

STEP BY STEP APPROACH FOR CONTROLLING N₂O

Step	Procedure	Control
1	Visually inspect all N ₂ O equipment (reservoir bag, hoses, mask, connectors) for worn parts, cracks, holes, or tears.	Replace defective equipment and/or parts.
2	Turn on the N ₂ O tank and check all high to low pressure connections for leaks. Use a non-oil-based soap solution to check for bubbles at high pressure connectors, or use a portable infrared gas analyzer.	Determine leak source and fix. If tank valve leaks, replace tank; if worn O-rings, gaskets, valves, hoses, or fittings, replace. Contact the manufacturer for parts replacement. For threaded pipe fittings, use Teflon tape. Do not use this tape on compression fittings.
3	Select scavenging system and mask. Mask should come in various sizes to fit patient. Scavenging systems should operate at air flow rate of 45 lpm.	Provide a range of mask sizes for patients. Check to see that noise levels at the mask are acceptable when the scavenging system exhaust rate is operated at 45 lpm.
4	Connect mask to hose and turn on vacuum pump before turning on N ₂ O. Scavenging system vacuum pump must have capacity to scavenge 45 lpm per dental operation.	Determine proper vacuum pump size for maintaining 45 lpm flow rates, especially when interconnected with other dental scavenging systems. If undersized, replace pump.
5	Place mask on patient and assure a good, comfortable fit. Make sure reservoir bag is not over or under inflated while the patient is breathing.	Secure mask with "slip" ring provided. Observe reservoir bag for "good activity" from patient breathing.
6	Check general ventilation for good room air mixing. Exhaust vents should not be close to air supply vents (use smoke tubes to observe air movement in room).	If smoke from smoke tubes indicate room air mixing is poor, then increase the airflow or redesign. If exhaust vents are close to air supply vents, relocate (check with ventilation engineers to make adjustments).
7	Conduct personal sampling of dentist and dental assistant for N ₂ O exposure. Use diffusive sampler or infrared gas analyzer (see sampling methods).	If personal exposures exceed 150 ppm during administration, improve mask fit and make sure it is secure over the patient's nose. Minimize patient talking while N ₂ O is administered.
8	Repeat procedure in step 7.	If personal exposures are less than 150 ppm but greater than 25 ppm, implement auxiliary exhaust ventilation near the patient's mouth. Capture distance should be no greater than 10 inches from the patient's nose and mouth area and exhaust no less than 250 cfm at the hood opening. Avoid getting between the auxiliary exhaust hood and patient's mouth and nose area.