

# Depression After Stroke and the Role of Psycho-Social Support

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**One in three people experience depression at some point during the five years after their stroke.**

**The impact of stroke can cause:**

- personality, mood and emotional changes.
- There is a strong link between stroke, depression and anxiety.

<https://strokefoundation.org.au/About-Stroke/Help-after-stroke/Stroke-resources-and-fact-sheets/Depression-and-anxiety-after-stroke-fact-sheet>

## **Consequences of post stroke depression**

- Longer hospital stays – affect rehabilitation
- Poorer recovery of activities of daily living
- Increased morbidity ( more with presence of executive dysfunction)
- Poorer quality of life, even when neurological symptoms and disability are held constant

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Poststroke depression (PSD) is the most common stroke-related emotional disorder and affecting one-third of stroke survivors at any time up to 5 years after stroke.

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Identifying patients at risk for PSD through early depression screening and provide interventions to enhance rehabilitation and improve recovery.

Babkair LA (2017). Risk Factors for Poststroke Depression: An Integrative Review. *J Neurosci Nurs. Apr;49(2):73-84*. doi: 10.1097/JNN.0000000000000271. retrieved from. <http://pubmed.gov>

# What are some tools to Identify PSD?

## Self-report scales

- Hamilton Rating Scale for Depression

[http://www.servier.com/App\\_Download/Neurosciences/Echelles/HDRS.pdf](http://www.servier.com/App_Download/Neurosciences/Echelles/HDRS.pdf)

- Beck Depression Inventory

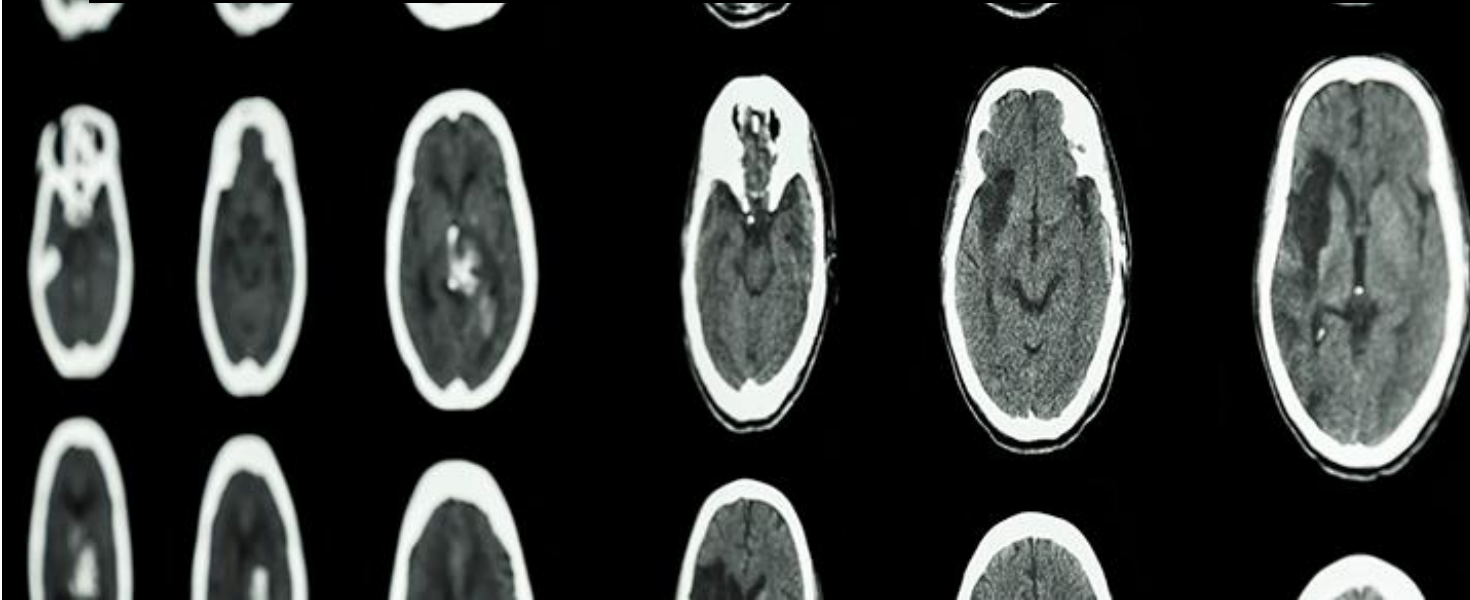
[http://www.ibogaine.desk.nl/graphics/3639b1c\\_23.pdf](http://www.ibogaine.desk.nl/graphics/3639b1c_23.pdf)

