

# Anaesthetists' knowledge and frequency of use of neuromuscular monitoring at the University of the Witwatersrand

## Appendix A: Questionnaire – For South African Journal of Anaesthesia and Analgesia

**Topic: Anaesthetists' knowledge and frequency of use of neuromuscular monitoring at the University of the Witwatersrand**

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### Demographics

Please tick the appropriate box

<b>AGE</b>	20–30	31–40	41–50	51–60	> 60
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

### Designation

<b>Medical officer</b>	<input type="checkbox"/>								
<b>Registrar</b>	<table border="1"><tr><td>1<sup>st</sup> year</td><td><input type="checkbox"/></td></tr><tr><td>2<sup>nd</sup> year</td><td><input type="checkbox"/></td></tr><tr><td>3<sup>rd</sup> year</td><td><input type="checkbox"/></td></tr><tr><td>4<sup>th</sup> year</td><td><input type="checkbox"/></td></tr></table>	1 <sup>st</sup> year	<input type="checkbox"/>	2 <sup>nd</sup> year	<input type="checkbox"/>	3 <sup>rd</sup> year	<input type="checkbox"/>	4 <sup>th</sup> year	<input type="checkbox"/>
1 <sup>st</sup> year	<input type="checkbox"/>								
2 <sup>nd</sup> year	<input type="checkbox"/>								
3 <sup>rd</sup> year	<input type="checkbox"/>								
4 <sup>th</sup> year	<input type="checkbox"/>								
<b>Consultant</b>	<input type="checkbox"/>								
<b>Career Medical Officer</b>	<input type="checkbox"/>								

**Please complete the following questions by circling the letter next to your choice. There is only one correct answer per question.**

#### 1. Supramaximal stimulus is defined as

- A. A stimulus 0–10% greater than the maximal stimulus.
- B. A stimulus 11–20% greater than the maximal stimulus.
- C. A stimulus 30% greater than the maximal stimulus.
- D. I do not know.

#### 2. The most recommended site for neuromuscular monitoring is

- A. Ulna/adductor pollicis.
- B. Facial nerve/orbicularis oculi.
- C. Facial nerve/corrigator supercilii.
- D. I do not know.

#### 3. Postoperative residual neuromuscular blockade is defined as

- A. Train-of-four ratio less than 0.7.
- B. Train-of-four ratio more than 0.7.
- C. Train-of-four ratio less than 0.9.
- D. I do not know.

#### 4. In train-of-four stimulation

- A. Four stimuli are provided at 2-Hz frequency.
- B. Four stimuli are provided at 50-Hz frequency.
- C. Four stimuli are provided at 100-Hz frequency.
- D. I do not know.

#### 5. The earliest that neostigmine should be administered to achieve complete reversal is

- A. Reappearance of a single twitch on train of four.
- B. Train-of-four ratio less than 0.9.
- C. Train-of-four count more than 2.
- D. I do not know.

#### 6. Fade

- A. Is usually seen when using depolarising muscle relaxants.
- B. Is a reduction of muscle response from the first to the last twitch in a train of four in non-depolarising muscle relaxants.
- C. Is a reduction of muscle response from the first to the last twitch in a train of four in depolarising muscle relaxant.
- D. I do not know.

#### 7. Airway reflexes are returned at

- A. Train-of-four ratio greater than 0.6.
- B. Train-of-four ratio greater than 0.7.
- C. Train-of-four ratio greater than 0.9.
- D. I do not know.

#### 8. Double burst stimulus

- A. Consists of 2 or 3 impulses at 100-Hz separated by 0.75 seconds.
- B. Consists of direct comparison of 2 sequential contractions.
- C. Consists of comparison of the fourth and first responses in a train-of-four.
- D. I do not know.

**9. In post-tetanic count**

- A. A 5 seconds tetanic stimulus is provided, followed 3 seconds later by 10-20 single stimuli.
- B. A 3 seconds tetanic stimulus is provided, followed 5 seconds later by 10-20 single stimuli.
- C. A frequency of 50-Hz is applied for 5 second.
- D. I do not know.

**10. In post-tetanic count**

- A. More post-tetanic single twitch responses indicate profound block.
- B. More post-tetanic single twitch responses indicate no block.
- C. More post-tetanic single twitch responses indicate less block.
- D. I do not know.

**11. Deep block is defined as post-tetanic count of**

- A. Less than 4.
- B. 4-10.
- C. More than 10.
- D. I do not know.

**12. What would produce optimal nerve stimulation**

- A. 50 V.
- B. 50 Hz.
- C. 50 mA.
- D. I do not know.

**13. Prior to tracheal extubation, train of four ratio should be**

- A. 71-80%.
- B. 81-90%.
- C. 91-100%.
- D. I do not know.

**14. Which of the following is the commonest method used to monitor a block**

- A. Electromyography.
- B. Mechanomyography.
- C. Acceleromyography.
- D. I do not know.

**15. To eliminate the effects of skin resistance a peripheral nerve stimulator should provide**

- A. Constant voltage.
- B. Constant current.
- C. Both constant voltage and current.
- D. I do not know.

**16. How many general anaesthesia cases do you do in an average week?**

- ☐ 0-10.
- ☐ 11-20.
- ☐ 21-30.
- ☐ > 30.

**17. How many of these general anaesthesia cases do you usually paralyse?**

- ☐ 0-10.
- ☐ 11-20.
- ☐ 21-30.
- ☐ > 30.

**18. In how many of the cases that you paralyse do you use neuromuscular monitoring?**

- ☐ 0-10.
- ☐ 11-20.
- ☐ 21-30.
- ☐ > 30.

**19. How do you decide which cases you use neuromuscular monitoring on?**

- ☐ All patients who received neuromuscular blocking agents should have neuromuscular blockade monitored.
- ☐ When I need guidance in dosing of neuromuscular blocking agents and reversal agents.
- ☐ When I need to assess the degree of recovery.
- ☐ Depends on the length of the surgical procedure

**20. Why would you not use neuromuscular monitoring in every case?**

- ☐ Lack of availability of neuromuscular monitors.
- ☐ Limited knowledge on neuromuscular monitoring use.
- ☐ Time consuming.
- ☐ I use reversal agent in all patients who receive neuromuscular blocking agents.

**The end**