# Chapter 8 Control and Stress

A. Steptoe and L. Poole

University College London, London, UK

# References

1.[Skinner EA. A guide to constructs of control.](file:///D:\\womat-filecopy\\Ed-Reference\\0002589179.html" \l "rfLink1rf0010) *[J Pers Soc Psychol](file:///D:\\womat-filecopy\\Ed-Reference\\0002589179.html" \l "rfLink1rf0010)*[. 1996;71(3):549–570.](file:///D:\\womat-filecopy\\Ed-Reference\\0002589179.html" \l "rfLink1rf0010)

2.[Weiss JM. Effects of coping behavior in different warning signal conditions on stress pathology in rats.](file:///D:\\womat-filecopy\\Ed-Reference\\0002589179.html" \l "rfLink2rf0015) *[J Comp Physiol Psychol](file:///D:\\womat-filecopy\\Ed-Reference\\0002589179.html" \l "rfLink2rf0015)*[. 1971;77(1):1–13.](file:///D:\\womat-filecopy\\Ed-Reference\\0002589179.html" \l "rfLink2rf0015)

3.[Seligman ME, Beagley G. Learned helplessness in the rat.](file:///D:\\womat-filecopy\\Ed-Reference\\0002589179.html" \l "rfLink3rf0020) *[J Comp Physiol Psychol](file:///D:\\womat-filecopy\\Ed-Reference\\0002589179.html" \l "rfLink3rf0020)*[. 1975;88(2):534–541.](file:///D:\\womat-filecopy\\Ed-Reference\\0002589179.html" \l "rfLink3rf0020)

4.[Steptoe A. The significance of personal control in health and disease. In: Steptoe A, Appels A, eds.](file:///D:\\womat-filecopy\\Ed-Reference\\0002589179.html" \l "rfLink4rf0025) *[Stress, Personal Control and Health](file:///D:\\womat-filecopy\\Ed-Reference\\0002589179.html" \l "rfLink4rf0025)*[. Chichester: John Wiley; 1989:309–318.](file:///D:\\womat-filecopy\\Ed-Reference\\0002589179.html" \l "rfLink4rf0025)

5.[Amat J, Baratta MV, Paul E, Bland ST, Watkins LR, Maier SF. Medial prefrontal cortex determines how stressor controllability affects behavior and dorsal raphe nucleus. *Nat Neurosci*. 2005;8(3):365–371.](file:///D:\womat-filecopy\Ed-Reference\0002589179.html#rfLink5rf0030)

6.[Sutton LC, Lea SE, Will MJ, et al. Inescapable shock-induced potentiation of morphine analgesia.](file:///D:\\womat-filecopy\\Ed-Reference\\0002589179.html" \l "rfLink6rf0035) *[Behav Neurosci](file:///D:\\womat-filecopy\\Ed-Reference\\0002589179.html" \l "rfLink6rf0035)*[. 1997;  
111(5):1105–1113.](file:///D:\\womat-filecopy\\Ed-Reference\\0002589179.html" \l "rfLink6rf0035)

7.[Light KC, Obrist PA. Cardiovascular response to stress: effects of opportunity to avoid, shock experience, and performance feedback.](file:///D:\\womat-filecopy\\Ed-Reference\\0002589179.html" \l "rfLink7rf0040) *[Psychophysiology](file:///D:\\womat-filecopy\\Ed-Reference\\0002589179.html" \l "rfLink7rf0040)*[. 1980;17(3):243–252.](file:///D:\\womat-filecopy\\Ed-Reference\\0002589179.html" \l "rfLink7rf0040)

8.[Bouton ME, Kenney FA, Rosengard C. State-dependent fear extinction with two benzodiazepine tranquilizers.](file:///D:\\womat-filecopy\\Ed-Reference\\0002589179.html" \l "rfLink8rf0045) *[Behav Neurosci](file:///D:\\womat-filecopy\\Ed-Reference\\0002589179.html" \l "rfLink8rf0045)*[. 1990;104(1):44–55.](file:///D:\\womat-filecopy\\Ed-Reference\\0002589179.html" \l "rfLink8rf0045)

9.[Forster GL, Feng N, Watt MJ, et al. Corticotropin-releasing factor in the dorsal raphe elicits temporally distinct serotonergic responses in the limbic system in relation to fear behavior.](file:///D:\\womat-filecopy\\Ed-Reference\\0002589179.html" \l "rfLink9rf0050) *[Neuroscience](file:///D:\\womat-filecopy\\Ed-Reference\\0002589179.html" \l "rfLink9rf0050)*[. 2006; 141(2):1047–1055.](file:///D:\\womat-filecopy\\Ed-Reference\\0002589179.html" \l "rfLink9rf0050)

