

Table 2.1. Risk Factors for Cardiovascular Disease

Modifiable	Nonmodifiable
High blood pressure	Age
Atherosclerosis/dyslipidemia	Sex
Diabetes	Family history
Tobacco smoking	
Obesity/diet	
Inactivity	
Stress	
Alcohol use	

Table 2.2. Common Medications for Cardiovascular Disease and Oral Adverse Drug Reaction/Dental Implication

Cardiovascular Drug Category	Culprit Drug	Oral Adverse Drug Reaction/ Dental Implication and Likelihood of Association
Alpha-adrenergic blockers	Class effect Methyldopa	<i>Est:</i> dry mouth <i>Pos:</i> lichenoid drug eruption
Beta-adrenergic blockers	Class effect/unspecified Labetolol/unspecified Atenolol, oxprenolol, practolol, propranolol Propranolol Practolol Carvediol Propranolol (sublingual)	<i>Est:</i> dry mouth, angioedema <i>Prob:</i> aphthae/ulcers <i>Pos:</i> lichenoid drug eruption <i>Pos:</i> thrombocytopenia <i>Pos:</i> oculo-mucocutaneous syndrome <i>Pos:</i> SJS <i>Pos:</i> mouth paresthesia
Angiotensin-converting enzyme (ACE) inhibitors	Class effect Class effect Captopril, enalapril Captopril Captopril, enalapril, lisinopril Lisinopril Captopril	<i>Est:</i> angioedema <i>Est:</i> neutropenia/agranulocytosis <i>Est:</i> taste disturbances <i>Prob:</i> aphthae/ulcers; pemphigus <i>Prob:</i> scalded mouth syndrome <i>Prob:</i> dry mouth <i>Pos:</i> lichenoid drug eruption
Antiotensin II receptor blocker	Losartan	<i>Prob:</i> angioedema

(Continued)

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Cardiovascular Drug Category	Culprit Drug	Oral Adverse Drug Reaction/ Dental Implication and Likelihood of Association
Anti-arrhythmics, Class I (sodium channel blockers)	Class effect Phenytoin Phenytoin Quinidine Quinidine	<i>Est:</i> dry mouth <i>Est:</i> gingival overgrowth; hypersensitivity reaction syndrome <i>Prob:</i> agranulocytosis; SJS, TEN <i>Prob:</i> thrombocytopenia <i>Pos:</i> FDE
Anti-arrhythmics, Class III (potassium channel blockers)	Amiodarone Amiodarone	<i>Prob:</i> angioedema <i>Pos:</i> taste disturbance
Calcium channel blockers	Class effect Diltiazem, verapamil Nifedipine, diltiazem Amlodipine	<i>Est:</i> gingival overgrowth, dry mouth, taste disturbances <i>Pos:</i> aphthae/ulcers, EM, SJS, TEN <i>Pos:</i> angioedema <i>Pos:</i> lichenoid drug eruption
Diuretics	Class effect Amiloride, furosemide, hydrochlorothiazide Amiloride, spironolactone Bendrofluzide, furosemide/ spironolactone Hydrochlorothiazide, furosemide Unspecified	<i>Est:</i> dry mouth <i>Prob:</i> agranulocytosis, thrombocytopenia <i>Prob:</i> taste disturbance <i>Uncertain/Pos:</i> lichenoid drug eruption <i>Pos:</i> EM, SJS, TEN, drug hypersensitivity reaction <i>Pos:</i> angioedema
Potassium channel opener	Nicorandil	<i>Prob:</i> aphthae/ulcers
Direct-acting peripheral vasodilator	Hydralazine	<i>Prob:</i> lupus erythematosus
Lipid regulators (statins)	Simvastatin	<i>Pos:</i> cheilitis, lichenoid drug eruption
Platelet inhibitors	Aspirin Aspirin	<i>Prob:</i> FDE <i>Pos:</i> angioedema
Anticoagulants	Warfarin, dabigatran, rivaroxaban	<i>Est:</i> impaired hemostasis

Est, established drug reaction; *Prob*, probable drug reaction; *Pos*, possible drug reaction; SJS, Stevens–Johnson syndrome; TEN, toxic epidermal necrolysis; FDE, fixed drug reaction; EM, erythema multiforme.
Modified from Torpet et al.¹⁰