## Objective Data Scales:

- Clinical Global Impression Severity Scale (CGI-S)
- Signs of Depression Scale (SDSS)



# If you have mild or moderate depression, psychological treatment and lifestyle changes may work for you



<https://strokefoundation.org.au/About-Stroke/Help-after-stroke/Stroke-resources-and-fact-sheets/Depression-and-anxiety-after-stroke-fact-sheet>

- **Cognitive behavior therapy (CBT).** Helps you identify and change unhelpful thought patterns, creating a more positive and problem-solving approach. It is one of the most effective treatments for depression.
- **Behavior therapy.** Behavior therapy focuses on doing activities that are rewarding, pleasant or satisfying. It aims to get you involved in life again.
- **Interpersonal therapy.** Helps you recognize patterns in your relationships that make you more vulnerable to depression. You focus on improving relationships, coping with sadness and grief, and finding new ways to get along with others.
- **Mindfulness-based cognitive therapy.** Group therapy that involves meditation. Mindfulness meditation teaches you to focus on the present moment without trying to change it. It can help to stop your mind wandering off into thoughts about the future or the past. It helps you notice feelings of sadness and negativity early on before they become fixed.

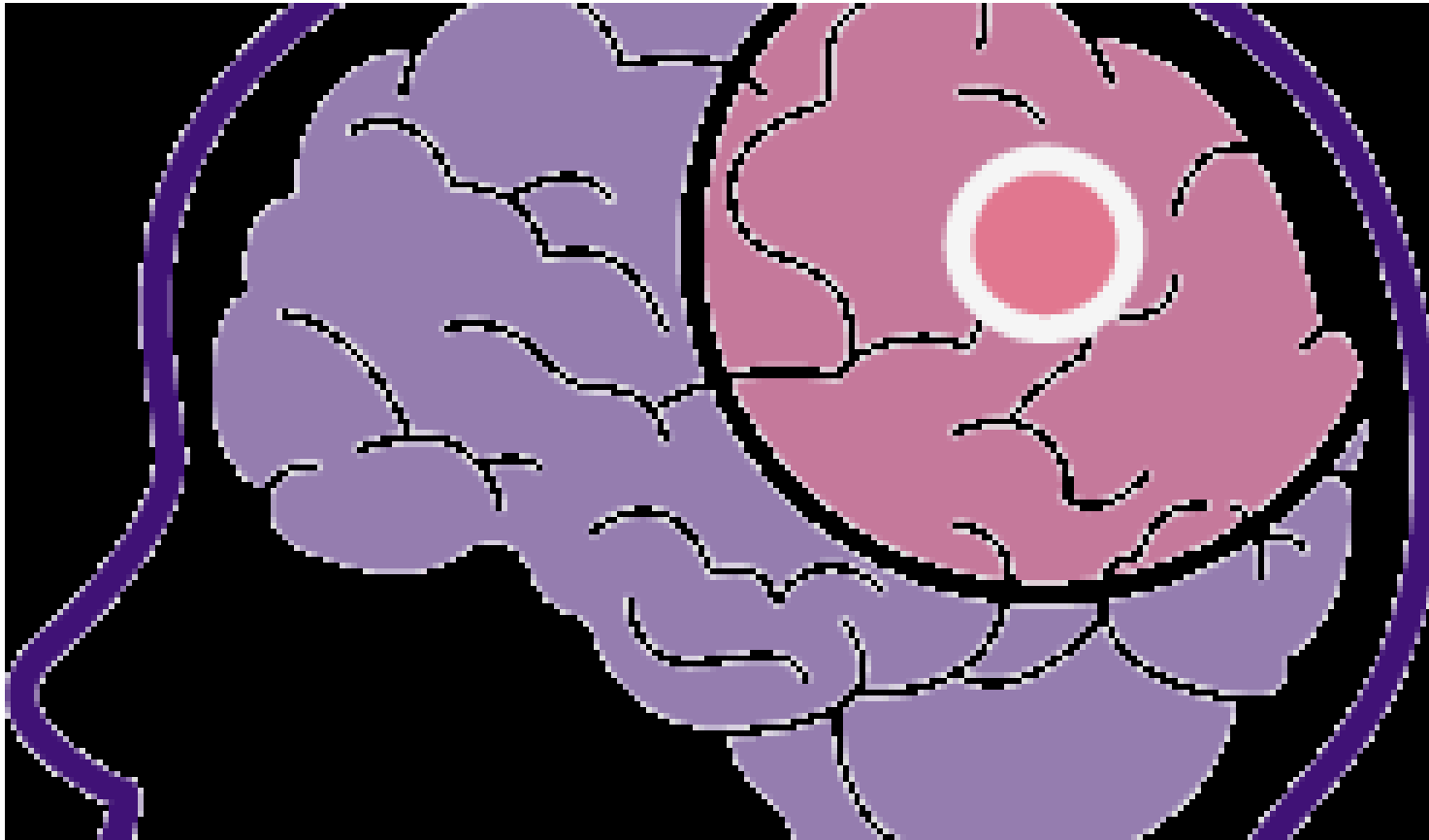
# Cognitive rehabilitation therapy significantly reduced post stroke depression



