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**A critical velocity of squeezing a droplet through a circular constriction: implications on ischemic stroke**[1] ZHIFENG ZHANG, CORINA DRAPACA, The Penn State University — Ischemic stroke accounts for about 87 percent of all stroke cases. In these cases, models of squeezing a droplet through a smaller constriction channel can help better understand the pathology and capillary restoring after a Stroke. In the present research, we analytical expressed the minimum impulse of squeezing a droplet through a circular channel as well as its critical velocity. By comparison with a previously defined critical velocity, we find the difference between these two. Applications of this research in the understanding of ischemic stroke are also discussed.

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