

Medical Assessment of Dental Patients

The challenge for practicing dentists is to evaluate the stability of patients in order to provide safe dental care.

Medical Clearance Does Not Clear the Patient or Dentist of Risks

- **“Medical Clearance”** is when a dentist requests clearance from an assessing physician before performing treatment on a patient
- **Cardiovascular risk is the number one reason to request medical clearance**, but other risks that call for medical clearance include congestive heart failure, pulmonary embolism, anticoagulation, obesity, and high blood pressure
- **Medical clearance is a misnomer because it implies that the patient is cleared and there are no risks**
- **No patient is free of risk** when undergoing a procedure. The goals of the assessment are to determine the level of risk and to identify opportunities to mitigate risk—with the surgeon and the assessing physician working in concert
- **The decision about whether to proceed with the operation belongs to the surgeon and the patient**



“Unfortunately, many dentists erroneously believe they can limit their liability by requesting ‘medical clearance’ for a procedure.”

*“Regardless of whether the dentist requests or the physician provides ‘medical clearance,’ it **does not shift liability for the treatment** rendered by the dentist from the dentist to the consulting physician.”*

“The physician provides information; the dentist makes the decisions on appropriate dental care.”

Reference: JADA 2012;143(11):1180-1

Other Notes or Questions to Ask:

TEN FOOT POLE PATIENTS: *Those patients that, because of their medical history or dental condition, can be risky to treat!*

Focusing on **Medical History**, who are they?
Some possible examples:

- Recent Heart Attack or Stroke
- Recent Cardiac Stent
- On Anticoagulant or Antiplatelet
- Uncontrolled Diabetes
- Undergoing Chemotherapy
- Pregnancy
- Illicit Drug Users/Abusers



Recent Heart Attack or Stroke (JADA 2012;143(1):1190-98.)

- How long do I have to wait to treat?
- Myocardial Infarction
 - Complicated MI = 6 month or more
 - Uncomplicated MI = 1 month
- Stroke
 - Unstable = emergent care only
 - Stable = 1 month
- Tips for safer appointments
 - Short, morning appts
 - Stress mitigation
 - Control risk factors (BP, drug interactions, hemostasis)
 - Monitor vital signs
 - Judicious use of vasoconstrictors

Recent Cardiac Stents (JADA 2008;139(1):3S-24S.)

- Do I need to give antibiotic prophylaxis? Generally, NO!
- Indicated if treatment to be performed within the first 30 days after insertion
- May be useful when treating acute dental infection, regardless of time since placement
- Do not stop/interrupt antiplatelet agents
- Also, applies to pacemakers

Other Notes or Questions to Ask:

Anticoagulants and Antiplatelets (JADA 2003;134:1492-7.)

- Assess underlying medical stability
- In general, do not interrupt anticoagulants or antiplatelets unless procedure involves potential for moderate/severe bleeding
 - Platelets > 150,000 mcL (Plavix, Brilinta, Effient, ASA)
- Risk/Benefit ratio often indicates it is safer to treat patients on these medications and control bleeding with local measures
- INR ≤ 3.5 may receive conservative dental care
- INR does not apply to newer anticoagulants (eg, Pradaxa, Xarelto, Eliquis, etc.)

Uncontrolled Diabetes (JADA 2003 ;134 suppl 1:24S-33S)

- Assess stability (BG, HgA1c)
- Comorbid diseases (CV, Neuropathy, Kidney dz, delayed wound healing, etc)
- Medication regimen and prevention of hypoglycemia
- Emergent care only, consider Abx prophylaxis if HgA1c ≥ 9%

Patient Undergoing Chemotherapy

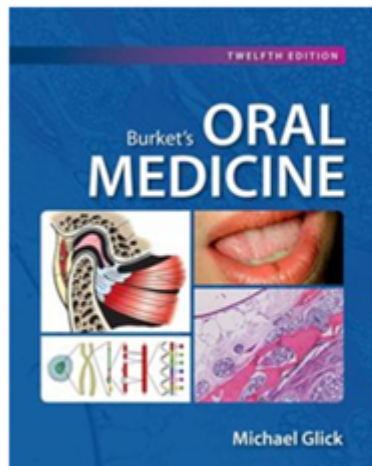
(Burket's Oral Medicine 2014, p. 201-10.)

