

# Time is Brain!!!



**THE AVERAGE HEALTHY HUMAN BRAIN:  
HAS APPROXIMATELY 130 BILLION NEURONS<sup>1</sup>.**

## THE AVERAGE HUMAN FOREBRAIN HAS<sup>1</sup>:



**22 billion** neurons,



**157 trillion** synapses,



**135 000km** of myelinated fibers,



Every year **during normal aging** your brain loses **31 million neurons.**

## DURING AN UNTREATED ISCHAEMIC STROKE THE BRAIN LOSES<sup>1</sup>:

Time	Neurons	Synapses	Myelinated Fibers	Premature Aging
Per second	32, 000	230 million	200m	8.7 hrs
Per minute	1.9 million	14 billion	12 km	3.1 weeks
Per hour	120 million	830 billion	714 km	3.6 years
Per Stroke	1.2 billion	8,3 trillion	7140 km	36 years



Blockage of one blood vessel will cause ischaemia within **5 minutes.**



Stroke Episode (nonlacunar) lasts on average **10 hours.**

That's why it is recommended to **act FAST<sup>7</sup>** when it comes to **AIS**, the sooner treatment is given the greater the chance of a successful outcome<sup>6</sup>.

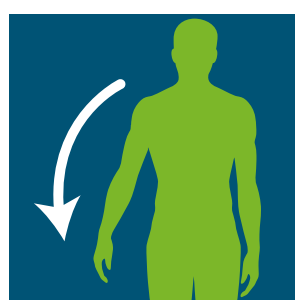
## DO THE F.A.S.T. TEST



**Face**

**Smile, or show your teeth.**

Does one side of the face droop?



**Arm**

**Close your eyes, and hold your arms out for 10 seconds.**

Does one arm drift down?



**Speech**

**Repeat any sentence.**

Is speech slurred, wrong words used or unable to speak?



**Time**

**Note the time and get to the nearest stroke unit as soon as possible.** Every minute counts.



REMEMBER TIME IS BRAIN,

**Act Fast!**



For more information on strokes and the management of these patients, please register and visit the website: [www.angels-initiative.com](http://www.angels-initiative.com)

**References:** 1. Saver JL et al, Time is Brain - Quantified, Stroke, 2006; 37; 263-266. 2. Saver JL et al, Time to Treatment With Intravenous Tissue Plasminogen Activator and Outcome From Acute Ischemic Stroke, JAMA, 2013 Jun 19;309(23):2480-8. 3. C.S. Kidwell, MRI Biomarkers in Acute Ischemic Stroke: A Conceptual Framework and Historical Analysis, Stroke, 2013 (Nov); 44; 570-579. Lancet, 2010 May; 15;375(9727):1695-703. 4. Lees KR, Time to treatment with intravenous alteplase and outcome in stroke: an updated pooled analysis of ECASS, ATLANTIS, NINDS, and EPITHET trials. Lancet; 2010 May 15;375(9727):1695-703. 5. National Institute of Neurological Disorders and Stroke rt-PA Stroke Study Group, Tissue plasminogen activator for acute ischemic stroke. N Engl J Med. 1995 Dec 14;333(24):1581-7. 6. NINDS NIH website. Stroke Symposium proceedings 1996. Updated 2011. 7. Preventing stroke. National Institute of Neurological Disorders and Stroke. National Institute of Health

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