# Chapter 41 Caregivers and Stress

S.H. Zarit and J. Savla

2 Virginia Tech University, Blacksburg, VA, USA

1 Penn State University, State College, PA, USA

# References

1.National Alliance for Caregiving. Caregiving in the U.S. 2009. Retrieved from
<http://www.caregiving.org/pdf/research/CaregivingUSAllAgesExecSum.pdf>.

2.[Lazzarino AI, Hamer M, Stamatakis E, Steptoe A. The combined association of psychological distress and socioeconomic status with all-cause mortality: a national cohort study.](file:///D%3A%5C%5Cwomat-filecopy%5C%5CEd-Reference%5C%5C0002570126.html%22%20%5Cl%20%22rfLink2rf0010) *[JAMA Intern Med](file:///D%3A%5C%5Cwomat-filecopy%5C%5CEd-Reference%5C%5C0002570126.html%22%20%5Cl%20%22rfLink2rf0010)*[. 2013;173:22–27.](file:///D%3A%5C%5Cwomat-filecopy%5C%5CEd-Reference%5C%5C0002570126.html%22%20%5Cl%20%22rfLink2rf0010)

3.[Aneshensel C, Pearlin L, Mullan J, Zarit S, Whitlatch C. *Profiles in Caregiving: the Unexpected Career.* San Diego, CA: Academic Press; 1995.](file:///D%3A%5Cwomat-filecopy%5CEd-Reference%5C0002570126.html#rfLink3rf0015)

4.Zarit SH, Kim K, Femia EE, Almeida DM, Klein LC. The effects of adult day services on family caregivers' daily stress, affect and health: outcomes from the DaSH study. *Gerontologist*. 2014;54:570–579. [http://dx.doi.org/ 10.1093/geront/gnt045](file:///D%3A%5Cwomat-filecopy%5CEd-Reference%5C0002570126.html#tsLink4).

5.Vitaliano PP, Zhang J, Scanlan JM. Is caregiving hazardous to one's physical health? A meta-analysis. *Psychol Bull*. 2003;129:946–972. [http://dx.doi.org/10.1037/0033-2909.129.6.946](file:///D%3A%5Cwomat-filecopy%5CEd-Reference%5C0002570126.html#tsLink5).

6.Mausbach BT, Patterson TL, Känel RV, et al. The attenuating effect of personal mastery on the relations between stress and Alzheimer caregiver health: a five-year longitudinal analysis. *Aging Ment Health*. 2007;11:637–644. [http://dx.doi.org/10.1080/13607860701787043](file:///D%3A%5Cwomat-filecopy%5CEd-Reference%5C0002570126.html#tsLink6).

7.von Känel R, Mills PJ, Mausbach BT, et al. Effect of Alzheimer caregiving on circulating levels of C-reactive protein and other biomarkers relevant to cardiovascular disease risk: a longitudinal study. *Gerontology*. 2012;58:354–365. [http://dx. doi.org/10.1159/000334219](file:///D%3A%5Cwomat-filecopy%5CEd-Reference%5C0002570126.html#tsLink7).

8.Savla J, Granger DA, Roberto KA, Davey A, Blieszner R, Gwazdauskas F. Cortisol and alpha-amylase reactivity to care-related stressors in spouses of persons with mild cognitive impairment. *Psychol Aging*. 2013;28:666–679. [http://dx.doi.org/10.1037/a0032654](file:///D%3A%5Cwomat-filecopy%5CEd-Reference%5C0002570126.html#tsLink8).

9.[McEwen BS. Stress, adaptation, and disease: allostasis and allostatic load.](file:///D%3A%5C%5Cwomat-filecopy%5C%5CEd-Reference%5C%5C0002570126.html%22%20%5Cl%20%22rfLink9rf0045) *[Ann N Y Acad Sci](file:///D%3A%5C%5Cwomat-filecopy%5C%5CEd-Reference%5C%5C0002570126.html%22%20%5Cl%20%22rfLink9rf0045)*[. 1998;840:33–44.](file:///D%3A%5C%5Cwomat-filecopy%5C%5CEd-Reference%5C%5C0002570126.html%22%20%5Cl%20%22rfLink9rf0045)

10.McEwen BS, Gianaros PJ. Stress- and allostasis-induced brain plasticity. *Annu Rev Med*. 2011;62:431–445. [http:// dx.doi.org/10.1146/annurev-med-052209-100430](file:///D%3A%5Cwomat-filecopy%5CEd-Reference%5C0002570126.html#tsLink10).

