



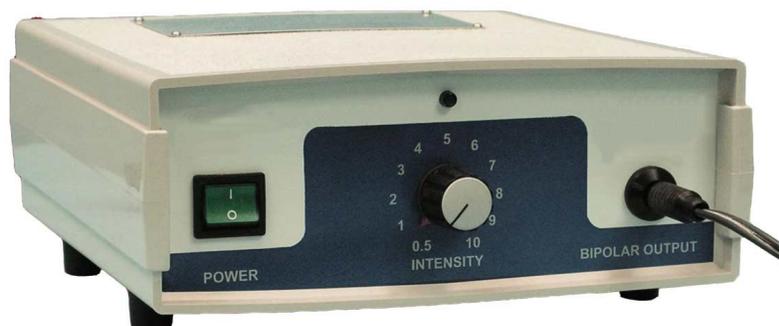
**MILLENNIUM
SURGICAL**

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822 Montgomery Ave #205
Narberth, PA 19072
(800) 600-0428

Dennis Probe



Bipolar Submucosal
Turbinate Surgery

Designed and Developed by
Donald P. Dennis, MD

The Dennis Bipolar Turbinate Probe was designed to perform bipolar submucosal coagulation of the inferior one-half of the inferior turbinate longitudinally.

The design includes a pencil grip for easy handling with a bayonet needle mount for easy intranasal visualization during surgery with parallel 4cm needles affixed 3mm apart for precision tissue destruction.

Five percent topical cocaine pledgets are placed in the nose for approximately five minutes and then withdrawn. The turbinates are injected with 2cc each of two percent xylocaine with 1:100,000 epinephrine. This allows some hydrodissection of the turbinate tissue from the turbinate bone and the added submucosal fluid protects against cautery bony necrosis (if the patient has a history of cardiac problems, plain two percent xylocaine is used). The needles are placed in the inferior one-half of the inferior turbinate approximately 2mm into the turbinate tissue and a test dose of current is given to be sure the machine is working properly (approximately setting four). After the correct setting is established with a test dose, the needles are then inserted the full length of the turbinate submucosally in the inferior one-half of the inferior turbinate longitudinally. One to two second spurts of electrical current are used until visual blanching occurs. After blanching occurs, the probes are removed. The same procedure is performed on both sides and the patient is dismissed. The nose opens immediately and in many cases, the postoperative edema is not enough to completely obstruct the airway again.

The patient is allowed to blow nostrils gently. Saline irrigation with one quarter teaspoon salt in a six ounce glass of water with an ear bulb syringe twice a day has been found to be very helpful in keeping crusting to a minimum. The patient returns to the office in two weeks when the final crust can be removed, provided the turbinates have not been too vigorously coagulated. Initially an approximately 3% post-operative bleeding rate was observed at a two to three week interval. This was easily stopped with cotton balls saturated with Afrin nose drops and external pressure applied. This was associated with too vigorous turbinate coagulation in all cases; therefore, it is strongly recommended that coagulation be discontinued immediately after blanching is observed.



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Advantages of the Dennis Probe in the Treatment of Chronic Obstructive Turbinate Hypertrophy

- It can be used in the office with local anesthesia
- There is no intraoperative or postoperative pain
- There is no packing necessary
- The patient may return to work the same day
- The high cost of hospitalization and anesthesia is avoided
- The method is reliable
- It gives precision tissue coagulation
- It may be repeated in the office in ten minutes if necessary
- The bayonet mount allows good visualization during surgery with precision handling
- It is safe and effective in children with chronic obstructive turbinate hypertrophy and chronic rhinorrhea. Chronic nasal airway obstruction in children can interfere with maxillary and mandibular development. Opening the nasal airway in chronically obstructed children can reduce the symptoms of allergy and in some cases reduce the need for allergy shots.

Technical Specifications

500 KHz with a maximum output of approximately 50 watts in the macro mode. It has been found that the generator that produces current in that range gives more precise tissue destruction with less current spread and peripheral damage. Contact Millennium Surgical for more information about the best generator for use with the Dennis Probe.

Care of the Instrument

The instrument is autoclavable by wrapping and conventional steam autoclaving or, ideally, by gas autoclaving. Cold soaking is NOT recommended.

Important!!

In order to obtain clinically satisfactory results, combined with the ultimate in safety for both patient and surgeon, the Dennis Probe must be energized with an appropriate low voltage bipolar current. Dissatisfaction and failures in clinical results can be traced to the use of the probe with generators delivering output with too high a voltage or a modulated waveform. Contact Millennium Surgical Corp for information about the recommended generator for this model.

Since there is no standard for bipolar generators with respect to output waveform and peak-to-peak voltage, we must draw your attention to the following requirements for bipolar submucosal turbinate surgery:

Output Frequency: 500 KHz, nominal

Waveform: Full wave rectified (sinusoidal, non-modulated)

Peak-to-Peak Voltage: Never to exceed 400 V at maximum generator output. Operating voltage should be less than 100 V peak-to-peak at nominal settings. This is very important, as the surgical procedure is to dehydrate the tissue and not to burn or char, overheat and/or arc across it. Since most bipolar generators, particularly those incorporated into major operating room units, may be energized by high voltage, modulated current, there is danger of post operative bleeding, excessive tissue trauma, or other complications.

Isolation Factor: The bipolar generator must be isolated from ground (floating) with a min. isolation factor of 98%

Wattage: Requirements for the instrument range from 15 to 25 W. A suitable bipolar generator should have a maximum of no more than 50 W of power, measured at 100 Ohm impedance load.



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Ordering Information

Item 72-5985	System for Bipolar Submucosal Turbinate Surgery Consisting of Item 72-5356 (BC Generator); Item 72-5970 (Probe); Item 72-5302 (Cable); Item 72-5520003 (Sterilization and Storage Case); and Item 72-5975 (Instructional Video).
For Individual Items	
Item 72-5970	Dennis Bipolar Submucosal Turbinate Probe
Item 72-5302	Bipolar RF-Cable for Dennis Probe & Generator Connection
Item 72-5230	Bipolar RF-Cable for Dennis Probe & Generators with 2-Banana Plug Connection
Item 72-5975	Video tape featuring the instrument used in surgery by Donald Dennis, MD
Item 72-5520003	Sterilization and Storage Container for Multiple Instruments (or sinus scopes), along with RF-Cables; Made of Durable Plastic, Perforated, with Silicone Strip Mounting Bars, 11" x 7" x 1.5" (illustrated)

Bipolar Output Tester: A unique, simple and economical test box to verify operation of the bipolar coagulation system in the surgical suite.

Item 72-525297



Bipolar Suction / Irrigation Coagulator

Item: 72-5980: Bipolar Coagulator with Irrigation or Suction

Item: 72-5981: Bipolar Coagulator with Irrigation & Suction Control Valve



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The bipolar probe is placed on top of the Inferior turbinate to show the submucosal placement of the probe needles in the turbinate tissue.



Pre-operative view of the obstructive turbinate hypertrophy.



Initial placement of the probe prior to insertion.



Initial placement of the probe into left turbinate.



Deeper penetration into right turbinate.

Post-operative view of the right turbinate showing the opened nasal airway with visualization of the nasopharynx mucosa.

