

References

From Chapter 1 of *Mother Nurture:
A Mother's Guide to Health in Body, Mind, and Intimate Relationships*
Penguin, 2002

How Your Cupboard Can Become Bare

Growing Demands upon You

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If any nutrients were missing in the foods you ate, they were extracted from you and given to your child.

Jeffrey HE, McCleary BV, Hensley WJ, Read DJ. Thiamin deficiency - a neglected problem of infants and mothers: possible relationships to sudden infant death syndrome. *Aust N Z J Obstet Gynaecol*, 1985, 25, 198-202.

Merchant K, Martorelli R, Haas JD. Consequences for maternal nutrition of reproductive stress across consecutive pregnancies. *Am J Clin Nutr*, 1990, 52, 616-20.

If you breastfeed (about half of all mothers do - and we generally recommend it for its benefits for both you and your child) . . .

For a review of the physical benefits for mothers, see Kennedy KI. Effects of breastfeeding on women's health. *International J Gynecology Obstetrics*, 1994, S11-S21.

For the benefits to children, see Chapter 9, *Juggling Home and Work*.

. . . each day you use about 750 to 1000 extra calories. . .

St. Jeor, ST, Sutnick, MR, & Scott, BJ. Nutrition. In Blechman EA, Brownell KD. Handbook of behavioral medicine for women. Pergamon Press, 1988, 269-90.

If you are not getting enough of these nutrients in your regular diet – and few moms with infants seem to have the time . . .

Murphy SP, Abrams BF. Changes in energy intakes during pregnancy and lactation in a national sample of US women. *Am J Public Health*. 1993 Aug;83(8):1161-3.

... your bodily reserves are drained every time you nurse.

For a general reference, see Kennedy KI. Effects of breastfeeding on women's health. *International J Gynecology Obstetrics*, 1994, S11-S21.

For studies on essential fatty acids, see:

Holman RT, Johnson SB, Ogburn PL. Deficiency of essential fatty acids and membrane fluidity during pregnancy and lactation. *Proc Natl Acad Sci U S A*. 1991 Jun 1;88(11):4835-9.

Otto SJ, van Houwelingen AC, Badart-Smook A, Hornstra G. Comparison of the peripartum and postpartum phospholipid polyunsaturated fatty acid profiles of lactating and nonlactating women. *Am J Clin Nutr* 2001 Jun;73(6):1074-9.

Hornstra G. Essential fatty acids in mothers and their neonates. *Am J Clin Nutr* 2000 May;71(5 Suppl):1262S-9S.

Al MD, van Houwelingen AC, Hornstra G. Long-chain polyunsaturated fatty acids, pregnancy, and pregnancy outcome. *Am J Clin Nutr* 2000 Jan;71(1 Suppl):285S-91S.

Zeijdner EE, van Houwelingen AC, Kester AD, Hornstra G. Essential fatty acid status in plasma phospholipids of mother and neonate after multiple pregnancy. *Prostaglandins Leukot Essent Fatty Acids* 1997 May;56(5):395-401.

Otto SJ, Houwelingen AC, Antal M, Manninen A, Godfrey K, Lopez-Jaramillo P, Hornstra G. Maternal and neonatal essential fatty acid status in phospholipids: an international comparative study. *Eur J Clin Nutr* 1997 Apr;51(4):232-42.

For other research on nursing, particularly if nutrition is poor, see: Adair LS, Popkin BM. Prolonged lactation contributes to depletion of maternal energy reserves in Filipino women. *J Nutr*. 1992 Aug;122(8):1643-55.

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Besides being time-consuming, the work of mothers is uniquely stressful . . .

Crnic KA., Greenberg MT. Minor parenting stresses with young children. *Child Development*. 1990 Oct Vol 61(5) 1628-1637.

Tein JY, Sandler IN, Zautra AJ. Stressful life events, psychological distress, coping, and parenting of divorced mothers: a longitudinal study. *J Fam Psychol*. 2000 Mar;14(1):27-41.

Breastfeeding rarely proceeds without one troublesome hitch or another, especially in the beginning.