10.[Steptoe A, Fieldman G, Evans O, Perry L. Control over work pace, job strain and cardiovascular responses in middle-aged men.](file:///D:\\womat-filecopy\\Ed-Reference\\0002589179.html" \l "rfLink10rf0055) *[J Hypertens](file:///D:\\womat-filecopy\\Ed-Reference\\0002589179.html" \l "rfLink10rf0055)*[. 1993;11(7):751–759.](file:///D:\\womat-filecopy\\Ed-Reference\\0002589179.html" \l "rfLink10rf0055)

11.[Steptoe A, Willemsen G. The influence of low job control on ambulatory blood pressure and perceived stress over the working day in men and women from the Whitehall II cohort.](file:///D:\\womat-filecopy\\Ed-Reference\\0002589179.html" \l "rfLink11rf0060) *[J Hypertens](file:///D:\\womat-filecopy\\Ed-Reference\\0002589179.html" \l "rfLink11rf0060)*[. 2004; 22(5):915–920.](file:///D:\\womat-filecopy\\Ed-Reference\\0002589179.html" \l "rfLink11rf0060)

12.[Kivimäki M, Nyberg ST, Batty GD, et al. Job strain as a risk factor for coronary heart disease: a collaborative meta- analysis of individual participant data.](file:///D:\\womat-filecopy\\Ed-Reference\\0002589179.html" \l "rfLink12rf0065) *[Lancet](file:///D:\\womat-filecopy\\Ed-Reference\\0002589179.html" \l "rfLink12rf0065)*[. 2012;380(9852):1491–1497.](file:///D:\\womat-filecopy\\Ed-Reference\\0002589179.html" \l "rfLink12rf0065)

13.[Steptoe A, Kivimäki M. Stress and cardiovascular disease: an update on current knowledge.](file:///D:\\womat-filecopy\\Ed-Reference\\0002589179.html" \l "rfLink13rf0070) *[Annu Rev Public Health](file:///D:\\womat-filecopy\\Ed-Reference\\0002589179.html" \l "rfLink13rf0070)*[. 2013;34:337–354.](file:///D:\\womat-filecopy\\Ed-Reference\\0002589179.html" \l "rfLink13rf0070)

14.[Nyberg ST, Fransson EI, Heikkilä K, et al. Job strain as a risk factor for type 2 diabetes: a pooled analysis of 124,808 men and women.](file:///D:\\womat-filecopy\\Ed-Reference\\0002589179.html" \l "rfLink14rf0075) *[Diabetes Care](file:///D:\\womat-filecopy\\Ed-Reference\\0002589179.html" \l "rfLink14rf0075)*[. 2014;37(8):2268–2275.](file:///D:\\womat-filecopy\\Ed-Reference\\0002589179.html" \l "rfLink14rf0075)

15.[Heikkilä K, Nyberg ST, Theorell T, et al. Work stress and risk of cancer: meta-analysis of 5700 incident cancer events in 116,000 European men and women. *BMJ*. 2013;346:f165.](file:///D:\womat-filecopy\Ed-Reference\0002589179.html#rfLink15rf0080)

16.[Wergeland E, Strand K. Work pace control and pregnancy health in a population-based sample of employed women in Norway.](file:///D:\\womat-filecopy\\Ed-Reference\\0002589179.html" \l "rfLink16rf0085) *[Scand J Work Environ Health](file:///D:\\womat-filecopy\\Ed-Reference\\0002589179.html" \l "rfLink16rf0085)*[. 1998;24(3):206–212.](file:///D:\\womat-filecopy\\Ed-Reference\\0002589179.html" \l "rfLink16rf0085)

17.[Bandura A.](file:///D:\\womat-filecopy\\Ed-Reference\\0002589179.html" \l "rfLink17rf0090) *[Self-Efficacy: The Exercise of Control.](file:///D:\\womat-filecopy\\Ed-Reference\\0002589179.html" \l "rfLink17rf0090)* [New York, NY: Freeman; 1997.](file:///D:\\womat-filecopy\\Ed-Reference\\0002589179.html" \l "rfLink17rf0090)

18.[Rotter JB. Generalized expectancies for internal versus external control of reinforcement.](file:///D:\\womat-filecopy\\Ed-Reference\\0002589179.html" \l "rfLink18rf0095) *[Psychol Monogr Gen Appl](file:///D:\\womat-filecopy\\Ed-Reference\\0002589179.html" \l "rfLink18rf0095)*[. 1966;80(1):1–28.](file:///D:\\womat-filecopy\\Ed-Reference\\0002589179.html" \l "rfLink18rf0095)

