

# Pharmacological Treatment for the Prevention of Post-Anesthetic Shivering



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## Abstract

- Post anesthetic shivering (PAS) is a relatively common manifestation following the administration of a general or regional anesthetic, and can prolong the recovery time of patients stemming from hemodynamic instability. Many nurse anesthesia students have a limited understanding of PAS. The goal of this study was to increase the knowledge base of 43 student registered nurse anesthetist attending Adventist University of Health Science.
- A PowerPoint lecture was given, preceded by a pre-test, and a posttest was given after the lecture.
- The pre and posttest scores were statistically analyzed. The results demonstrated a significant increase between the mean pre and posttest scores. The lecture was an effective method to increase the understanding of PAS.

## Background

- Managing postoperative shivering remains a difficult task for all anesthesia providers, including Student Registered Nurse Anesthetists (SRNA). Initially it was thought that hypothermia was the cause for shivering; however, many patients shivered even though they were normothermic. As such, vigilance is warranted in treating post anesthetic shivering (PAS). The interventions that are used to prevent hypothermia only have a partial impact on the number of incidences.
- Meperidine is the most frequently used pharmacological treatment for PAS, but is plagued with serious side effects. The SRNA may have a limited understanding of the treatment options for PAS.

## Objectives

The goal of this project was to increase the understanding among SRNAs regarding the etiology, risk factors, consequences, and pharmacological treatment options when PAS is encountered.

## Methods

- The information was presented in the form of an educational presentation to SRNAs. They were introduced to recent clinical studies using evidenced based modalities including the pharmacological treatment for PAS.

## Results

- The results showed an increase between the pre-and post- test with a mean score increase of approximately 8.1957 (pre-test) to 13.7826 (post-test).
- A Paired t test was used with  $p < 0.001$  and statistical significance was achieved.

## Conclusions

- The presenters concluded that the lecture increased subjects' understanding of PAS.
- The outcomes that were achieved was an increased understanding of PAS, which could translate to improved outcomes for patients.
- The Power Point Presentation was an effective method to increase the understanding of PAS among SRNA students. This Power Point Presentation may also be an educational benefit to practicing CRNAs as well.

Paired Samples Statistics

		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	PreTest	8.1957	23	2.91446	.60771
	PostTest	13.7826	23	1.83294	.38220

Paired Samples Test

		Paired Differences					t	df	Sig. (2-tailed)
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
					Lower	Upper			
Pair 1	PreTest - PostTest	-5.58696	2.86298	.59697	-6.82500	-4.34891	-9.359	22	.000