Table 2.3. Outpatient Dental Care Guidelines for the Adolescent or Adult Patient with Hypertension^a

Patient Age (Years)	BP Level (mmHg)	Elective Dental Care	Emergency Dental Care
Adult (>18)	<160/100	No modification	No modification
Adult (>18)	>160/100 ^b	Repeat measurement 1. If lowered or within written guidelines from physician ⇒ proceed. 2. If confirmed ⇒ no elective dental treatment and patient seeks consultation with physician.	Repeat measurement 1. If lowered or within written guidelines from physician ⇒ proceed. 2. If confirmed SBP 160–180 and/or DBP 100–109 where dental symptoms and pain contribute to HTN ⇒ initiate emergency care with BP monitoring every 10–15 minutes during procedure; consider anxiety reduction techniques. 3. If confirmed SBP >180 and/or DBP >109 ⇒ dentist seeks consultation with physician before proceeding.
Adolescent (10–17)	<140/90	No modification	No modification
Adolescent (10–17)	140–160/90–100	Repeat measurement 1. If lowered or within written guidelines from physician ⇒ proceed. 2. If confirmed ⇒ no elective dental treatment and patient seeks consultation with physician.	Repeat measurement 1. If lowered or within written guidelines from physician ⇒ proceed. 2. If confirmed SBP 140–160 and/or DBP 90–100 where dental symptoms and pain contribute to HTN ⇒ initiate emergency care with BP monitoring every 10–15 minutes during procedure; consider anxiety reduction techniques.
Adolescent (10–17)	>160/100 ^b	Same as above for adolescent with BP 140–160/90–100.	Repeat measurement 1. If lowered or within written guidelines from physician ⇒ proceed. 2. If confirmed SBP >160 and/or DBP >100 ⇒ dentist seeks consultation with physician before proceeding.

^a BP measurement should begin after the patient has been at rest a minimum of 5 minutes, with proper BP cuff size for patient (too small a cuff falsely elevates BP), with the patient in a sitting or supine position, and the patient's bare arm extended at heart level.

^b Patients with SBP >180 and/or DBP >110 should be referred to their physician as soon as possible or sent for urgent medical evaluation if symptomatic.

HTN, hypertension; BP, blood pressure; mmHg, millimeters of mercury; SBP, systolic BP; DBP, diastolic BP.

Table 2.4. Summary of AHA Infective Endocarditis Antibiotic Premedication Guidelines

Cardiac conditions associated with the highest risk of adverse outcome from endocarditis for which prophylaxis with dental procedures is recommended

- Prosthetic cardiac valve
- Previous infective endocarditis
- Congenital heart disease
 - Unrepaired cyanotic conditions
 - Completely repaired with prosthetic material within the first 6 months after the repair
 - Incompletely repaired with prosthetic material
- Cardiac transplantation patients who develop valvulopathy

Dental procedures for which antibiotic prophylaxis is recommended

- All dental procedures that involve the manipulation of gingival tissue or the periapical region of teeth or perforation of the oral mucosa
 - This does *not* include
 - routine anesthetic injections through noninfected tissue,
 - dental radiographs,
 - placement or removal of prosthodontic or orthodontic appliances,
 - adjustment of appliances,
 - shedding of deciduous teeth,
 - bleeding from trauma to the lips or oral mucosa.
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Table 2.5. Antibiotic Prescriptions (Single Dose 30–60 Minutes before Dental Procedure)

Route of Administration	Antibiotic	Adult Dosage	Child Dosage
Oral	Amoxicillin	2 g	50 mg/kg
	Clindamycin	600 mg	20 mg/kg
	Cephalexin	2 g	50 mg/kg
	Azithromycin	500 mg	15 mg/kg
Unable to take oral meds	Ampicillin or cefazolin	2 g IM or IV	50 mg/kg IM or IV
	Ceftriaxone	1 g IM or IV	50 mg/kg IM or IV
	Cefazolin or ceftriazone	1 g IM or IV	50 mg/kg IM or IV
	Clindamycin	600 mg IM or IV	20 mg/kg IM or IV

Adapted from Wilson et al.²⁶