19.[Suomi SJ. Early stress and adult emotional reactivity in rhesus monkeys.](file:///D:\\womat-filecopy\\Ed-Reference\\0002589179.html" \l "rfLink19rf0100) *[Ciba Found Symp](file:///D:\\womat-filecopy\\Ed-Reference\\0002589179.html" \l "rfLink19rf0100)*[. 1991;156:171–183.](file:///D:\\womat-filecopy\\Ed-Reference\\0002589179.html" \l "rfLink19rf0100)

20.[Spinelli S, Chefer S, Suomi SJ, Higley JD, Barr CS, Stein E. Early-life stress induces long-term morphologic changes in primate brain.](file:///D:\\womat-filecopy\\Ed-Reference\\0002589179.html" \l "rfLink20rf0105) *[Arch Gen Psychiatry](file:///D:\\womat-filecopy\\Ed-Reference\\0002589179.html" \l "rfLink20rf0105)*[. 2009;66(6):658–665.](file:///D:\\womat-filecopy\\Ed-Reference\\0002589179.html" \l "rfLink20rf0105)

21.[Otowa T, York TP, Gardner CO, Kendler KS, Hettema JM. The impact of childhood parental loss on risk for mood, anxiety and substance use disorders in a population-based sample of male twins.](file:///D:\\womat-filecopy\\Ed-Reference\\0002589179.html" \l "rfLink21rf0110) *[Psychiatry Res](file:///D:\\womat-filecopy\\Ed-Reference\\0002589179.html" \l "rfLink21rf0110)*[. 2014;220(1– 2):404–409.](file:///D:\\womat-filecopy\\Ed-Reference\\0002589179.html" \l "rfLink21rf0110)

22.[Lachman ME, Weaver SL. The sense of control as a moderator of social class differences in health and well-being.](file:///D:\\womat-filecopy\\Ed-Reference\\0002589179.html" \l "rfLink22rf0115) *[J Pers Soc Psychol](file:///D:\\womat-filecopy\\Ed-Reference\\0002589179.html" \l "rfLink22rf0115)*[. 1998;74(3):763–773.](file:///D:\\womat-filecopy\\Ed-Reference\\0002589179.html" \l "rfLink22rf0115)

23.[Turiano NA, Chapman BP, Agrigoroaei S, Infurna FJ, Lachman M. Perceived control reduces mortality risk at low, not high, education levels. *Health Psychol*. 2014;33(8):883–890.](file:///D:\womat-filecopy\Ed-Reference\0002589179.html#rfLink23rf0120)

24.[Rosengren A, Hawken S, Ounpuu S, et al. Association of psychosocial risk factors with risk of acute myocardial infarction in 11119 cases and 13648 controls from 52 countries (the INTERHEART study): case–control study. *Lancet*. 2004;364(9438):953–962.](file:///D:\womat-filecopy\Ed-Reference\0002589179.html#rfLink24rf0125)

25.[Bobak M, Pikhart H, Hertzman C, Rose R, Marmot M. Socioeconomic factors, perceived control and self-reported health in Russia. A cross-sectional survey.](file:///D:\\womat-filecopy\\Ed-Reference\\0002589179.html" \l "rfLink25rf0130) *[Soc Sci Med](file:///D:\\womat-filecopy\\Ed-Reference\\0002589179.html" \l "rfLink25rf0130)*[. 1998;47(2):269–279.](file:///D:\\womat-filecopy\\Ed-Reference\\0002589179.html" \l "rfLink25rf0130)

26.[Cockerham WC.](file:///D:\\womat-filecopy\\Ed-Reference\\0002589179.html" \l "rfLink26rf0135) *[Health and Social Change in Russia and Eastern Europe.](file:///D:\\womat-filecopy\\Ed-Reference\\0002589179.html" \l "rfLink26rf0135)* [London: Routledge; 1999.](file:///D:\\womat-filecopy\\Ed-Reference\\0002589179.html" \l "rfLink26rf0135)

27.[Cameron LD, Leventhal H.](file:///D:\\womat-filecopy\\Ed-Reference\\0002589179.html" \l "rfLink27rf0140) *[The Self-Regulation of Health and Illness Behaviour.](file:///D:\\womat-filecopy\\Ed-Reference\\0002589179.html" \l "rfLink27rf0140)* [London: Routledge; 2003.](file:///D:\\womat-filecopy\\Ed-Reference\\0002589179.html" \l "rfLink27rf0140)