- Level of immune suppression (WBC, ANC)
- Abx prophylaxis may be necessary
- Drug interactions (eg, bisphosphonates)
- Palliation of xerostomia and oropharyngeal pain
- Bleeding risk?

Pregnancy (JADA 2012;143(8):858-71.)

- Dentistry is usually safe during pregnancy
- Be mindful of patient positioning
- Safest local anesthetic = Lidocaine WITH epi (or prilocaine)
- Radiographs are ok with appropriate shielding
- Pain medications (Tylenol with opioid) and Abx (penicillins, Z-pak, clindamycin) are ok

Other Notes or Questions to Ask:



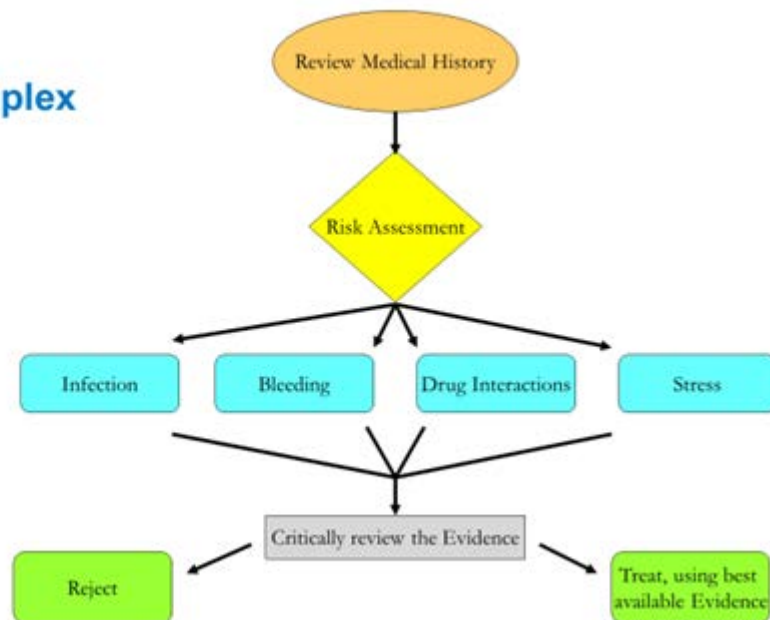
“A physician cannot ‘clear’ a patient for treatment.”

“A physician’s advice and recommendation may be helpful in managing a dental patient, but the responsibility to provide safe and appropriate care lies ultimately with the oral health-care provider.”

Burket's Oral Medicine. 2014. 12th Ed. Chapter 1, p 8-9.

Management of Medically Complex Patients

1. Drug actions and interactions of medications patients are taking
2. Patient's ability to withstand the stress of dental care
3. Patient's ability to achieve hemostasis
4. Patient's susceptibility to infections



Burket's Oral Medicine. 2008.

Other Notes or Questions to Ask:

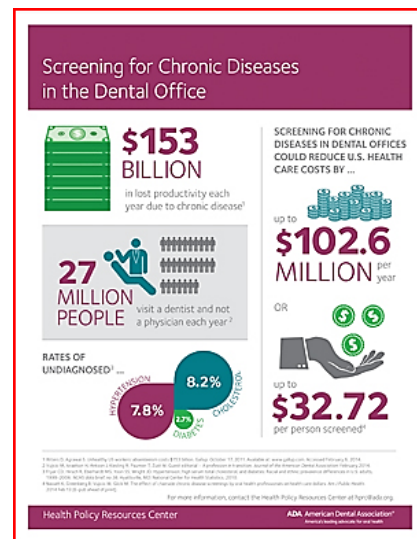
Dentists are faced with several problems that make risk assessment difficult:

