

CNS Percentage Tracking v1.1

To find the percentage CNS oxygen toxicity dose for a dive, calculate the PPO₂ of your gas mix for the appropriate dive depth (or depths, if you have a variable profile or are using separate bottom and decompression mixes), multiply the matching figure in the CNS% per minute column by the time at depth.

PPO ₂	CNS% per minute
0.6	0.14
0.62	0.14
0.64	0.15
0.66	0.16
0.68	0.17
0.7	0.18
0.72	0.18
0.74	0.19
0.76	0.2
0.78	0.21
0.8	0.22
0.82	0.23
0.84	0.24
0.86	0.25
0.88	0.26
0.9	0.26
0.92	0.29
0.94	0.3
0.96	0.31
0.98	0.32
1.0	0.33

PPO ₂	CNS% per minute
1.02	0.35
1.04	0.36
1.06	0.38
1.08	0.4
1.1	0.42
1.12	0.43
1.14	0.43
1.16	0.44
1.18	0.46
1.2	0.47
1.22	0.48
1.24	0.51
1.26	0.52
1.28	0.54
1.3	0.56
1.32	0.57
1.34	0.6
1.36	0.62
1.38	0.63
1.4	0.65

PPO ₂	CNS% per minute
1.42	0.68
1.44	0.71
1.46	0.74
1.48	0.78
1.5	0.83
1.52	0.93
1.54	1.04
1.56	1.19
1.58	1.47
1.6	2.22
1.62	5
1.65	6.25
1.67	7.69
1.7	10
1.72	12.5
1.74	20
1.77	25.0
1.78	31.25
1.8	50
1.82	100

EXAMPLE: A dive on Nitrox 32 for 20 minutes at 36 metres (PPO₂: 1.47 bar) and 24 minutes at 20 metres (PPO₂: 0.97 bar) would give a CNS percentage of:

$$(20 \times 0.78) + (24 \times 0.32) = 15.6 + 7.68 = 23.28\% \text{ CNS toxicity loading.}$$

CNS toxicity decays at a rate of 50% every 90 minutes. In the above example, after 90 minutes it would be 11.64%, after 180 minutes it would be 5.82%, and so on.

If repetitive dives are planned, the adjusted CNS% total from earlier dives must be added to the next CNS% exposure to give the total current CNS% exposure.

12 hours must elapse before tissues can be regarded as clear.