Preparing for a Medical Emergency in the Dental Office

It is the College’s expectation that all Ontario dentists and their support staff are prepared should a medical emergency arise. This article summarizes ways to ensure that this expectation is met.

Assessment
The treatment of a medical emergency in a dental office begins with assessment and, if necessary, treatment of airway, breathing and circulation by means of cardiopulmonary resuscitation. Most often, only after these basics have been addressed, should the use of the emergency kit be considered.

All members are encouraged to review the College’s LifeLong Learning CD, Medical Emergencies in the Dental Office, that deals extensively with this subject.

Emergency Drugs
The six basic drugs that should be included in the emergency kit of every dental office and their recommended dosages are listed in the accompanying table on the next page.

Additional agents may be appropriate depending on the nature of the dental practice.

These emergency drugs should have current dates and be stored in readily identifiable and organized fashion (i.e. labelled trays or bags) or organized in a kit similar to the one presented in the Medical Emergencies in the Dental Office CD.

The arrangement of the emergency drugs in such a manner assists dentists and staff in responding to a medical emergency in a capable and confident way, despite the emotional stress and anxiety created by the emergency.

In addition to having an emergency kit available with the recommended drugs, it is advisable that some type of quick source of glucose also be on hand.

Other Requirements
It is also recommended that in all dental offices:

• All dental office staff have CPR training.
• A written emergency protocol is in place in the office.
• All dental office staff should be aware of this protocol and the procedures to follow when a medical emergency arises. This protocol should be periodically reviewed at staff meetings so everyone is clear about who does what when an emergency occurs.

Offices providing conscious sedation, deep sedation and/or general anaesthesia are required to have specific other emergency drugs and armamentaria. These lists can be found in the RDCSO Guidelines on the Use of Sedation and General Anaesthesia in Dental Practice. This is available on our website at www.rcdso.org under the heading of Professional Practice in the navigation bar on the left-hand side of the home page.
**The American Heart Association publication on Advanced Cardiac Life Support, 1997, page 1-51, suggests having ASA (acetylsalicylic acid) readily available for administration to a patient who has new pain suggestive of an acute myocardial infarction. A dose of 160 or 325 mg should be taken as soon as possible in this situation, unless there is a contraindication such as hypersensitivity, severe asthma or severe ulcer disease. ASA will be added to the suggested list of emergency drugs for dental practice in the 2001 edition of the Compendium of Pharmaceuticals and Specialities (CPS).**

**Summary**

It is important that dentists update their knowledge on the management of dental office emergencies from time to time by including courses and seminars on this subject and on dental pharmacology in their ongoing continuing education plans. Reviewing the College’s LifeLong Learning Program CD on Medical Emergencies in the Dental Office periodically would also be helpful.

**LIFELONG LEARNING PROGRAM:**  
Medical Emergencies in the Dental Office

The CD-ROM features a section on office preparedness and the responsibilities of individual staff members. It also includes instructional material and simulations of various medical emergencies.

Step-by-step summary sheets on each of the emergency situations are available to be downloaded. You can keep a hard copy in your office or access the information from your office computer for quick and easy reference when an emergency situation occurs.

Dr. Dan Haas, Professor of Pharmacology in both the Faculties of Dentistry and Medicine at the University of Toronto, is the content consultant and the key presenter. Dr. Haas is one of the leading authorities in North America on this subject and has garnered honours for his work in this area.

This program was distributed at no charge to members in 2005. Members can purchase a replacement copy of this educational package for $50. There is an order form online on the College’s website at www.rcdso.org. Just click on the Quality Assurance heading in the navigation bar on the left-hand side of the home page, and then click on LifeLong Learning.

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### Preparing for a Medical Emergency in the Dental Office

<table>
<thead>
<tr>
<th>DRUG</th>
<th>INDICATION</th>
<th>INITIAL ADULT DOSE</th>
<th>RECOMMENDED CHILD DOSE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oxygen</td>
<td>Most medical emergencies</td>
<td>100% inhalation</td>
<td>100% inhalation</td>
</tr>
<tr>
<td>Epinephrine</td>
<td>Anaphylaxis</td>
<td>0.1 mg i.v or</td>
<td>0.01 mg/kg</td>
</tr>
<tr>
<td></td>
<td></td>
<td>0.3-0.5 mg i.m*</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Asthmatic bronchospasm</td>
<td>0.3 mg i.v or</td>
<td>0.01 mg/kg</td>
</tr>
<tr>
<td></td>
<td>which is unresponsive to salbutamol</td>
<td>0.5 mg i.m*</td>
<td></td>
</tr>
<tr>
<td>Nitroglycerin</td>
<td>Cardiac arrest</td>
<td>1 mg i.v</td>
<td>0.01 mg/kg</td>
</tr>
<tr>
<td>Diphenhydramine or chlorpheniramine</td>
<td>Allergic reactions</td>
<td>50 mg i.v or i.m*</td>
<td>1 mg/kg</td>
</tr>
<tr>
<td>Salbutamol inhalation aerosol</td>
<td>Asthmatic bronchospasm</td>
<td>2 puffs (100 micrograms/puff)</td>
<td>1 puff</td>
</tr>
<tr>
<td>ASA</td>
<td>Acute Myocardial infarction</td>
<td>160 or 325 mg**</td>
<td>Not indicated</td>
</tr>
</tbody>
</table>

* The dose suggested for the i.m. route is also appropriate for sublingual injections

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