Olukolade O, Osinowo HO, (2017). Efficacy of Cognitive Rehabilitation Therapy on Post stroke Depression among Survivors of First Stroke Attack in Ibadan, Nigeria *Behav Neurol*.;2017:4058124. doi: 10.1155/2017/4058124. Epub 2017 Jun 27. Retrieved from. <http://pubmed.gov>

Cognitive Rehabilitation focuses on:

- activity stimulation
- negative thoughts
- people contacts
- knowledge on stroke and post stroke depression

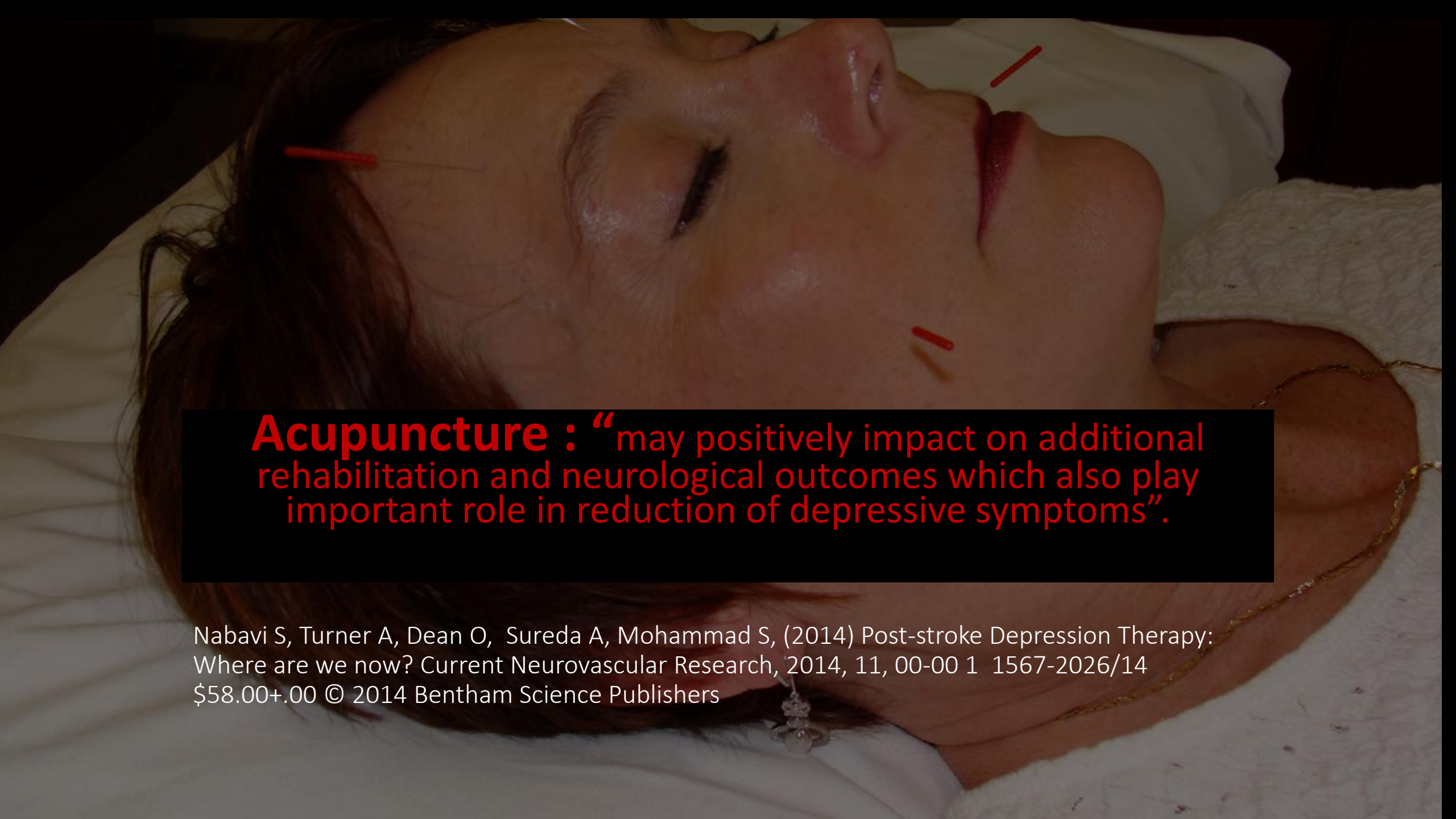


Hadidi N, Huna Wagner R, Lindquist R (2017). Nonpharmacological Treatments for Post-Stroke Depression: An Integrative Review of the Literature. *Res Gerontol Nurs. Jul 1;10(4):182-195*. doi: 10.3928/19404921-20170524-02. Epub 2017 May 30. Retrieved from. <http://pubmed.gov>

## Nonpharmacological Treatments:

- ecosystem-focused therapy,
- life review therapy,
- problem solving therapy,
- meridian acupressure,
- repetitive transcranial magnetic stimulation,
- music therapy,
- exercise,
- light therapy,
- motivational interviewing,
- robotic-assisted neurorehabilitation.





**Acupuncture** : “may positively impact on additional rehabilitation and neurological outcomes which also play important role in reduction of depressive symptoms”.

Nabavi S, Turner A, Dean O, Sureda A, Mohammad S, (2014) Post-stroke Depression Therapy: Where are we now? Current Neurovascular Research, 2014, 11, 00-00 1 1567-2026/14 \$58.00+.00 © 2014 Bentham Science Publishers



Shen X, Liu M, Cheng Y, Jia C, Pan X, Gou Q, Liu X, Cao H, Zhang L (2017). Repetitive transcranial magnetic stimulation for the treatment of post-stroke depression: A systematic review and meta-analysis of randomized controlled clinical trials. *J Affect Disord.* Mar 15;211:65-74. doi: 10.1016/j.jad.2016.12.058. Epub 2017 Jan 10.

- Repetitive transcranial magnetic stimulation (rTMS) is one of the emerging techniques which assist in targeting rehabilitation after stroke.