Schmied V, Barclay L. Connection and pleasure, disruption and distress: women's experience of breastfeeding. *J Hum Lact*. 1999 Dec;15(4):325-34.

Wambach KA. Maternal fatigue in breastfeeding primiparae during the first nine weeks postpartum. *J Hum Lact*. 1998 Sep;14(3):219-29.

... mothers consistently report more stress than fathers, or women not raising children . . .

Luecken LJ, Suarez EC, Kuhn CM, Barefoot JC, Blumenthal JA, Siegler IC, Williams RB. Stress in employed women: impact of marital status and children at home on neurohormone output and home strain. *Psychosom Med*. 1997 Jul-Aug;59(4):352-9.

Larson RW, Richards MH, Perry-Jenkins M. Divergent worlds: the daily emotional experience of mothers and fathers in the domestic and public spheres. *J Pers Soc Psychol*. 1994 Dec;67(6):1034-46.

Campbell A, Converse P, Rodgers W. *The quality of American life*. Russell Sage Foundation, 1976.

Research reported in USA Today, August 4, 1999, 1.

... especially if a child has any special needs, like colic ...

Beebe SA, Casey R, Pinto-Martin J. Association of reported infant crying and maternal parenting stress. *Clinical Pediatrics*. 1993 32, 15-19.

... an illness ...

Hauenstein, E. The experience of distress in parents of chronically ill children: Potential or likely outcome. *Journal of Clinical Child Psychology*. 1990 19, 356-364.

Woods NF, Hulka BS. Symptom reports and illness behavior among employed women and homemakers. *J Community Health*. 1979 Fall;5(1):36-45.

... a disability ...

Dumas JE., Wolf LC., Fisman SN, Culligan A. Parenting stress, child behavior problems, and dysphoria in parents of children with autism, Down syndrome, behavior disorders, and normal development. *Exceptionality*. 1991 2 (2), 97-110.

... or a challenging temperament.

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Fischer M. Parenting stress and the child with attention deficit hyperactivity disorder. Special issue: The stresses of parenting. *Journal of Clinical Child Psychology*. 1990 19, 337-346.

Over half of all mothers today will return to work before their baby's first birthday ...

Rosenfeld JA. Maternal work outside the home and its effect on women and their families. *Journal of the American Medical Women's Association*. 1992 47 (2), 47-53.

... yet doing so while raising an infant increases their risk of health problems, especially if they're already stretched, such as by being a single parent.

McGovern P, Dowd B, Gjerdingen D, Moscovice I, Kochevar L, Lohman W. Time off work and postpartum health of employed women. *Medical Care*. 1997 35, 507-521.

Ali J, Avison WR. Employment transitions and psychological distress: the contrasting experiences of single and married mothers. *J Health Soc Behav*. 1997 Dec;38(4):345-62.

Walker LO, Best MA. Well-being of mothers with infant children: a preliminary comparison of employed women and homemakers. *Women Health*. 1991;17(1):71-89.

A Thin Soup of Resources

... the typical mother of a young child gets about six and one-half hours of sleep a day ... plus she rarely gets a chance to sleep as deeply as she needs to.

Lee KA, Zaffke ME, McEnany G. Parity and sleep patterns during and after pregnancy. *Obstet Gynecol*. 2000 Jan;95(1):14-8.

McGovern P, Dowd B, Gjerdingen D, Moscovice I, Kochevar L, Lohman W. Time off work and postpartum health of employed women. *Medical Care*. 1997 35, 507-521.

Maas J. Power Sleep. Villard Books, 1999.

You're probably not eating all that well, either. . .

Mackey AD, Picciano MF, Mitchell DC, Smiciklas-Wright H. Self-selected diets of lactating women often fail to meet dietary recommendations. *J Am Diet Assoc.* 1998 Mar;98(3):297-302.

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. . . when you've got a young family, pleasures fall away, old friends drop out of your life, and you never seem to have any real time for yourself.

Walker LO, Best MA. Well-being of mothers with infant children: a preliminary comparison of employed women and homemakers. *Women Health.* 1991;17(1):71-89.

Even if you're ill, you usually get little chance to rest.

