

**The American Academy of Otolaryngology—  
Head and Neck Surgery Foundation  
(AAO-HNSF) Presents. . .**



## **Chapter 3: Postoperative Fevers**

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## Chapter 3: Postoperative Fevers

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Dr. Gregory Staffel first authored this short introduction to otolaryngology for medical students at the University of Texas School for the Health Sciences in San Antonio in 1996. Written in conversational style, peppered with hints for learning (such as "read an hour a day"), and short enough to digest in one or two evenings, the book was a "hit" with medical students.

Dr. Staffel graciously donated his book to the American Academy of Otolaryngology—Head and Neck Surgery Foundation to be used as a basis for this primer. It has been revised, edited and is now in the second printing. This edition has undergone an extensive review, revision and updating. We believe that you, the reader, will find this book enjoyable and informative. We anticipate that it will whet your appetite for further learning in the discipline that we love and have found most intriguing. It should start your journey into otolaryngology, the field of Head and Neck Surgery.

Enjoy!

Mark K. Wax, MD

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### Chapter Number 3: Postoperative Fevers

In surgery the differential diagnosis, as it relates to specific symptoms, depends on the time since the procedure has been completed. For example, if a person has a fever, the most likely cause is dictated somewhat by the **postoperative day (POD)**. Remembering the **five W's of postop fever—Wind, Water, Walking, Wound, and Wonder drugs**—as a useful memory tool when you are following patients after surgery.

POD 1-2: **Wind: Atelectasis (without air)** often causes a fever. Reasons include being on a ventilator, inadequate sighs during surgery, and (in the general surgery patient) incisional pain on deep breathing. This is treated with incentive **spirometry** because there is evidence that **deep inspiration** prevents atelectasis better than just coughing.

POD 3-5: **Water: Urinary tract infections (UTIs)** are common here. Foley catheters are sometimes still in place.

POD 4-6: **Walking: Deep venous thrombosis** can occur. This is more of a problem in patients undergoing pelvic, orthopedic, or general surgery than in head and neck surgery. Subcutaneous, low-dose **heparin** and **venous compression devices** reduce the incidence of **thromboembolization**. Walking the patient on POD 1 is the best way to prevent this complication.



### Chapter Number 3: Postoperative Fevers

POD 5-7: **Wound:** Most wound infections occur during this period. **Preoperative antibiotics** are important to prevent or reduce the risk of infection in head and neck surgery that crosses **mucosal linings**.

POD 7+: **Wonder drugs:** Drugs can cause fevers. (Note that in obstetrics and gynecology, this W is "Womb," and it precedes "Wonder drugs.")

#### How to Present on Rounds:

**Patient presentations** should be **goal directed**.

Presentations should follow this format:

"Mr. Jones is a 63-year-old man with a **T3** cancer of the tonsil that failed radiation. He initially presented with a 2-month history of pain and a **nonhealing ulcer** on the left tonsil. He underwent 6 weeks of radiotherapy and was disease free for 7 months. His tumor recurred, and three days ago, he underwent a mandibulotomy, neck dissection, hemiglossectomy and partial pharyngectomy with tracheostomy. A radial forearm free tissue transfer was the reconstruction. He is **afebrile** (this means less than 38.5), and his **perioperative antibiotics** have been discontinued. He is tolerating his tube feeds at 100 cc per hour, and his drains have each put out 30 cc over the last 24 hours."



### Chapter Number 3: Postoperative Fevers

The last sentence in your presentation should always start with "The plan is...." For example: "The plan is to remove the drains today, continue the tube feedings, and start feeding the patient by mouth at one week post surgery." We also plan to cap his **tracheostomy** tube and remove it if he tolerates having it plugged. We have contacted social work in order to make sure that he has a place to go when we are ready to discharge him at day 8 or 9 postop."

For a general surgery patient, the presentation may be something like this:

"This is day 1 post colon resection for Mrs. Jones, a 60-year-old woman with colon cancer found on endoscopy obtained because of a positive test for occult blood in the stool."

Discuss ins, outs, and drains. Finally, your last sentence should start with "The plan is...." Always think of what you need to do to send the patient home. For example, if she still isn't eating and needs **IVs** for fluid intake, the object would be to get her eating.



**Chapter Number 3: Postoperative Fevers**

**Questions, Section #3**

1. The 5 W's of postoperative fever are: \_\_\_\_\_  
, \_\_\_\_\_  
, \_\_\_\_\_  
, \_\_\_\_\_  
and \_\_\_\_\_
2. A fever on postoperative day 5-7 may be due to an infection of the \_\_\_\_\_
3. A fever on the night of surgery is most likely due to \_\_\_\_\_  
\_\_\_\_\_

**Answers**

1. Wind, water, walking, wound, wonder drugs
2. Wound
3. Atelectasis



## More educational opportunities from the AAO-HNSF

The American Academy of Otolaryngology—Head and Neck Surgery Foundation offers many programs designed to keep you up-to-date without leaving your practice. Most activities offer Category 1 AMA/PRA credits. The Academy/Foundation also serves as a primary resource for otolaryngology/head and neck surgery activities and events, and serves as an online clearinghouse for patient education and specialty information.

Visit the Academy's website, <http://www.entnet.org> to learn more about these programs.