11.Selye H. The story of the adaptation syndrome. *JAMA*. 1952;224(6):711. [http://dx.doi.org/10.1097/00000441- 195212000-00039](file:///D%3A%5Cwomat-filecopy%5CEd-Reference%5C0002570126.html#tsLink11).

12.Mills PJ, Ancoli-Israel S, Känel RV, et al. Effects of gender and dementia severity on Alzheimer's disease caregivers' sleep and biomarkers of coagulation and inflammation. *Brain Behav Immun*. 2009;23(5):605–610. [http://dx.doi.org/ 10.1016/j.bbi.2008.09.014](file:///D%3A%5Cwomat-filecopy%5CEd-Reference%5C0002570126.html#tsLink12).

13.von Känel R, Dimsdale JE, Mills PJ, et al. Effect of Alzheimer caregiving stress and age on frailty markers interleukin-6, C-reactive protein, and D-dimer. *J Gerontol A Biol Sci Med Sci*. 2006;61(9):963–969. [http://dx.doi.org/ 10.1159/000264654](file:///D%3A%5Cwomat-filecopy%5CEd-Reference%5C0002570126.html#tsLink13).

14.Kiecolt-Glaser JK, McGuire L, Robles TF, Glaser R. Psychoneuroimmunology: psychological influences on immune function and health. *J Consult Clin Psychol*. 2002;70:537–547. [http://dx.doi.org/10.1037//0022-006X.70.3.537](file:///D%3A%5Cwomat-filecopy%5CEd-Reference%5C0002570126.html#tsLink14).

15.Harmell AL, Chattillion EA, Roepke SK, Mausbach BT. A review of the psychobiology of dementia caregiving: a focus on resilience factors. *Curr Psychiatry Rep*. 2011;13:219–224. [http://dx.doi.org/10.1007/s11920-011-0187-1](file:///D%3A%5Cwomat-filecopy%5CEd-Reference%5C0002570126.html#tsLink15).

16.Puterman E, O'Donovan A, Adler NE, et al. Physical activity moderates effects of stressor-induced rumination on cortisol reactivity. *Psychosom Med*. 2011;73:604–611. [http://dx.doi.org/10.1097/PSY.0b013e318229e1e0](file:///D%3A%5Cwomat-filecopy%5CEd-Reference%5C0002570126.html#tsLink16).

17.von Känel R, Mausbach BT, Dimsdale JE, et al. Regular physical activity moderates cardiometabolic risk in Alzheimer's caregivers. *Med Sci Sports Exerc*. 2011;43:181–189. [http://dx.doi.org/10.1249/MSS.0b013e3181e6d478](file:///D%3A%5Cwomat-filecopy%5CEd-Reference%5C0002570126.html#tsLink17).

18.Martire LM, Schulz R, Helgeson VS, Small BJ, Saghafi EM. Review and meta-analysis of couple-oriented interventions for chronic illness. *Ann Behav Med*. 2010;40:325–342. [http://dx.doi.org/10.1007/s12160-010-9216-2](file:///D%3A%5Cwomat-filecopy%5CEd-Reference%5C0002570126.html#tsLink18).