Baylan S, Swann-Price R, Peryer G, Quinn T (2016). The effects of music listening interventions on cognition and mood post-stroke: a systematic review. *Expert Rev Neurother.* Nov;16(11):1241-1249. Epub 2016 Aug 29. retrieved from <http://pubmed.gov>

- Music listening therapy may be a viable intervention to improve motor function in chronic stroke individuals.





Lund A, Melhus M, Sveen U. (2018) Enjoyable company in sharing stroke experiences; - lifestyle groups after stroke *Scand J Occup Ther.* Mar;25(2):127-135. doi: 10.1080/11038128.2017.1341958. Epub 2017 Jun 19.

Active participation seemed to bring the participants' resources into focus and contrasted with the frequent negative perceptions of people post-stroke as 'victims'.



## Resiliency skills:

- mindfulness/focusing on the present
- problem solving
- gratitude/optimism
- self-care
- interpersonal communication
- developing a supportive team of family, friends, and medical staff

Resiliency skills are beneficial  
to optimize recovery



**Caregiver  
Demographics**

**Duration of  
Caregiving**

**Caregiving Situation**

**Physical Disability  
Behavioral/Mood Disturbances  
Cognitive/Communication  
Impairment**

**Caregiver Factors**

**Health  
Role Interference  
Mastery/Burden**

**Other Life Events**

# What effects caregivers

**Caregiver Quality of Life**

**Environmental Factors**

**Social Relationships  
Relationship with Stroke Survivor  
Health Care Resources  
Financial Resources**



STRESS

REDUCING  
**CAREGIVER STRESS**  
TIPS

[www.caregiversupportacademy.com](http://www.caregiversupportacademy.com)



# *What is Caregiver Stress*

- The emotional & physical strain of providing basic care to a person who has a chronic medical condition.
- Signs of Stress:
  - Withdrawal
  - Sleeplessness
  - Sleeping difficulty
  - Lack of concentration
  - Weight loss/gain
  - Drug/alcohol abuse
  - Eating disorder
  - Mood swings
  - Chronic fatigue
  - Feeling overwhelmed



