.

12

Patients Using Recreational Drugs



Explain oral consequences:

- Describe how substances like meth, cocaine, cannabis, and alcohol impact teeth and gums.
- Use visual aids to illustrate damage if appropriate.

Offer specific recommendations:

- Meth or cocaine: Encourage frequent rinsing with water or baking soda, fluoride treatments, and regular dental visits.
- Cannabis: Address dry mouth, recommend non-cariogenic snacks.
- Alcohol: Discuss risk of oral cancer, especially with tobacco use.

13

Patients Using Recreational Drugs



Promote harm reduction:

- Suggest rinsing after vomiting or drug use to protect enamel.
- Recommend using a straw to minimize contact with teeth (for sugary drinks or alcohol).

Refer to support services:

- If the patient is open, provide referrals to medical, mental health, or substance use support.
- Emphasize that oral health can improve significantly with even small reductions in drug use.

14

Communication

- Use non-stigmatizing language: Say "person who uses substances" rather than "addict."
- Ensure confidentiality: Reassure patients that disclosures are private unless there's a risk of harm.
- Avoid moralizing: Focus on health impacts, not judgment.
- Be empathetic: Acknowledge the challenges they face and affirm any steps they take toward health.

15

Tobacco and Oral Health

Gum Disease (Periodontitis)

- Tobacco reduces blood flow to the gums, masks inflammation, and weakens immune response.
- Smokers are 2-6 times more likely to develop severe gum disease.

Tooth Staining

- Nicotine and tar cause persistent yellow/brown stains that are hard to remove.

Bad Breath (Halitosis)

- Caused by dry mouth and buildup of bacteria.



16

Smoking and Oral Health

- Oral Cancer
 - Strongly linked to cancers of the lips, tongue, cheeks, and throat.
 - Smokeless tobacco (chewing tobacco, snuff) is also highly carcinogenic.
- Tooth Loss
 - Smokers are more likely to lose teeth due to bone loss and advanced gum disease.
- Leukoplakia
 - White patches in the mouth, sometimes precancerous.

17

Alcohol and Oral Health

- Xerostomia
- Tooth Erosion
- Oral Cancer
- Poor OH
- Gingivitis
- Poor Nutrition



18

Combined Use of Alcohol + Tobacco

- Increases oral cancer risk 15 times or more compared to non-users.
- Intensifies periodontal disease progression.
- Leads to more severe dry mouth and enamel erosion.
- Often results in poorer dental outcomes and more tooth loss.



19

Preventive Advice

- Quit or reduce use: Strongly encourage cessation of both substances.
- Regular screenings: Especially for oral cancer, gum disease, and soft tissue lesions.
- Improved oral hygiene: More frequent brushing with fluoride toothpaste, flossing, and dental visits.
- Use of saliva substitutes: To combat dry mouth.
- Limit acidic drinks: Rinse with water after alcohol consumption.

20



Oral Cancer

Signs and Symptoms

21

Oral Cancer

Signs

- Visible lesion
- Lump/swelling
- Altered sensation
- Voice change
- Mobility of teeth
- Bleeding

Symptoms

- Pain/discomfort
- Functional changes
- Numbness
- Hoarseness
- Loose teeth
- Poorly fitting denture



22

High-Risk Areas

- Lateral borders and underside of the tongue
- Floor of the mouth
- Soft palate
- Inside of the cheeks
- Lips (especially lower lip in sun-exposed individuals)



23

Screening and Early Detection

Dental professionals should:

- Perform routine oral cancer screenings at every dental exam.
- Educate patients—especially those who use tobacco, alcohol, or have HPV exposure—about risk factors and warning signs.



24

MCQs



- Which of the following is a common oral manifestation of chronic methamphetamine use?
 - Tooth erosion
 - Gingival enlargement
 - "Meth mouth"
 - Enamel hypoplasia
- Which drug is most commonly associated with gingival hyperplasia?
 - Ibuprofen
 - Phenytoin
 - Metformin
 - Amoxicillin

25

MCQs



- Which combination increases the risk of oral cancer most significantly?
 - Alcohol and caffeine
 - Sugar and smoking
 - Alcohol and tobacco
 - Spicy food and smoking
- Leukoplakia is best described as:
 - A painful ulcer that resolves in 3 days
 - A red lesion on the tongue
 - A white patch that cannot be wiped off and has no known cause
 - A black hairy tongue

26

MCQ

- Which of the following is a common oral side effect of many antidepressants?
 - Gingival bleeding
 - Dry mouth
 - Tooth sensitivity
 - Oral thrush

27

Short Answer Questions (SAQs)

- List four oral health effects of tobacco use.
- Describe the signs and symptoms of oral cancer.
- Mention three oral side effects of recreational drug use.
- Explain how alcohol contributes to oral cancer development.
- What is leukoplakia and why is it significant in oral cancer screening?
- List three ways in which prescribed medications can affect oral health.
- Give two examples of drugs that can cause gingival hyperplasia.
- How does dry mouth increase the risk of dental caries?
- List two counseling strategies a dentist should use with a patient who smokes.

28

Answers

List four oral health effects of tobacco use.

- Periodontal disease
- Tooth staining
- Delayed wound healing
- Oral cancer

Describe the signs and symptoms of oral cancer.

- Non-healing ulcer
- Red or white patches (erythroplakia or leukoplakia)
- Lump or thickening in the mouth
- Pain, difficulty swallowing or speaking

29

Answers

List three oral side effects of recreational drug use.

- Severe dental decay ("meth mouth")
- Bruxism (teeth grinding)
- Xerostomia (dry mouth)

Explain how alcohol contributes to oral cancer development.

- Alcohol metabolizes into acetaldehyde, a carcinogen
- Causes tissue irritation and promotes cellular changes
- Enhances carcinogenic effects of tobacco
- Reduces immune defense in oral tissues

30

Answers

What is leukoplakia and why is it significant in oral cancer screening?

- Leukoplakia is a white patch in the mouth that cannot be rubbed off and has no obvious cause
- It is considered a potentially malignant lesion and requires monitoring or biopsy

List three ways in which prescribed medications can affect oral health.

- Cause dry mouth (xerostomia)
- Lead to gingival overgrowth (e.g., phenytoin)
- Cause candidiasis due to immunosuppression or inhaled steroids

31

Answers

Give two examples of drugs that can cause gingival hyperplasia.

- Phenytoin (antiepileptic)
- Cyclosporine (immunosuppressant)

How does dry mouth increase the risk of dental caries?

- Reduces saliva's natural cleansing and buffering action
- Allows bacterial acids to accumulate, leading to demineralization

32

Answers

List two counseling strategies a dentist should use with a patient who smokes.

- Use motivational interviewing techniques to support quitting
- Provide referrals to smoking cessation programs or nicotine replacement therapy



33