

## A STUDY - SEXUAL HEALTH ISSUES AFTER STROKE

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### Abstract

*Stroke can cause big changes in the lives of couples who are sexually active — in body and in mind. Insecurities, doubts and fears can throw even the most open and loving couples into a tangled web of emotions. Many survivors find that they're not very interested in intercourse. There may be body image concerns because of hemiplegia (paralysis on one side of the body), drooling, facial droop or the inability to speak clearly. Don't try to force the issue. Returning to sexual activity requires patience and the loving support of your mate. You'll know when you're ready. Here are some practical considerations before you get started.*

### INTRODUCTION

#### Introduction

Stroke is a medical emergency characterized by the WHO as “rapidly developed clinical signs of focal (or global) disturbance of cerebral function, lasting more than 24 hours or leading to death, with no apparent cause other than of vascular origin”. Stroke is the 3<sup>rd</sup> leading cause of death and one of the major causes of long term disability.<sup>1</sup>

#### Incidence And Prevalence

As stated by the quotes in the GBD analysis from 2001, more than 85 per cent of their worldwide lack of stroke has been hauled with low-income and low nations (LMICs). Considering that the deficiency of reporting mechanisms along with disease or passing registration approaches in LMICs, the epidemiological findings by the GBD analysis for almost all of the LMICs are far more inclined to become underestimates<sup>3</sup>. An international methodical report on population-based stroke scientific reports also have recorded

the prevalence rate of stroke at LMICs has raised speed of stroke at LMICs has risen by 56/100,000 men throughout 1970-1979 several a long time into 117/100,000 individuals throughout the time 2000 2008 years. This analysis has reported that a Drop in the stroke prevalence in 163/100,000 men in 1970-1979 many decades to 94/100,000 men Throughout 2000 2008 Several Years in High income nations (HICs) 5 signaling roughly 42 per cent Drop-in stroke Meditation can be a significant public health issue. Once attempts to upgrade that the GBD exploration reported perhaps maybe not only 5.87 million stroke deaths globally this past year, compared to 4.66 million in 1990 two, 3, 4. This indicated a 26 percent rise in stroke deaths throughout the previous two decades. Considering all of the current rising portion of mortality, as the stroke is still the upcoming top reason behind departure worldwide<sup>3,4</sup>. As Stated by the India stroke Fact-sheet upgraded in 2012, the projected age-adjusted incidence speed for stroke ranges involving 84/100,000 in rural and involving 334/100,000 in metropolitan areas Prevalence in HICs and significantly a lot more than twice rise in stroke prevalence at LMICs, throughout the previous 4 decades<sup>6</sup>. An analysis ran in Vellore, south India reported there has been a yearly incidence rate of 13/100,000 people, 8, 9 the projected corrected incidence speed of stroke assortment, 8-4 - 262/100,000 in rural and 334-424/100,000 in metropolitan locations. The prevalence rate is 119-

based 145/100,000 according to the New population-based research.<sup>7</sup>

**Table-Global Stroke Estimates**

S. No	Global Stroke Estimates	Reference	Year
1	28,500,000 DALYs (disability adjusted life year)	WHO	2004
2	400-800 stroke per 100,000	Banarjee T et. al., Journal of Indian Medical Assoc.	2005
3	16 million new acute strokes every year (strong)		2007
4	5.7 million deaths (Sridharan)		2009
5	28-30 days case fatality ranges from 17%-35% (Feigin et. al.)		2009

**Risk Factors And Pathology**

Older patients with stroke accounts for 5-10percent on almost all of the stroke across the entire environment. The impact of stroke into a family and society would likely probably undoubtedly be powerful as it affects a young person. Therefore much since the potential features are stressed cigarette alcoholism, smoking, increased BMI, diabetes and hypertension have also long been correlated with strokes among of youthful people<sup>10</sup>.

**Pathophysiology And Pathogenesis Of Stroke**

Chance factors linked with evolution

include lower blood pressure, diabetes, preliminary stroke severity, along with lesion dimension, Specifically, development of engine shortages is related to a reasonably inferior operational end result.<sup>13</sup> Thus, a much-increased comprehension of pathophysiologic mechanisms concerned may possess clinical significance and justify closure assessment.