- Patients are getting older
- Patients are retaining their teeth later in life
- More ambulatory patients with medical conditions
- More patients on polypharmacology

Changes Associated with Aging	
<p>Liu LL, in <u>Conscious Sedation</u>, 2001</p> <p>Cardiovascular System</p> <ul style="list-style-type: none"> ↓ cardiac output ↓ elasticity ↑ incidence of ischemic heart dz 	<p>Central Nervous System</p> <ul style="list-style-type: none"> ↓ neurons and cerebral mass ↑ incidence of postoperative delirium ↑ sensitivity to anesthetics ←
<p>Respiratory System</p> <ul style="list-style-type: none"> ↓ alveolar gas exchange surface ↓ upper airway reflexes ← ↓ response to hypoxia and hypercarbia 	<p>Renal System</p> <ul style="list-style-type: none"> ↓ renal blood flow ↓ ability to conserve free water ↓ ability to secrete acid and conserve sodium
<p>Hepatic System</p> <ul style="list-style-type: none"> ↓ liver blood flow ↓ drug clearance ← 	<p>Thermoregulation</p> <ul style="list-style-type: none"> ↓ temperature regulation ↓ vasoconstriction and shivering

More patients will present to the dental office with chronic medical conditions:

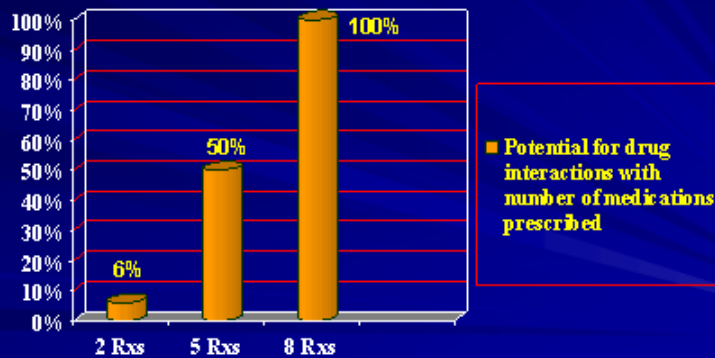
- \$153 billion in lost production each year due to chronic disease
- 27 million people visit a dentist and not a physician each year
- Screening for chronic diseases in dental offices could reduce U.S. health care costs by \$102.6 million per year or...\$37.72 per patient screened



American Journal of Public Health:
April 2014, Vol. 104, No. 4, pp. 744-

Other Notes or Questions to Ask:

How many patients do you have taking more than 1 drug?



Johnson AG, et al. *Int J Clin Pharmacol Ther* 1994;32(10):509-32.

Question... Do your patients tell you the truth on the medical history questionnaire?

Reasons noted for refusing to reveal information on a health history form	
Unimportant information	17%
Privacy	62%
Afraid of refusal of treatment	7%
Other	14%

23% of respondents would be reluctant to note current drug abuse on a dental history questionnaire!

10% of respondents believed that dental health professionals do not need to be fully aware of a patient's health status!

From: McDaniel TF et al. *JADA* 1995;126:375-9.

Other Notes or Questions to Ask:

Medical History Questionnaire

- Screening for medical problems
- Monitoring medical conditions
- Assessing and evaluating medical conditions and diseases that may create risks to the dental patient
- Assessing and evaluating modifications to dental care
- Verify history with verbal interview

ASA Physical Status Classification

1. A normal healthy patient
 2. A patient with a mild systemic disease
 3. A patient with a severe systemic disease that limits activity, but is not incapacitating.
 4. A patient with an incapacitating systemic disease that is a constant threat to life.
 5. A moribund patient not expected to survive 24 hours with or without operation.
 6. A declared brain-dead patient whose organs are being removed for donor purposes
- In the event of an emergency, precede the number with an "e"

ASA Physical Status Classification. American Society of Anesthesiologists.
Available at: www.asahq.org/clinical/physical_status.htm

ASA Physical Status Classification

- Devised in 1941 as a statistical tool for retrospective analysis of hospital records; the ASA physical status classification was revised in 1961 (JAMA;178:261-6).
- Originally, ASA classification was not intended to assign “operative risk”, but merely to describe the “physical status” of a patient prior to an operation.

