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Original Research:

David Rabago, Bruce Barrett, Lucille Marchand, Rob Maberry, and Marlon Mundt

**Qualitative Aspects of Nasal Irrigation Use by Patients With Chronic Sinus Disease in a Multimethod Study**

Ann Fam Med 2006; 4: 295-301 [\[Abstract\]](#) [\[Full text\]](#) [\[PDF\]](#)

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## Electronic letters published:

### ▼ Thanks for the comments

David P Rabago (19 August 2006)

### ▼ Re: Commentary on: "Qualitative Aspects of Nasal Irrigation Use by Patients With Chronic Sinus Disease in a Multimethod Study"

Judith A Nudelman (13 August 2006)

### ▼ Commentary on: "Qualitative Aspects of Nasal Irrigation Use by Patients With Chronic Sinus Disease in a Multimethod Study"

Berrylin J Ferguson (10 August 2006)

### ▼ Pulsatile vs. Non-pulsatile nasal irrigation

Judith A Nudelman (10 August 2006)

### ▼ Nasal Irrigation

Terence M Davidson (3 August 2006)

## Thanks for the comments

19 August 2006 ▲ ▲

David P Rabago,  
Madison, USA  
MD

From the first author.

Send response to  
journal:

[Re: Thanks for the  
comments](#)

[Email](#) David P  
Rabago

My thanks for the discussion here. It's a good forum for communication on publications, and allows readers and authors to go one step further.

The comments thus far are very interesting. Thanks for the praises, this was a rewarding project, and did indeed result in generally happy subjects.

Re hypertonic vs normal saline, I agree that the debate will go on. As well as with additions to the saline. A recent paper documented Dead sea salt irrigations as being more effective than NaCl for chronic sinus symptoms. RCTs to delineate these issues are fine, but they are time-consuming and expensive. In our center we go through some options with pts about salt, sodium bicarb and temperature and let them experiment within safe parameters. Different pt seem to prefer different solutions, yet have good results.

Re neti pots vs pulsatile devices, I think the main thing is getting the saline into the nasal cavity, though I am not aware of a

head to head trial. Different patients would likely prefer different vessels, again the best at this time might be to offer the choice. I am unaware of different rates of harm in either case.

Re the use of nasal irrigation for rhinitis, that is an excellent next RCT. One group in Italy has documented excellent results with nasal saline for pediatric seasonal allergic rhinitis. Our group plans a second look at our data to determine if subjects with allergic rhinitis had equally effective results in all three parts of the study.

Thanks again for the comments, I will continue to respond to comments and questions. David

Competing interests: None declared

## Re: Commentary on: "Qualitative Aspects of Nasal Irrigation Use by Patients With Chronic Sinus Disease in a Multimethod Study"

13 August  
2006



Judith A Nudelman,  
Barrington, RI USA  
Family Physician,  
Brown Medical  
School

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[Commentary on:  
"Qualitative Aspects  
of Nasal Irrigation  
Use by Patients With  
Chronic Sinus  
Disease in a  
Multimethod Study"](#)

What an excellent comment/commentary. It serves as an additional reference to the article.

Competing interests: None declared

[Email](#) Judith A  
Nudelman

## Commentary on: "Qualitative Aspects of Nasal Irrigation Use by Patients With Chronic Sinus Disease in a Multimethod Study"

10 August  
2006



Berrylin J Ferguson,  
Pittsburgh, USA  
M.D., University of  
Pittsburgh School of  
Medicine

Send response to  
journal:

[Re: Commentary  
on: "Qualitative  
Aspects of Nasal  
Irrigation Use by  
Patients With  
Chronic Sinus  
Disease in a  
Multimethod Study"](#)

The authors report on the quality of life improvements and reflections of over two dozen individuals utilizing hypertonic saline nasal irrigation on an as needed basis. The findings provide validation of the anecdotal experience of many rhinologists. Unique to this study was an apparent added benefit of group training and discussions, which gave these sufferers an additional benefit conferred from "group support", a benefit acknowledged in many disease states from cancer support groups to chronic debilitating diseases. I had not previously considered that this kind of group support might be helpful for chronic rhinosinusitis, but from the interviews it appears that it is indeed appreciated by the participants.