**Stress of family caregiving places caregivers at risk for developing depression, poor quality of life, and health problems**



Saban KL, Sherwood PR, DeVon HA, Hynes DM(2010). Measures of psychological stress and physical health in family caregivers of stroke survivors: a literature review. J Neurosci Nurs. Jun;42(3):128-38. retrieved from. <http://pubmed.gov>

QOL

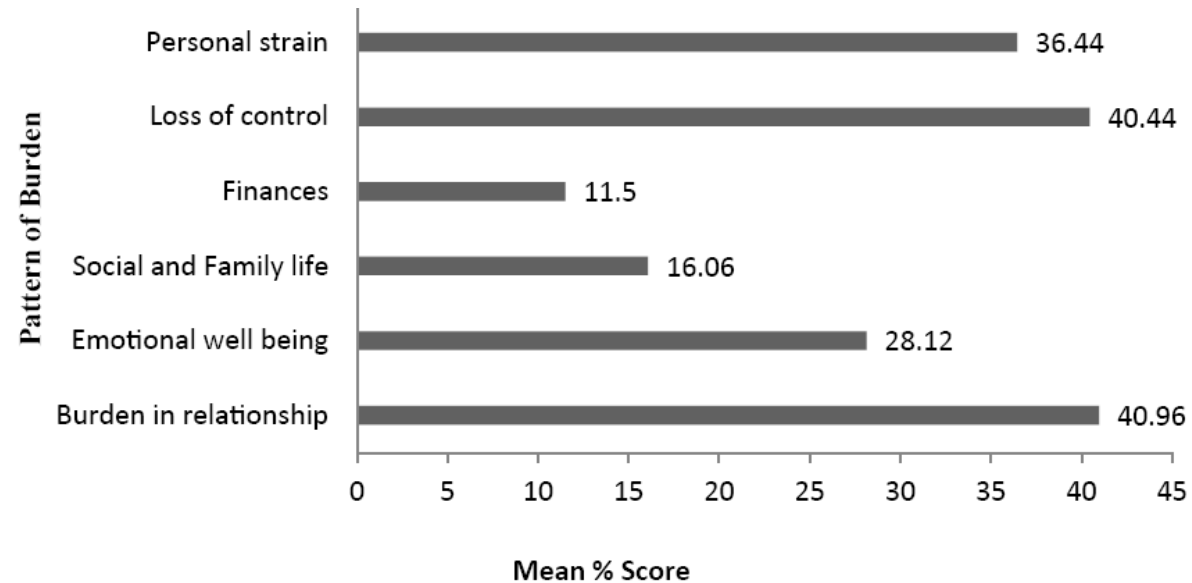
Patient

Caregiver





## Burden for Caregivers



**Figure 1:** Mean percentage of pattern of burden in caregivers.

- Kumar R, Kaur S , Reddemma K, (2016) Burden, its Predictors and Quality of Life in Caregivers of Stroke Survivors at Rural Community, Punjab, India. Journal of Neurology and Neurorehabilitation Research Volume 1, Issue 1. retrieved from. <http://alliedacademics.org>

# Uncertainty in caregivers can contribute to negative health outcomes.

1

Caregivers of stroke survivors experience high rates of mental and physical morbidity. Uncertainties surrounding the new caregiving role may necessitate major changes in the lives of family caregivers and contribute to negative health outcomes for the caregiver.

2

Caregivers experienced persistently high uncertainty during the first 6 weeks post stroke. Better understanding of uncertainty, may help clinicians identify caregivers at risk who may benefit from targeted interventions.

Depressive symptom patterns  
can be noted among stroke  
survivor-caregiver

Addressing mood problems in 1  
member may benefit the other  
member.

# Caregiver Burden



Malhotra R, Chei CL, Menon E, Chow WL, Quah S, Chan A, Matchar DF (2016). Short-Term Trajectories of Depressive Symptoms in Stroke Survivors and Their Family Caregivers. *J Stroke Cerebrovasc Dis.* 2016 Jan;25(1):172-81. doi: 10.1016/j.jstrokecerebrovasdis.2015.09.012. Epub 2015 Oct 21. retrieved from. <http://pubmed.gov>

# Chronic emotional distress is common after stroke and interdependent between patients and their informal caregivers



Uncertainty about future health,  
Fear of recurrent strokes,  
Negative emotions,  
Role changes post-stroke.

McCurley JL, Funes CJ, Zale EL, Lin A, Jacobo M, Jacobs JM, Salgueiro D, Tehan T, Rosand J, Vranceanu AM (2018). Preventing Chronic Emotional Distress in Stroke Survivors and Their Informal Caregivers. *Neurocrit Care* Nov 12. doi: 10.1007/s12028-018-0641-6. Retrieved from. <http://pubmed.gov>



Caregivers' perceived social support and physical well-being were significantly predicted by confidence in problem-solving

Significant relationships between caregiver self-appraised problem-solving, perceived social support and well-being suggest that interventions maximizing caregiver confidence in problem-solving might be valuable in supporting family caregivers of stroke survivors

Lui MH, Lee DT, Greenwood N, Ross FM (2012). Informal stroke caregivers' self-appraised problem-solving abilities as a predictor of well-being and perceived social support. *J Clin Nurs*. Jan;21(1-2):232-42. doi: 10.1111/j.1365-2702.2011.03742.x. Epub 2011 Jun 24. Retrieved from. <http://pubmed.gov>





- Caregiver stress culminating in burden is commonly a reason for the eventual institutionalization of the stroke survivor.
- Caregiver burden often results in psychological and physical health compromise for the caregiver.

Camak DJ (2015). Addressing the burden of stroke caregivers: a literature review. *J Clin Nurs. Sep;24(17-18):2376-82*. doi: 10.1111/jocn.12884. Epub 2015 Jun 10. retrieved from. <http://pubmed.gov>



- Caregivers' **financial factors** affected caregiver QoL directly as did caregivers' poor self-rated health and lower education level
- Interventions to make appropriate **policies for financial subsidies**, to enhance caregivers' health and to provide tailored stroke-related education may promote caregiver QoL.

Tsai YH, Lou MF, Feng TH, Chu TL, Chen YJ, Liu HE (2018). Mediating effects of burden on quality of life for caregivers of first-time stroke patients discharged from the hospital within one year. *BMC Neurol.* 2018 Apr 25;18(1):50. doi: 10.1186/s12883-018-1057-9. retrieved from. <http://pubmed.gov>  
Photo Source: Thinkstock.

# Vocational education to caregivers may be a beneficial intervention.

A substantial component of care is provided to stroke survivors by **informal caregivers**. However, providing such care is often a new and challenging experience and has been linked to a number of adverse outcomes.

**‘Vocational educational’** type interventions delivered to caregivers prior to the stroke survivor's discharge from hospital appear to be the most promising intervention





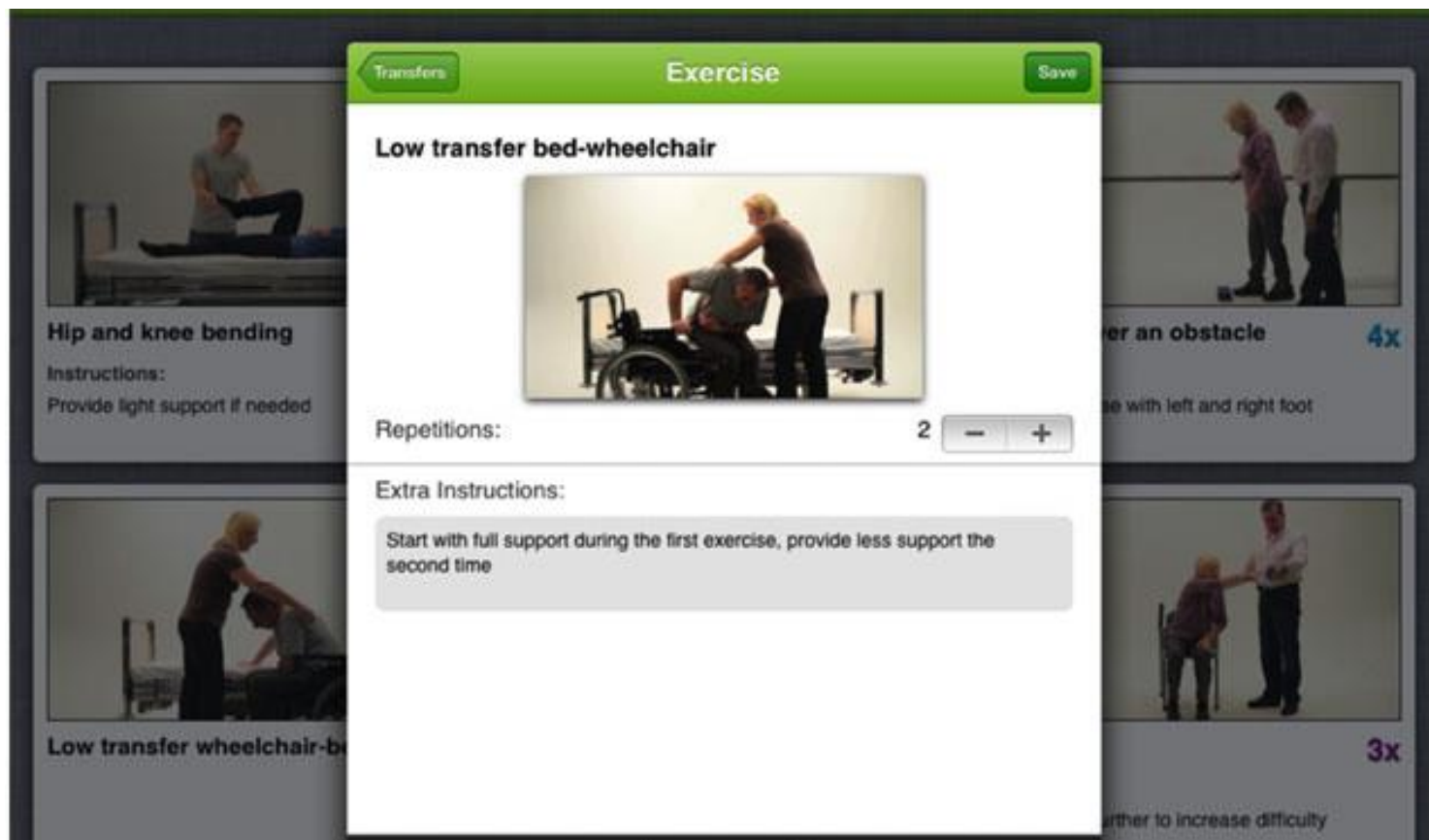
# Social support is as important as assessment and physical therapy to stroke treatment

A stroke affects more than brain cells – it **impacts** every area of the survivor's life, as well as the lives of the survivor's loved ones.

It may be the **prime predictor** of how survivors adjust to disability and depression long-term.

Support groups **challenge** survivors to get beyond their doctor-imposed, therapist-imposed, family-imposed and self-imposed limitations.





Vloothuis J, de Bruin J, Mulder M, Nijland R, Kwakkel G, van Wegen EEH (2018) Description of the CARE4STROKE programme: A caregiver-mediated exercises intervention with e-health support for stroke patients *Physiother Res Int.* Jul;23(3):e1719. doi: 10.1002/pri.1719. Epub 2018 May 24. retrieved from. <http://pubmed.gov>

## Exercise Coach

- The caregiver acts as an exercise coach by actively supporting and assisting the patient during the task-specific mobility exercises. This involves both mental and physical support during the exercises.



## Caregiver-mediated exercises are a novel way of delivering augmented exercise therapy for patients with stroke

Doing exercises together seems to make patient and caregivers actively involved in rehabilitation, and seems to help them prepare for the home

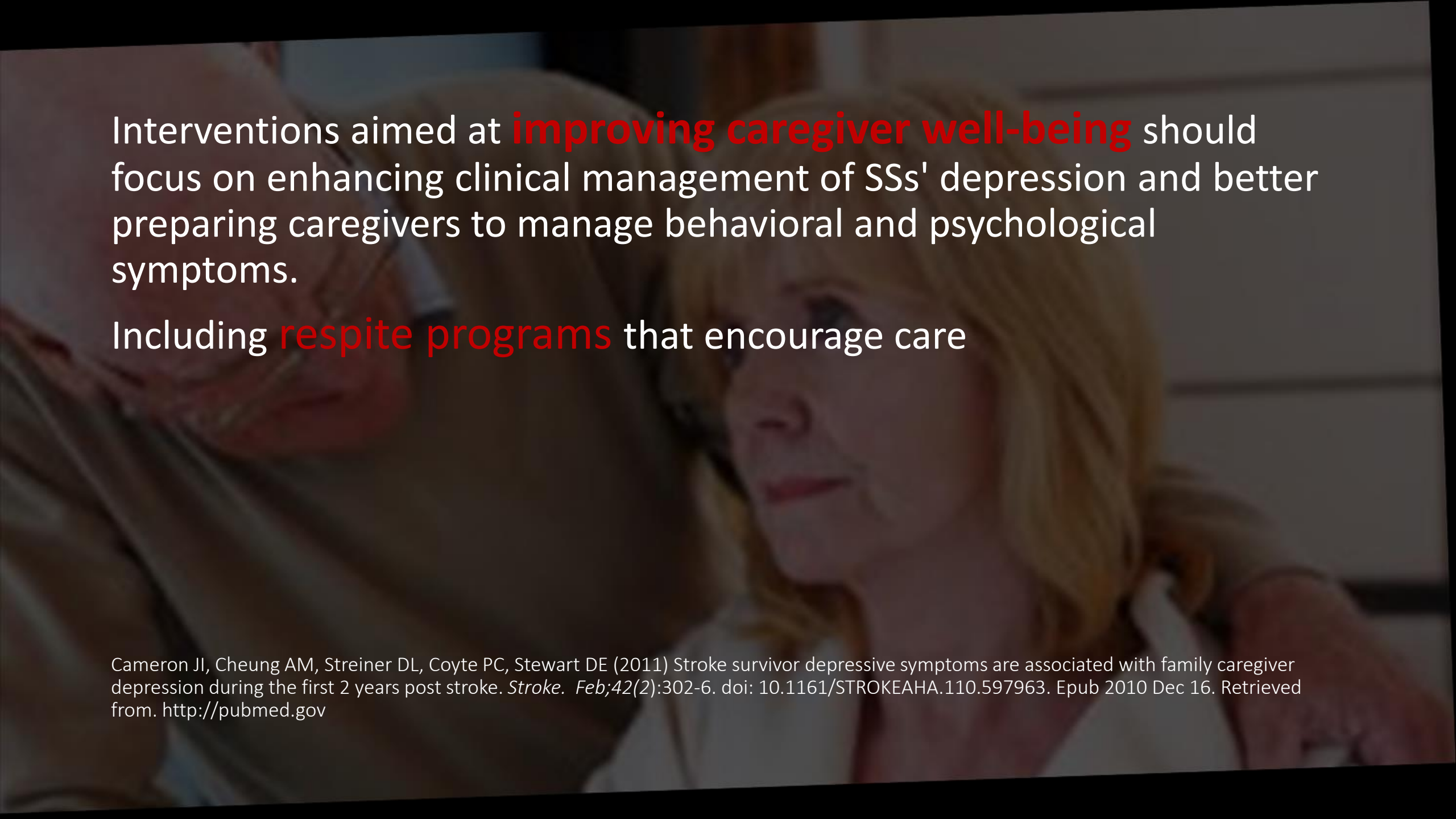
Vloothuis J, Depla M, Hertogh C, Kwakkel G, van Wegen E (2018). Experiences of patients with stroke and their caregivers with caregiver-mediated exercises during the CARE4STROKE trial. *Disabil Rehabil.* Nov 1:1-7. doi: 10.1080/09638288.2018.1507048. [Epub ahead of print] retrieved from. <http://pubmed.gov>



Yoga has the potential for being included as part of patient-centered stroke rehabilitation.

