

Eleveld Model Titration Sequence – Recommended Standard

The Eleveld titration sequence reflects the pharmacological reality of the OCC: propofol's effect is amplified by remifentanyl co-administration in the model itself, meaning equivalent clinical sedation depth is reached at lower absolute propofol concentrations than with Schnider. Three builds are presented (Standard, Red for elderly or constitutionally fragile patients, and Green for younger or healthier patients) to guide target selection for the clinical profile of the patient. The standard starting pair of 0.6 / 1.0 is not a reduced or cautious start; it is the pharmacologically appropriate starting point for the Eleveld model when both agents are used together with effect-site targeting.

This sequence is an excellent guide for titration steps when sedating with TCI. After each step has equilibrated, use clinical judgement and RAVOC to assess whether the desired sedation level has been achieved. If not, apply another joint titration increment and reassess before proceeding further, continuing to higher target pairs once the equilibrated clinical state at the current step has been assessed as suitable. The Red build is the default for elderly or constitutionally fragile patients. The Green build may be appropriate for younger, healthier patients, particularly when LA administration is planned earlier in the procedure.

Step	Standard Build		Red Build: Elderly / Constitutionally Fragile		Green Build: Younger / Healthier	
	Propofol Ce (µg/mL)	Remi Ce (ng/mL)	Propofol Ce (µg/mL)	Remi Ce (ng/mL)	Propofol Ce (µg/mL)	Remi Ce (ng/mL)
1	0.6	1.0	0.3	0.8	0.6	1.0
2	0.9	1.2	0.6	1.0	0.9	1.3
3	1.2	1.5	1.0	1.2	1.2	1.6
4	1.4	1.6	1.2	1.4	1.4	1.8
5	1.6	1.6	1.3	1.4	1.6	1.8
6	1.6	1.7	1.4	1.4	1.6	1.7

ELEVELD START POINT – THE LARGER BOLUS & OCC EXPLAINED

The 0.6 µg/mL propofol starting Ce is lower than the Schnider equivalent because the Eleveld model was designed to administer a larger bolus at the induction concentration but with a longer induction time period changing depending on other covariates. Furthermore, an opioid co-administration coefficient (OCC) formally accounts for remifentanyl's potentiating effect on propofol at the pharmacodynamic level. When opioid co-administration is selected, the model knows remifentanyl is running, because the Eleveld model incorporates the synergy that the Schnider model ignores.

Starting at 1.0 propofol on an Eleveld pump with remifentanyl running is dosing at a very large induction bolus which may produce unpredictable depth and hemodynamic instability.



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Vital Signs	Stop & Correct	Alert	OK	Alert	Stop & Correct
Respiratory Rate (RR) (<i>breaths per minute</i>)	< 5	5 – 9	10 – 25	26 – 30	> 30
Oxygen saturation (SpO ₂) (%)	< 90%	90 – 93	94 – 100		
Heart rate (HR or PR) (<i>beats per minute</i>)	< 40	40 – 49	50 – 120	121 – 140	> 140
Blood Pressure (NIBP) (<i>mmHg</i>)	< 90	90 – 99	100 – 180	181 – 200	> 220
Level of Consciousness (AVPU)	Pain only / Unresponsive	Repeated stimulus	Awake / Voice		
End-tidal CO ₂ (EtCO ₂)	< 30	30 – 34	35 – 45	46 – 50	> 50

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