19.[Zarit SH, Zarit JM.](file:///D%3A%5C%5Cwomat-filecopy%5C%5CEd-Reference%5C%5C0002570126.html%22%20%5Cl%20%22rfLink19rf0095) *[Mental Disorders in Older Adults.](file:///D%3A%5C%5Cwomat-filecopy%5C%5CEd-Reference%5C%5C0002570126.html%22%20%5Cl%20%22rfLink19rf0095)* [2nd ed. New York, NY: Guilford Press; 2007.](file:///D%3A%5C%5Cwomat-filecopy%5C%5CEd-Reference%5C%5C0002570126.html%22%20%5Cl%20%22rfLink19rf0095)

20.Coon DW, Thompson L, Steffen A, Sorocco K, Gallagher-Thompson D. Anger and depression management: psychoeducational skill training interventions for women caregivers of a relative with dementia. *Gerontologist*. 2003;43:678–689. [http://dx.doi.org/10.1093/geront/43.5.678](file:///D%3A%5Cwomat-filecopy%5CEd-Reference%5C0002570126.html#tsLink20).

21.Livingston G, Barber J, Rapaport P, et al. Clinical effectiveness of a manual based coping strategy programme (START, STrAtegies for RelaTives) in promoting the mental health of carers of family members with dementia: pragmatic randomized controlled trial. *BMJ*. 2013;347:f6276. [http://dx.doi.org/10.1136/bmj.f6276](file:///D%3A%5Cwomat-filecopy%5CEd-Reference%5C0002570126.html#tsLink21).

22.[Hepburn KW, Tornatore J, Center B, Ostwald SW. Dementia family caregiver training: affecting beliefs about caregiving and caregiver outcomes.](file:///D%3A%5C%5Cwomat-filecopy%5C%5CEd-Reference%5C%5C0002570126.html%22%20%5Cl%20%22rfLink22rf0110) *[J Am Geriatr Soc](file:///D%3A%5C%5Cwomat-filecopy%5C%5CEd-Reference%5C%5C0002570126.html%22%20%5Cl%20%22rfLink22rf0110)*[. 2001;49:450–457.](file:///D%3A%5C%5Cwomat-filecopy%5C%5CEd-Reference%5C%5C0002570126.html%22%20%5Cl%20%22rfLink22rf0110)

23.Belle SH, Burgio L, Burns R, et al. Enhancing the quality of life of dementia caregivers from different ethnic or racial groups. *Ann Intern Med*. 2006;145:727–738. [http://dx.doi.org/10.7326/0003-4819-145-10-200611210-00005](file:///D%3A%5Cwomat-filecopy%5CEd-Reference%5C0002570126.html#tsLink23).

24.Elliott AF, Burgio LD, DeCoster J. Enhancing caregiver health: findings from the resources for enhancing Alzheimer's caregiver health II intervention. *J Am Geriatr Soc*. 2010;58:30–37. [http://dx.doi.org/10.1111/j.1532- 5415.2009.02631.x](file:///D%3A%5Cwomat-filecopy%5CEd-Reference%5C0002570126.html#tsLink24).

25.Burgio LD, Collins IB, Schmid B, Wharton T, McCallum D, DeCoster J. Translating the REACH caregiver intervention for use by area agency on aging personnel: the REACH OUT program. *Gerontologist*. 2009;49:103–116. [http:// dx.doi.org/10.1093/geront/gnp012](file:///D%3A%5Cwomat-filecopy%5CEd-Reference%5C0002570126.html#tsLink25).

26.Teri L, Logsdon RG, Uomoto J, McCurry SM. Behavioral treatment of depression in dementia patients: a controlled clinical trial. *J Gerontol B Psychol Sci Soc Sci*. 1997;52:159–166. [http://dx.doi.org/10.1093/geronb/52B.4.P159](file:///D%3A%5Cwomat-filecopy%5CEd-Reference%5C0002570126.html#tsLink26).

27.Teri L, Gibbons LE, McCurry SM, et al. Exercise plus behavioral management in patients with Alzheimer's disease: a randomized control trial. *JAMA*. 2003;290:2015–2022. [http://dx.doi.org/10.1001/jama.290.15.2015](file:///D%3A%5Cwomat-filecopy%5CEd-Reference%5C0002570126.html#tsLink27).

28.McCurry SM, Gibbons LE, Logsdon RG, Vitiello MV, Teri L. Nighttime insomnia treatment and education for Alzheimer's disease: a randomized controlled trial. *J Am Geriatr Soc*. 2005;53:793–802. [http://dx.doi.org/10.1111/ j.1532-5415.2005.53252.x](file:///D%3A%5Cwomat-filecopy%5CEd-Reference%5C0002570126.html#tsLink28).

29.McCurry SM, Pike KC, Vitiello MV, Logsdon RG, Larson EV, Teri L. Increasing walking and bright light exposure to improve sleep in community-dwelling persons with Alzheimer's disease: results of a randomized, controlled trial. *J Am Geriatr Soc*. 2011;59:1393–1402. [http://dx.doi.org/10.1111/j.1532-5415.2011.03519.x](file:///D%3A%5Cwomat-filecopy%5CEd-Reference%5C0002570126.html#tsLink29).

30.Hou RJ, Wong SY, Yip BH, et al. The effects of mindfulness-based stress reduction on the mental health of family caregivers: a randomized controlled trial. *Psychother Psychosom*. 2014;83:45–53. [http://dx.doi.org/10.1159/ 000353278](file:///D%3A%5Cwomat-filecopy%5CEd-Reference%5C0002570126.html#tsLink30).

31.Mittelman MS, Roth DL, Coon DW, Haley WE. Sustained benefit of supportive intervention for depressive symptoms in caregivers of patients with Alzheimer's disease. *Am J Psychiatry*. 2004;161:850–856. [http://dx.doi.org/10.1176/appi. ajp.161.5.850](file:///D%3A%5Cwomat-filecopy%5CEd-Reference%5C0002570126.html#tsLink31).

32.[Zarit SH, Kim K, Femia EE, Almeida DM, Savla J, Molenaar PCM. Effects of adult day care on daily stress of caregivers: a within person approach.](file:///D%3A%5C%5Cwomat-filecopy%5C%5CEd-Reference%5C%5C0002570126.html%22%20%5Cl%20%22rfLink32rf0160) *[J Gerontol B Psychol Sci Soc Sci](file:///D%3A%5C%5Cwomat-filecopy%5C%5CEd-Reference%5C%5C0002570126.html%22%20%5Cl%20%22rfLink32rf0160)*[. 2011;66:538–547.](file:///D%3A%5C%5Cwomat-filecopy%5C%5CEd-Reference%5C%5C0002570126.html%22%20%5Cl%20%22rfLink32rf0160)

33.Klein LC, Kim K, Almeida DM, Femia EE, Rovine MJ, Zarit SH. Anticipating an easier day: effects of adult day services on daily cortisol and stress. *Gerontologist*. 2014; [http://dx.doi.org/10.1083/geront/gne060](file:///D%3A%5Cwomat-filecopy%5CEd-Reference%5C0002570126.html#tsLink33). Advance online publication.

34.Zarit SH, Whetzel CA, Kim K, et al. Daily stressors and adult day service use by family caregivers: effects on depressive symptoms, positive mood and DHEA-S. *Am J Geriatr Psychiatry*. 2014;[http://dx.doi.org/10.1016/j. jagp.2014.01.013](file:///D%3A%5C%5Cwomat-filecopy%5C%5CEd-Reference%5C%5C0002570126.html%22%20%5Cl%20%22tsLink34). Advance online publication.

35.Gitlin LN, Reever K, Dennis MP, Mathieu E, Hauck WW. Enhancing quality of life of families who use adult day services: short- and long-term effects of the adult day services plus program. *Gerontologist*. 2006;46:630–639. [http:// dx.doi.org/10.1093/geront/46.5.630](file:///D%3A%5Cwomat-filecopy%5CEd-Reference%5C0002570126.html#tsLink35).

36.Gaugler JE, Zarit SH, Pearlin LI. Family involvement following institutionalization: modeling nursing home visits over time. *Int J Aging Hum Dev*. 2003;57:91–117. [http://dx.doi.org/10.2190/8MNF-QMA3-A5TX-6QQ3](file:///D%3A%5Cwomat-filecopy%5CEd-Reference%5C0002570126.html#tsLink36).