28.[Moffitt TE, Arseneault L, Belsky D, et al. A gradient of childhood self-control predicts health, wealth, and public safety.](file:///D:\\womat-filecopy\\Ed-Reference\\0002589179.html" \l "rfLink28rf0145) *[Proc Natl Acad Sci U S A](file:///D:\\womat-filecopy\\Ed-Reference\\0002589179.html" \l "rfLink28rf0145)*[. 2011;108(7):2693–2698.](file:///D:\\womat-filecopy\\Ed-Reference\\0002589179.html" \l "rfLink28rf0145)

29.[Daly M, Delaney L, Egan M, Baumeister RF. Childhood self-control and unemployment throughout the life span: evidence from two British cohort studies.](file:///D:\\womat-filecopy\\Ed-Reference\\0002589179.html" \l "rfLink29rf0150) *[Psychol Sci](file:///D:\\womat-filecopy\\Ed-Reference\\0002589179.html" \l "rfLink29rf0150)*[. 2015;26(6):709–723.](file:///D:\\womat-filecopy\\Ed-Reference\\0002589179.html" \l "rfLink29rf0150)

30.[Hostinar CE, Ross KM, Chen E, Miller GE. Modeling the association between lifecourse socioeconomic disadvantage and systemic inflammation in healthy adults: the role of self-control.](file:///D:\\womat-filecopy\\Ed-Reference\\0002589179.html" \l "rfLink30rf0155) *[Health Psychol](file:///D:\\womat-filecopy\\Ed-Reference\\0002589179.html" \l "rfLink30rf0155)*[. 2015;34(6):580–590.](file:///D:\\womat-filecopy\\Ed-Reference\\0002589179.html" \l "rfLink30rf0155)

31.[Galla BM, Wood JJ. Trait self-control predicts adolescents' exposure and reactivity to daily stressful events.](file:///D:\\womat-filecopy\\Ed-Reference\\0002589179.html" \l "rfLink31rf0160) *[J Pers](file:///D:\\womat-filecopy\\Ed-Reference\\0002589179.html" \l "rfLink31rf0160)*[. 2015;83(1):69–83.](file:///D:\\womat-filecopy\\Ed-Reference\\0002589179.html" \l "rfLink31rf0160)

32.[Scheibe S, Carstensen LL. Emotional aging: recent findings and future trends.](file:///D:\\womat-filecopy\\Ed-Reference\\0002589179.html" \l "rfLink32rf0165) *[J Gerontol B Psychol Sci Soc Sci](file:///D:\\womat-filecopy\\Ed-Reference\\0002589179.html" \l "rfLink32rf0165)*[. 2010; 65B(2):135–144.](file:///D:\\womat-filecopy\\Ed-Reference\\0002589179.html" \l "rfLink32rf0165)

33.[Brandtstädter J, Rothermund K. Self-percepts of control in middle and later adulthood: buffering losses by rescaling goals.](file:///D:\\womat-filecopy\\Ed-Reference\\0002589179.html" \l "rfLink33rf0170) *[Psychol Aging](file:///D:\\womat-filecopy\\Ed-Reference\\0002589179.html" \l "rfLink33rf0170)*[. 1994;9(2):265–273.](file:///D:\\womat-filecopy\\Ed-Reference\\0002589179.html" \l "rfLink33rf0170)

34.[Rodin J, Langer EJ. Long-term effects of a control-relevant intervention with the institutionalized aged.](file:///D:\\womat-filecopy\\Ed-Reference\\0002589179.html" \l "rfLink34rf0175) *[J Pers Soc Psychol](file:///D:\\womat-filecopy\\Ed-Reference\\0002589179.html" \l "rfLink34rf0175)*[. 1977; 35(12):897–902.](file:///D:\\womat-filecopy\\Ed-Reference\\0002589179.html" \l "rfLink34rf0175)

35.[Rodin J. Aging and health: effects of the sense of control.](file:///D:\\womat-filecopy\\Ed-Reference\\0002589179.html" \l "rfLink35rf0180) *[Science](file:///D:\\womat-filecopy\\Ed-Reference\\0002589179.html" \l "rfLink35rf0180)*[. 1986;233(4770):1271–1276.](file:///D:\\womat-filecopy\\Ed-Reference\\0002589179.html" \l "rfLink35rf0180)

36.[Gronstedt H, Frändin K, Bergland A, et al. Effects of individually tailored physical and daily activities in nursing home residents on activities of daily living, physical performance and physical activity level: a randomized controlled trial.](file:///D:\\womat-filecopy\\Ed-Reference\\0002589179.html" \l "rfLink36rf0185) *[Gerontology](file:///D:\\womat-filecopy\\Ed-Reference\\0002589179.html" \l "rfLink36rf0185)*[. 2013;59(3):220–229.](file:///D:\\womat-filecopy\\Ed-Reference\\0002589179.html" \l "rfLink36rf0185)