I can think of no way to perform a blinded controlled study of nasal irrigations, but that doesn't mean they are not effective. In fact, the efficacy of the irrigation frequently overshadows the efficacy of any number of added ingredients including antifungals, antibacterials, and topical steroids.<sup>1</sup> The irrigation serves to remove nasal debris in noses that are not self-cleaning, which is particularly a problem in patients with nasal polyps or who have undergone extensive sinus/nasal surgery.

[Email](#) Berrylin J  
Ferguson

Nasal irrigation can also be helpful as a rinse to remove mucus before the application of a topical steroid or antibiotic. I commonly recommend a commercial nasal lavage kit, of which there are a half dozen or so available to assist with compliance. There are many commercially available nasal irrigators.<sup>2</sup> I also provide our patients with a "recipe" so that they can make their own saline irrigation. Patients should be warned to use filtered or boiled water, and to make sure the device used for irrigation is cleaned frequently to prevent iatrogenic inoculation with water loving microbes such as *Pseudomonas* and *Serratia*.

The debate of hypertonic versus normal saline irrigation is sure to continue.<sup>3</sup> I usually provide the patient with the recipe for hypertonic saline and suggest that they reduce the amount of salt they add, if they find that the hypertonic mixture is irritating. Interestingly, hypertonic inhaled saline has been shown to be beneficial in cystic fibrosis.<sup>4</sup> Seven percent of patients with chronic rhinosinusitis carry a mutation for cystic fibrosis compared to 2% of normal controls. Thus there may be a variance in response to hypertonic versus isotonic saline irrigations, depending on the cause of the patient's rhinosinusitis.<sup>5</sup>

Finally, the authors capture in a qualitative manner the relief that patients feel with this technique. I still recall the words of a patient on her return visit, "I can't believe I've been suffering for 30 years with the sinus condition when relief was as easy and inexpensive as this salt water wash." A trial of hypertonic or isotonic saline nasal rinse is inexpensive, does not promote bacterial resistance, and safe. Saline irrigations should be a therapeutic alternative offered to any patients suffering from chronic rhinosinusitis.

#### References

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Competing interests: None declared

## Pulsatile vs. Non-pulsatile nasal irrigation

10 August 2006



Judith A Nudelman,  
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*Family Physician,  
Brown Medical  
School*

Send response to  
journal:

[Re: Pulsatile vs.](#)

I am a family physician who has both treated many patients with sinusitis, and has had sinus disease for decades. I've used both pulsatile irrigation (Water Pik with Grossan head) and more recently, the neti pot for the last seven years. As your article addressed patients' sense of control over the disease primarily, I feel that the neti pot irrigation has several benefits. It is considerably less expensive and easily cleaned. If one is not careful, the tubing in the Grossan irrigator or Water pik can become colonized, as all wet tubing as the ability to form biofilms. My ENT has preferred the neti pot for at least a decade, citing low pressure, high flow and head position that encourages ethmoid irrigation. Rather than a matter of preference: pulsatile vs. non-pulsatile irrigation, I would like to see RTC's exploring the two methods. I do feel that the significantly lower

[Non-pulsatile nasal irrigation](#)

cost and ease of cleaning favor the simple neti pot. However, if pulsatile irrigation would significantly decrease sinus disease over non-pulsatile irrigation, the initial cost and need to rigorously cleanse the device would become a moot point. I welcome additional studies.

[Email](#) Judith A Nudelman

Competing interests: None declared

## Nasal Irrigation

3 August 2006



Terence M Davidson,  
San Diego, CA, USA  
*Director UCSD Nasal Dysfunction Clinic,  
UCSD School of Medicine*

What a great paper. My clinical experience with over 3000 patients supports the findings. This works equally well for atrophic rhinitis, aging rhinitis and to a lesser degree for allergic rhinitis Pulsatile irrigation is superior to non pulsatile. Just as pulsatile irrigation is supperior for cleaning your teeth or cleaning a wound, the pulsatile irrigation does a superior job of dislodging thick mucus and debris. My preferred irrigation systems are the Grossan and the WaterPik with Ethicare nasal adaptor. Further information on their use is found in my website, [drdaavidson.ucsd.edu](http://www.drdaavidson.ucsd.edu), fileURL: <http://www.drdaavidson.ucsd.edu/Portals/0/nasal.htm>

Send response to journal:

[Re: Nasal Irrigation](#)

[Email](#) Terence M Davidson

Competing interests: None declared

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