Limitations of ASA Classifications

The classification makes no adjustments for:

- × Age
- × Sex
- × Weight
- × Pregnancy
- × Type of operation
- × Type of anesthesia
- × Skill or training of surgeon

Therefore, the same assignment of “risk” cannot be given to a single patient undergoing different surgical procedures

Other Notes or Questions to Ask:

ASA Classification Examples

ASA 1: Patient without systemic disease; a normal, healthy patient

ASA 2: Patient with mild systemic disease

Type II Diabetes Mellitus
Controlled or exercise induced asthma
Controlled epilepsy
Controlled HTN

ASA 3: Patient with severe systemic disease that limits activity but is non-incapacitating

Stable angina
Myocardial infarction or Stroke (>6 mos)
Type 1 Diabetes Mellitus
Congestive Heart Failure (CHF)
Chronic Obstructive Pulmonary Disease (COPD)
Uncontrolled asthma
BP > 160/95

ASA 4: Patient with an incapacitating systemic disease that is a constant threat to life

Myocardial infarction or Stroke (<6 mos)
Unstable angina
BP > 200/115
CHF or COPD on O₂
Uncontrolled epilepsy
Uncontrolled Diabetes Mellitus

ASA 5: Moribund pt. who is not expected to survive 24 hours with or without an operation

Ruptured aortic aneurysm
Massive pulmonary embolism

ASA 6: A declared brain dead pt. whose organs are being removed for donor purposes

An "E" can be assigned to any classification to denote emergency status

Other Notes or Questions to Ask:

USC Physical Evaluation System

	ASA Physical Status Classification	Therapy Modifications
I	A normal healthy patient	None (Stress reduction as indicated)
II	A patient with mild to moderate systemic disease	Possible stress reduction and other modifications as indicated
III	A patient with severe systemic disease that limits activity but is not incapacitating	Possible strict modifications; stress reduction and medical consultation are priorities
IV	A patient with severe systemic disease that limits activity and is a constant threat to life	Minimal emergency care in office; hospitalize for stressful elective treatment; medical consultation urged
V	A moribund patient not expected to survive 24 hours with or without an operation	Treatment in the hospital is limited to life support only; for example, airway and hemorrhage management

McCarthy & Malamed. JADA 1979;99:181-4.

Medical Risk Assessment for Dentistry

Operative Risk should be assigned based on:

- Medical Complexity (Controlled vs. Uncontrolled)
- Potential severity of adverse events
 - None
 - Minor
 - Major
- Potential modifications needed (e.g. before, during, and/or after)

Other Notes or Questions to Ask:

Medical Complexity Status

MC-0	No significant medical problems
MC-1A	Controlled and stable condition/disease No anticipated complications
MC-1B	Controlled and stable condition/disease Anticipated/possible minor complications
MC-1C	Controlled and stable condition/disease Anticipated/possible major complications
MC-2A	Poorly controlled and/or unstable condition/disease No anticipated complications
MC-2B	Poorly controlled and/or unstable condition/disease Anticipated/possible minor complications
MC-2C	Poorly controlled and/or unstable condition/disease Anticipated/possible major complications
MC-3	Cardiac or other conditions needing continuous monitoring

Goodchild & Glick. *Endodontic Topics* 2003;4:1-8.

Potential for Adverse Events

1. Drug actions and interactions of medication patients are taking and oral sedative given by the dentist
2. Patient's ability to withstand the stress of dental care
3. Patient's ability to achieve hemostasis
4. Patient's susceptibility to infections

Modification of dental care or when to institute changes to protocol

- Before Treatment
- During Treatment
- After Treatment

Setting or the most appropriate place to treat

- Patient can be treated as an out-patient in a general dental office
- Patient can be treated as an out-patient in a hospital dental setting
- Patient requires continuous monitoring in an operating room or short-procedure unit

Other Notes or Questions to Ask:
