

Cryo Proficiency Evaluation

Each staff member must understand the following principles and steps to use cryo effectively in the EP Lab. All content is based on web based tutorial that can be found at:

http://www.hrsonline.org/Education/SelfStudy/VHO/cryocath_technologies_cryoablation.cfm

Staff member: _____
Evaluated by: _____

Date: _____

Part 1: An Introduction to CryoTherapy

1. Concept of Heat Removal
2. Dynamic Thermal Gradient
3. CryoAdhesion
4. Cryomapping and Hypothermic Site Testing
5. CryoAblation
6. Time-to-Effect

Part 2: CryoConsole Start-up and Connections

1. Plug the console in
2. Connect the vacuum hose to the hospital system
3. Open the Nitrous Oxide tank
4. Turn the CryoConsole ON.
5. Check the level of refrigerant/pressure from “Service System”
6. Start case from “Begin CryoTherapy”
7. Complete Patient Information entry
8. Understand the “Therapy” screen
 - a. Temperature and Time Display
 - b. Time / Temperature Graphs
 - c. Tank Level Gauge
 - d. Flow / Pressure Displays
 - e. CryoTherapy Mode and Presets
 - f. CryoMapping (only Freezor 4mm)
 - g. CryoAblation
 - h. Release Vacuum
 - i. View Messages
 - j. Treatment Counter
9. Prepare all items to connect the catheter to the CryoConsole
 - a. Catheter (sterile)
 - b. Electrical Umbilical (sterile)
 - c. Coaxial Umbilical (sterile)
 - d. Auto Connection Box
 - e. ECG cable

Part 3: Performing CryoTherapy with Freezor, Xtra, and MAX

1. Understand what catheters are available and their modes
2. Depending on catheter chosen be able to initiate CryoMapping or CryoAblation injection
3. Communicate time and temperature with the physician
4. (If necessary) Operate the stimulator to aid physician in use of cryo
5. Quickly stop an injection when necessary

Part 4: Troubleshooting

1. Press “Mute”, record the five-digit number, and press “Continue” when a System Notice occurs
2. Know how to contact CryoCath Technical Support
3. Understand what to do when common messages occur:
 - a. Message 50012 “**The path of the refrigerant is obstructed**”, check the coaxial umbilical and catheter for obvious kinks. Then disconnect the coaxial umbilical from each end and reconnect. Replace the coaxial umbilical if message repeats. Replace the catheter if message repeats again. If you are unable to clear this message after trying all of these steps, call CryoCath Technical Support.
 - b. Message 50030 “**There is too much refrigerant flowing**”, advise the physician to reposition the catheter and try again, making sure of good contact. Inspect coaxial injection tube and replace the coaxial umbilical if the message repeats. If message still repeats, replace the catheter. If you are unable to clear this message after trying all of these steps, call CryoCath Technical Support.
 - c. In **no notice**, but the catheter struggles to reach temperature or will not get cold, this problem typically happens because the nitrous oxide tank is not open, but may have other causes. To resolve this problem, check the nitrous tank to be sure it is open at least two full turns. If the tank is open, or the message repeats, replace the coaxial umbilical. If the message still repeats, replace the catheter. If you are unable to resolve the problem after trying all of these steps, call CryoCath Technical Support.
4. Understand that when cardioverting/defibrillating or using RF, disconnect Auto Connection box from the CryoConsole to prevent false triggering of the leak detection alarm.

Part 5: End of Case / Console Shut Down

1. Complete the case from the “Report” tab
2. Return to the Main Menu (touch the “Home” button).
3. Shut down the CryoConsole
4. Close the Nitrous Oxide tank

Part 6: Changing the N₂O Tank

1. Understand how to change the nitrous oxide tank