

TIME (min.)	High Dose Fentanyl Conc. Plasma (ng/ml)				Low Dose Fentanyl Conc. Plasma (ng/ml)			
	Measured (mean ± sd)	Calculated	P value	Chia et al. (calculated)	Measured (mean ± sd)	Calculated	P value	Chia et al. (calculated)
30	2.6 ± 1.4	5.5	0.008	6.0	0.4 ± 0.2	0.5	0.141	0.4
60	4.1 ± 1.5	7.0	0.014	3.0	0.5 ± 0.3	0.7	0.078	0.2
90	2.9 ± 0.8	2.5	0.293	2.0	0.3 ± 0.2	0.3	0.833	0.1
120	2.0 ± 0.5	1.8	0.349	1.8	0.1 ± 0.2	0.2	0.351	0.1
270	1.5 ± 0.4	1.2	0.106	1.3	0.1 ± 0.2	0.1	0.720	0.1
390	1.1 ± 0.6	1.0	0.742	1.1	0.0 ± 0.1	0.1	0.152	0.1
420	N/A	1.0		1.0	N/A	0.1		0.1
720	N/A	0.6		0.7	N/A	0.1		0.0

Supplemental Digital Content 1: comparison of measured and calculated plasma fentanyl concentrations.

Measured values are means ± standard deviations. Calculations made using the Shafer model in the iTIVA basic app (Version 3.1 by David Eduardo Ramirez) using the following parameters: Our trial (using means): age 27; all male, 75 kg, 180 cm, fentanyl infused 10 µg/kg vs. 1 µg/kg of bodyweight over 1 hour; Chia et al. (using means): age 43, all female 55 kg, 149 cm, fentanyl infused 15 µg/kg vs. 1 µg/kg of bodyweight over 20 minutes. P values compare measured and calculated values by Wilcoxon-Mann-Whitney-test. N/A = not applicable, sd = standard deviation