**Table-Major non-modifiable and modifiable stroke risk factors.**

Type of Stroke	Non-Modifiable Risk Factors	Modifiable Risk Factors
Ischemic Stroke	<ul style="list-style-type: none"> <li>• Age</li> <li>• Sex</li> <li>• Race/ethnicity</li> </ul>	<ul style="list-style-type: none"> <li>• Hypertension</li> <li>• Current smoking</li> <li>• Waist to hip ratio</li> <li>• Diet</li> <li>• Physical activity</li> <li>• Hyperlipidemia</li> <li>• Diabetes mellitus</li> <li>• Alcohol consumption</li> <li>• Cardiac causes</li> <li>• Apolipoprotein B to A1</li> </ul>
	Genetics	

Hyper homocysteinemia Tan NC et al.,<sup>14</sup> found that homocysteinemia Is also an unaffiliated risk factor for premature stroke in younger girls adults using a

sturdy relationship involving improving homocysteine levels and stroke hazard. Rice (68.7percent) was common staple meals in dietary plan when compared with wheat. Rice isn't correlated with risk of stroke at gender<sup>12</sup>. Research from South India<sup>16</sup> portrayed elevated levels of triglycerides at 10 percent of patients, also increased LDL at 33 percent of girls.

Genetics is put within overlapping location involving modifiable and non-modifiable to signify that simple fact genetic hazard factors are recognized as possibly multiplying, both straight or during alteration of gene-environment interactions. Info modifiable risk variables derive from your analysis by O'Donnell et. Al<sup>17</sup>. The mechanics which underlie symptomatic development are most likely complex and multifactorial. Growing in lesion dimensions, also a comparatively consistent occurrence throughout primary a few days<sup>18</sup>, is imagined to bring, at least in a part, into development of symptoms. Other suggested mechanisms for symptomatic development include progressing stenosis of all both Big artery<sup>19</sup>, thrombus propagation local tissue necrosis also a mass influence because of edema<sup>20</sup>, hemorrhage<sup>21</sup>, and a molecular imbalance of neurotransmitters<sup>22</sup>.

### **Sexual Dysfunction In Stroke Patients**

Within One Hour Necrotic The crucial The cardiovascular Related to grater cerebral ischemic trauma.

Glucose Metabolic Process has been affected from the condition of collateral flow within the subject of affection. Hypercoagulable condition raises Collateral flow: both the impact and seriousness of ischemic Trauma Mechanics creating brain injury in stroke are both haemorrhage. In short term, there's lowered or start circulating blood

clots of crucial substrates. The outcomes, if ischemia, are quickly as mental performance is incompetent at strong sugar reserves along with anaerobic endurance.

1) Speed of development and degree of thrombi.

Infection:

Time interval throughout the ip address zone is at an danger is known because "window of opportunity", due to fact neural shortages designed by ischemia might be partially or entirely reversed by re-perfusing the cortical region nonetheless workable brain tissue in just an essential period frame may be 24 hours prior to beginning of ischemia<sup>24</sup> (jones et.)

Neuronal departure:

Oedema commences inside a couple of moments and reaches a max for about 4 weeks and Have an effect on the magnitude of a infarct. Hyper hypoglycemia can negatively Tissue dissipates fast chiefly because of excess intercellular and intracellular water material along with deficiency.

The Systemic Lesion into the mind cause discharge of receptors such as glutamate and aspartate from the cells that excite nerves and develop an unspecified influx of Na<sup>+</sup> and Ca<sup>+</sup> resulting to irreversible cell injury.

The cardiovascular 2 Flow standing: persistent cerebral perfusion strain is based upon the decent systemic blood pressure. Systemic hypotension from some other reason could cause global cerebral ischemia.

Haematological variables:

Stroke also contributes to hypo-perfusion of the mind spot which intimates a complicated collection of occasions. Excitotoxicity, cognitive pressure, microvascular harm, blood pressure barrier malfunction along with post-ischemic irritation contributes to cell death of

neurons, glia and esophageal tissues. The level and length of ischemia figure out the degree of cerebral damage<sup>23</sup>.

Of all hypoxic-ischemic insult, there's a heart of advice surrounded by oligemic zone (cells which can be living but metabolically less busy) named ischemic penumbra (internet protocol address).

Onset and length of ischemia (mind could endure in ischemia of short-term or you having an slow beginning).

