Precautions for the Pregnant Dental Professional

This form is mandatory if you are pregnant or plan to become pregnant while attending any program at NC Dental U or The Dental Assistant Academy

What precautions should one take to be safe in a dental setting when pregnant?

Although NC Dental U/The Dental Assistant Academy cannot provide specific medical advice concerning potential risk factors and pregnancy, we can provide you with general information.

First and foremost, however, pregnant dental health care workers should consult with their primary care physician and/or an obstetrician for medical advice and recommendations. In addition, NC Dental U is not aware of individual state/local laws/regulations, therefore, the appropriate state/local agencies should be contacted for specific laws (e.g. State Board of Dental Examiners/Licensing agency, State Health Dept., State/local EPA, etc.).

Pregnant workers generally are not considered to be at an increased risk for acquiring infections occupationally. There are, however, some infections, which if acquired by the mother, can cause problems for the developing fetus. Adherence to appropriate infection control precautions, including standard precautions is indicated. Female workers of childbearing age should ensure that they have received all recommended immunizations and consult with their personal physician regarding which immunizations may require booster doses. (1), (2), (3)

The "Guidelines for Infection Control in Health Care Personnel, 1998" provide specific information for precautions for pregnant healthcare workers. (See table 6 located within the document). (1)

All dental health care workers, whether they are pregnant or not, must adhere to and practice Universal/Standard Precautions with all patients, practice sharps safety protocols, follow all directions for safe handling, use, disposal of chemicals, obtain vaccinations recommended by the Centers for Disease Control and Prevention (CDC) (http://www.cdc.gov/). These vaccinations include, but are not limited to: Hepatitis B; MMR (measles, mumps, rubella); Varicella (chickenpox vaccine); Td booster (at least every 10 years); and the flu vaccine during flu season (except when contraindicated for medical reasons/pregnancy, generally, a pregnant women should avoid receiving any live vaccine and must always consult with their OBGYN/Healthcare Provider concerning vaccinations and contraindications). (3)

Second, one of the most important and effective procedures to perform to prevent and/or reduce the spread of infection is proper hand hygiene as hands serve as conduits for the transfer of microorganisms, including pathogenic microorganisms. The use of appropriate personnel protective equipment PPE's, especially gloves, mask, protective eyewear, and gown must be worn during procedures where there is the potential for spray, splash, splatter of blood and other potentially infectious materials/fluids, including saliva during dental procedures. (3) (5)

The Centers for Disease Control and Prevention published the revised Infection Control for Dental Health Care Facilities in December 2003. These guidelines may be viewed at:


Other issues include; exposure to chemicals (e.g. surface disinfectants, sterilants, numerous dental materials, etc.); radiation; and the use of compressed gases (specifically, nitrous oxide). Practice radiology safety protocols, and when indicated or required by State law, wear radiation monitoring film badges and monitor nitrous oxide levels.

Prior to using or working with any chemical be sure to read and follow all manufacturer's instructions and refer to the material safety data sheets (MSDA) for further important information. In addition, be sure to wear the appropriate PPE and work in well ventilated areas.

Radiology safety protocols should be strictly adhered to. All workers must follow precautions to prevent occupational exposure to radiation emitted from dental x-ray machines. Dental health care workers (especially pregnant workers) should consider wearing a monitoring dosimeter film badge on uniforms (waste level) for monthly assessment. In some States this is mandate by Law so always check with your State Board of Dental Examiners/licensing agency and other State agencies responsible for radiation safety. X-ray machines should be monitored/inspected according to all local and/or State laws (usually required on an annual basis). Never stand in the direct path of the x-ray beam (stand at least 6-8 feet away or behind a lead-lined wall) and never attempt to hold film in a patient's mouth during x-ray exposure.

Other precautions include: ensuring the machines are properly collimated, the worker is never present in the room during exposure of the film, the worker is not in the path of the active beam, the proper kVP and MA are utilized, and the highest speed film is used to further reduce the amount of radiation needed to expose the film.
Additionally, monitoring exposure through the use of radiation monitoring badges may be considered. Adverse effects associated with chronic nitrous oxide exposure in dental healthcare workers have been well documented over the years. Chronic exposure to N20 may include defects such as: nausea, spontaneous abortion/miscarriage, neurological defects, liver/kidney problems anemia, and cancer. NIOSH (National Institute for Occupational Safety and Health) recommends that N20 equipment be inspected, maintained, and a scavenger system be utilized. (4)

In addition, nitrous oxide hoses, connections, patient face mask, and fittings should be routinely checked for leaks, and the room air in the treatment areas should be periodically monitored for excessive levels of nitrous oxide. The supplier of the tanks/gases should be able to provide air monitoring service.

The maximal amount of nitrous oxide allowable in a healthcare setting is 50ppm. For further information on Nitrous Oxide, NIOSH's website is: http://www.cdc.gov/niosh/noxidair.html

For further information on the effects of workplace hazards go to NIOSH's website at: http://www.cdc.gov/niosh and CDC's occupational health guide at:

http://www.cdc.gov/ncidod/hip/occhealt/ocguide.htm

The National Institute For Occupational Safety & Health also has posted on it's website a great deal of information on: "The Effects Of Workplace Hazards On Female Reproductive Health". This information is located at:

http://www.cdc.gov/niosh/99-104.html

Other information concerning OSHA's Bloodborne Pathogens Standard and Hazardous Communication Standard (hazardous chemicals) may be obtained at OSHA's website at: http://www.osha.gov

Please copy this document for your records. Sign, date and return to the School Administrator prior to the first day of class.

Student name: _______________________________ Date class begins: ______________________
Student signature: ___________________________ Today's date: ______________________