



## Response to Letter to Editor by Dr. Aminnejad et al.

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### Dear Editor,

We would like to thank Dr. Aminnejad and Dr. Sabouri for their interest in our article and expressing their concern regarding the use of melatonin in cataract surgery (1).

The primary concern noted was that the use of melatonin as a preemptive analgesic drug may delay recovery and discharge in short-time surgeries. Because of returning to basal concentrations in 4 to 8 hours (2), they believed that melatonin is not a short-acting drug. The drug elimination half-life is not an appropriate criterion for evaluating the efficacy of a drug. Melatonin does not last longer than fentanyl (a short-acting opioid agonist) because melatonin elimination half-life is 1.8-2.1 hours (3) but that of fentanyl is 8-10 hours (4). The short-acting effect of single-dose fentanyl administration is not due to elimination half-life, but to its rapid redistribution (5). Melatonin like fentanyl acts as a short-acting drug because it crosses easily the blood-brain barrier by its amphipathic nature (6, 7). Oral administration of melatonin at pharmacological doses could not impair the motor performance, memory, and visual sensitivity and therefore, it is a drug with short-acting sedative-like properties (8). Also, from data not presented in our recently published paper (9), we found no significant difference between melatonin and placebo groups in the orientation score (at either place and time) before entering the operating room, after surgery, and during recovery time.

Hence, we concluded that due to its short-acting feature, melatonin can be considered for short-time surgeries.

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### Footnotes

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