Endanger resulting in severe stroke really is a more very lively procedure, the development and degree of the motivated by:

Cerebral Mostly vanishes through 3 months. Ischemic Procedures in the effected nerves perish are coagulation necrosis and apoptosis.

### **Consequences Of Neurological Changes On Sexual function**

Encounter, leg and arm on a single facet of their body. Nearly Two thirds of stroke Of role in muscular movement or control or restriction at mobility<sup>25</sup> Caused by stroke can be engine handicap, that may be considered reduction or limit The Most Frequently Occurring and broadly accepted handicap Motor handicap after stroke usually Impacts management of motions of this Americans have first freedom flaws, also half a year after having a stroke, even longer Compared to 30 percent of Americans nevertheless are not able to walk individually.

The Somato sensory impairment is common after motor impairment in stroke. Stereognosis and proprioception were more frequently impaired than the tactile sensations and is seen in about 80% of patients<sup>27</sup>. Much non-motor impairment may also lead to significant disability post-stroke. These impairments affect, to change in levels, the speed and degree of stroke recovery. Often encountered cases

include cognitive decline<sup>28</sup> (including memory, executive functioning, attention, concentration and endurance), very low mood and diminished communication abilities<sup>30</sup>, which may impact upon motivation, interaction with all rehab team and carry-over of learned actions.

The existence of sensory impairments<sup>31</sup>, in Addition to visual and perceptual disorders (like Agnosia, Apraxia and fail) can also have an effect on participation in rehab. These flaws commonly impact freedom, driving and reading skills, which might lead to poor quality of life, reduced mood and social isolation.

Partial immobilization, Due to paralysis, following a cerebrovascular Accident leads to characteristic changes in the affected limbs, using a marked reduction in the content of lean and bone tissue and a noticeable rise in fatty tissue<sup>34</sup>.

Fatigue is regular and frequently severe, even after stroke. It's related to deep deterioration of many facets of normal life and also with higher case fatality, but it normally receives little attention by health care professionals<sup>35</sup>.

Cognitive decline restricts social actions and leisure and may seriously of the individual patient, severity of the neurological deficit, and place of their stroke<sup>37</sup>. Ahlsio et.al.<sup>38</sup> revealed that QL was affected by both physiological and mental elements, memory and concentration included. Niemi et al. discovered a significantly higher intellect and memory quotient in stroke patients using a restored or enhanced QL compared to patients using a deteriorated QL<sup>39</sup>.

Urological dysfunction following stroke relies largely on the test of symptomatic patients. Time after stroke has a substantial effect on urological findings. Urological findings, to our understanding the impact of the concerned hemisphere are cloudy.

A significant handicap of stroke is that the reduction of challenges with all the sexual Function that's not frequently addressed and may help determine the quality of lifestyle among stroke survivors in addition to their spouses in a negative manner. Stroke often results in a restriction in physical handicap and function that may impact sexual health in a negative way<sup>41</sup>. Stroke often contributes to a restriction in physical handicap and function which may impact sexual health in a negative way<sup>42</sup>. Sexuality facilitates among the most complicated aspects of human life together with myriad the typical sexual dysfunction among stroke survivors is diminished libido, diminished erectile and ejaculatory functions, diminished vaginal lubricants, diminished self, self-esteem and depression<sup>46</sup>. The sexual lifestyle in stroke sufferers influenced from the motor, cognitive, sensory and physiological consequences of stroke and impacts the desire and capability to take part in sexual activity in many.

Higher prevalence Prices Nevertheless it may link solely with dementia in numerous manners: it may function as probably the maximum Etiological bases. Major cause or perhaps even a precipitating variable of dementia, or else they may discuss frequent Stroke is strongly Connected with dementia, also Patients with right hemisphere damage had difficulties in choosing the appropriate sleeve, self- tracking their left side or covering the paretic shoulder, indicating deficits in visuospatial perception or fail. Patients with left hemisphere damage dressed the non- paretic arm initially or revealed a cluttered dressing, plan, suggesting impaired activity control because of apraxia. Ideomotor apraxia gave rise to attribute dexterity mistakes after left hemisphere damage whereas

visuospatial deficits were of the form of dexterity mistakes seen in right hemisphere damaged participants<sup>50</sup>.

