

# Safety Interval From Increased Viscosity After COVID-19 Vaccination Among Persons With Cerebrovascular Problems

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Dear Editor,

We would like to add ideas on the recently published article “Expected Viscosity After COVID-19 Vaccination, Hyperviscosity and Previous COVID-19.”<sup>1</sup> Based on the previous report,<sup>1</sup> there is an increasing blood viscosity after COVID-19 vaccination and there might be a problem if the blood viscosity exceeds hyperviscosity level (5 cp). For a general person, blood viscosity can increase to 3.9 cp.<sup>1</sup> In healthy persons, there will be a safe interval after vaccination, which is determined by “hyperviscosity level–post vaccination viscosity level.” In a person with background illness, whether there is a change of the safety interval is an interesting issue.

Here, the authors estimated for the safety interval for no hyperviscosity in 3 different groups of persons with cerebrovascular problems, based on referencing publication,<sup>2</sup> (a) patients with stroke, (b) those with a transient ischemic attack, and (c) those with stroke risk factors. The data from previous publication<sup>2</sup> are used for estimation of the safety interval for no hyperviscosity comparing between healthy person and cases from different groups of persons with cerebrovascular problems.

According to estimation, the safety interval for each group is shown in Table 1. Using this clinical modeling, all persons in the groups with a cerebrovascular event or with stroke risk

factors have a decreased safety interval. The most affected group is the patient with stroke group.

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**Table 1.** Safety Interval for No Hyperviscosity Problem in Different Groups.

Groups	Background viscosity (cp)	Safety interval (cp)
Healthy person	1.51	1.1
Patient with stroke	1.57	0.4
Patient with TIA	1.53	0.8
Person with stroke risk factors	1.53	0.8

TIA, transient ischemic attack.



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