Vloothuis JD, Mulder M, Veerbeek JM, Konijnenbelt M, Visser-Meily JM, Ket JC, Kwakkel G, van Wegen EE (2016). Caregiver-mediated exercises for improving outcomes after stroke. *Cochrane Database Syst Rev*. Dec 21;12:CD011058. doi: 10.1002/14651858.CD011058.pub2. retrieved from. <http://pubmed.gov>





Interventions aimed at **improving caregiver well-being** should focus on enhancing clinical management of SSs' depression and better preparing caregivers to manage behavioral and psychological symptoms.

Including **respite programs** that encourage care

Cameron JJ, Cheung AM, Streiner DL, Coyte PC, Stewart DE (2011) Stroke survivor depressive symptoms are associated with family caregiver depression during the first 2 years post stroke. *Stroke*. Feb;42(2):302-6. doi: 10.1161/STROKEAHA.110.597963. Epub 2010 Dec 16. Retrieved from. <http://pubmed.gov>



Cameron JJ, Stewart DE, Streiner DL, Coyte PC, Cheung AM (2014). What makes family caregivers happy during the first 2 years post stroke?. *Stroke* Apr;45(4):1084-9. doi: 10.1161/STROKEAHA.113.004309. Epub 2014 Mar 20. Retrieved from. <http://pubmed.gov>

## Caregiver Mastery

Strategies to enhance caregiver mastery may enhance their positive experiences with providing care and ultimately enhance the sustainability of the caregiving situation.



# What can we do?

- Education
- Psychological interventions
- Case workers
- Physical rehabilitation
- Exercise programs
- Caregiver education programs
- Support groups
- Visiting nurses
- Respite care



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