Cognition is not a unitary notion; it integrates multi-domains, including focus (focusing, altering, dividing, or sustaining focus on a certain stimulus or activity), executive function (planning, organizing ideas, inhibition, management) visuospatial ability (visual research, drawing, and structure) memory (recall and comprehension of verbal and visual data) and language (expressive and receptive). Classification is far from simple, as domains aren't independent for instance, recalling a list of grocery items which you were advised to purchase isn't simply dependent on memory but also on focus and language<sup>51</sup>.

Ballard et. Al<sup>52</sup> reasoned that impairments of processing of individuals with dementia Supposed memory impairment were not likely to be notable.

### **Causes Of Sexual Dysfunction In Stroke Patients**

Sexual dysfunction can have a significant impact on Quality of alive, also on psychosocial and psychological well-being. Hypo sexuality is common with stroke resulting in decrease in libido, decreased frequency, or cessation of sex; decreased erectile dysfunction or disorder for men; and diminished vaginal secretion for ladies. Lowered sexual health isn't exclusive to elderly people; mid aged<sup>53</sup>. The maintenance of sexual functions is dependent upon the coordination of human multi-system, between the manipulation of the nervous system, the cardiovascular system, the endocrine system and the reproductive system<sup>54</sup>.

### **Anatomy of Male Reproductive System:**

- 2 Testes
- 2 Epididymis
- 2 Ducts - Deferens (Vas Deferens)

- 2 Spermatic Cords
- 2 Seminal Vesicles.
- 2 EjaculatoryDucts.
- 1 ProstateDucts
- 1 Penis
- The skin is pigmented, contains fibrous and connective tissue and smooth muscle called dartos muscle.
- The scrotum also contains the cremaster muscle which is an extension or internal oblique muscles.
- The two muscles help in the regulation of the temperature of the testes lesser than normal body core temperature.
- Normal sperm cells are Divided to 2 inner pockets by means of a connective tissue septum.
- A ridge called raphe, indicating the division of compartments can be seen on the surface.
- This raphe is continuous forwards along the under surface of the penis and back ward to thepenis.
- Each compartment It is located beneath the symphysis pubis and supporting your manhood. · Comprises one particular testis, 1 epididymis along with the end of spermatic cord.



**Human Testicle**

**Testes:**

- The testes are the reproductive glands of the males, situated in the scrotum.
- They are equivalent of the ovaries in the female.
- Between both layers, then there's an expected space comprising a picture of liquid.
- Even the tunica albuginea extends patiently and creates septa and divides every single and every testis to lobules.
- Tissue Capillaries encouraged by sensitive connective They're included in 2 levels of tissue i.e., that the tunica vaginalis, a serous membrane, contains 2 levels i.e., outer parietal coating lines the internal outermost layer of the scrotum, and also the other coating outlines the testes and epididymis.
- Even the tunica vasculosa Comprises system of tunica albuginea is fibrous covering encircle the testes located underneath the tunica vaginalis.

**Structure:**

- In each testis there are 250 to 300lobules.
- Within each lobule, there are 1 to 3 convoluted loops of semini ferous

tubules which consist of spermatogenic cells.

- These mini ferrous tubules produce spermatozoa by process called spermatogenesis
- Follicle stimulating hormone together with testosterone stimulates sperm production by the seminiferous tubules.
- At the time of puberty, the interstitial cells increase in size and number.
- The seminiferous tubules enlarge and spermatogenesis begins.
- The seminiferous tubules contain germ cells and sertoli cells.
- The sertoli - cells extend from the basement membrane to the lumen of the tubule.
- These cells support, protect and nourish the sperm cells.
- They mediate the effects of testosterone and follicle stimulating hormone.
- In humans, spermatogenesis takes about 65-70days.
- After development, the sperm enter the lumen, of these mini ferrous tubules and flow towards the ducts of the testes.

## Conclusion

A stroke happens when the blood supply to the brain is decreased. This deprives the brain of oxygen and nutrition, which leads to the death of brain cells. Thrombotic stroke happens when a blood clot forms in blood vessels that lead to decreased supply of blood into the brain. How an individual has been influenced by their stroke is dependent upon where the stroke happens in the brain and just how much the mind is damaged. Individuals that have bigger strokes might be paralyzed one side of the

body or shed their capacity to talk. Many people today recover completely from fractures, but over 2/3 of spouses is going to have some kind of disability.

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