37.[Rosenbaum M. Individual differences in self-control behaviors and tolerance of painful stimulation.](file:///D:\\womat-filecopy\\Ed-Reference\\0002589179.html" \l "rfLink37rf0190) *[J Abnorm Psychol](file:///D:\\womat-filecopy\\Ed-Reference\\0002589179.html" \l "rfLink37rf0190)*[. 1980;89(4):581–590.](file:///D:\\womat-filecopy\\Ed-Reference\\0002589179.html" \l "rfLink37rf0190)

38.[Salomons TV, Johnstone T, Backonja M-M, Shackman AJ, Davidson RJ. Individual differences in the effects of perceived controllability on pain perception: critical role of the prefrontal cortex.](file:///D:\\womat-filecopy\\Ed-Reference\\0002589179.html" \l "rfLink38rf0195) *[J Cogn Neurosci](file:///D:\\womat-filecopy\\Ed-Reference\\0002589179.html" \l "rfLink38rf0195)*[. 2007;19(6):993–1003.](file:///D:\\womat-filecopy\\Ed-Reference\\0002589179.html" \l "rfLink38rf0195)

39.[Wager TD, Rilling JK, Smith EE, et al. Placebo-induced changes in FMRI in the anticipation and experience of pain.](file:///D:\\womat-filecopy\\Ed-Reference\\0002589179.html" \l "rfLink39rf0200) *[Science](file:///D:\\womat-filecopy\\Ed-Reference\\0002589179.html" \l "rfLink39rf0200)*[. 2004; 303(5661):1162–1167.](file:///D:\\womat-filecopy\\Ed-Reference\\0002589179.html" \l "rfLink39rf0200)

40.[McNicol ED, Ferguson MC, Hudcova J. Patient controlled opioid analgesia versus non-patient controlled opioid analgesia for postoperative pain.](file:///D:\\womat-filecopy\\Ed-Reference\\0002589179.html" \l "rfLink40rf0205) *[Cochrane Database Syst Rev](file:///D:\\womat-filecopy\\Ed-Reference\\0002589179.html" \l "rfLink40rf0205)*[. 2015;6 CD003348.](file:///D:\\womat-filecopy\\Ed-Reference\\0002589179.html" \l "rfLink40rf0205)

41.[Infurna FJ, Gerstorf D. Perceived control relates to better functional health and lower cardio-metabolic risk: the mediating role of physical activity.](file:///D:\\womat-filecopy\\Ed-Reference\\0002589179.html" \l "rfLink41rf0210) *[Health Psychol](file:///D:\\womat-filecopy\\Ed-Reference\\0002589179.html" \l "rfLink41rf0210)*[. 2014;33(1):85–94.](file:///D:\\womat-filecopy\\Ed-Reference\\0002589179.html" \l "rfLink41rf0210)

42.[Calfee CS, Katz PP, Yelin EH, Iribarren C, Eisner MD. The influence of perceived control of asthma on health outcomes.](file:///D:\\womat-filecopy\\Ed-Reference\\0002589179.html" \l "rfLink42rf0215) *[Chest](file:///D:\\womat-filecopy\\Ed-Reference\\0002589179.html" \l "rfLink42rf0215)*[. 2006; 130(5):1312–1318.](file:///D:\\womat-filecopy\\Ed-Reference\\0002589179.html" \l "rfLink42rf0215)

43.[Partridge C, Johnston M. Perceived control of recovery from physical disability: measurement and prediction.](file:///D:\\womat-filecopy\\Ed-Reference\\0002589179.html" \l "rfLink43rf0220) *[Br J Clin Psychol](file:///D:\\womat-filecopy\\Ed-Reference\\0002589179.html" \l "rfLink43rf0220)*[. 1989;28(1):53–59.](file:///D:\\womat-filecopy\\Ed-Reference\\0002589179.html" \l "rfLink43rf0220)

44.[Levinson W, Kao A, Kuby A, Thisted RA. Not all patients want to participate in decision making. A national study of public preferences.](file:///D:\\womat-filecopy\\Ed-Reference\\0002589179.html" \l "rfLink44rf0225) *[J Gen Intern Med](file:///D:\\womat-filecopy\\Ed-Reference\\0002589179.html" \l "rfLink44rf0225)*[. 2005;20(6):531–535.](file:///D:\\womat-filecopy\\Ed-Reference\\0002589179.html" \l "rfLink44rf0225)