Woods NF, Hulka BS. Symptom reports and illness behavior among employed women and homemakers. *Journal of Community Health.* 1979 5, 36-45.

. . . the average mom works about twenty hours more per week, altogether, than does her partner, regardless of whether she's drawing a paycheck.

Rexroat C, Shehan,C. The family life cycle and spouses' time in housework. *Journal of Marriage and the Family.* 1987 49, 737-750.

Cowan RS. More work for mother: Basic Books, 1983.

Robinson J, Godbey G. Time for Life, 1995, Pennsylvania State University Press, reported in *Newsweek*, May 12, 1997, 68.

Research by Ulf Lundberg, reported in *APA Monitor*, November, 1995, 1.

. . . a mother's stress jumps . . . when teamwork with her partner breaks down.

Parke RD, Tinsley B. The early environment of the at-risk infant: Expanding the social context. In Bricker DD (ed.), Intervention with at-risk and handicapped infants 153-164. University Park Press, 1982.

. . . and her mood drops when teamwork with her partner breaks down.

Schwartzberg NS, Dytell RS. Dual-earner families: The importance of work stress and family stress for psychological well-being. *Journal of Occupational Health Psychology.* 1996 Apr Vol 1(2) 211-223.

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You probably also handle more of the high-stress tasks, like dressing a resistant two-year-old, plus carry more of the "executive responsibility" for the family . . .

For a general review, see Maushart S. The mask of motherhood. The New Press, 1999.

Also see Walker LO, Best MA. Well-being of mothers with infant children: a preliminary comparison of employed women and homemakers. *Women Health.* 1991;17(1):71-89.

. . . if you're raising your children essentially alone, as does one in five mothers . . .

Blankenhorn D. Fatherless America. HarperPerennial Library, 1996.

... the arrival of children commonly leads to a dramatic decrease in positive interactions and marital satisfaction - especially for mothers.

Belsky J, Kelly J. The transition to parenthood Delacorte Press, 1995.

Cowan CP, Cowan PA. When partners become parents. Lawrence Erlbaum, 1999.

Kurdek LA. The nature and predictors of the trajectory of change in marital quality for husbands and wives over the first 10 years of marriage. *Developmental Psychology*. September 1999 Vol. 35, No. 5, 1283-1296.

Shapiro AF, Gottman JM, Carrere S. The baby and the marriage: Identifying factors that buffer against decline in marital satisfaction after the first baby arrives. *J Fam Psychol*. 2000 Mar;14(1):59-70.

... couples with children report less satisfaction with their relationship than couples without kids.

Kurdek LA. The nature and predictors of the trajectory of change in marital quality for husbands and wives over the first 10 years of marriage. *Developmental Psychology*. September 1999 Vol. 35, No. 5, 1283-1296.

Children are meant to be raised within a strong community . . .

Flinn MV, England BG. Social economics of childhood glucocorticoid stress response and health. *Am J Phys Anthropol*. 1997 Jan;102(1):33-53.

Also see Small MF. Family matter. *Discover Magazine*, August, 2000, 66-71.

... the average adult is affiliated with just one community group as compared to five in our parents' day.

Putnam RD. Bowling alone: The collapse and revival of American community. Simon & Schuster, 2000.

... fathers have not entered the world of family to the extent that mothers have gone into the world of work . . .

National Advisory Mental Health Council, Basic Behavioral Science Task Force. Basic behavioral science research for mental health: Family processes and social networks. *American Psychologist*. 1996 Jun Vol 51(6) 622-630.

Carter B. Focusing your wide-angle lens. *The Family Therapy Networker*, November/December, 1995, 31-35.

... you're likely to have much less of the social support that could have provided practical help, lowered your stress, and buttressed your health.

Aspinwall LG, Taylor SE. A stitch in time: self-regulation and proactive coping. *Psychol Bull*. 1997 May;121(3):417-36.

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Vulnerable Spots in Your Armor of Resilience

In the last two decades, the birthrate of women over thirty has increased by about one-third, and the rate of first births for women over thirty-five has nearly doubled.

Statistical abstract, 1997.

Older mothers are less able to weather a pregnancy . . .

Gilbert WM, Nesbitt TS, Danielsen B. Childbearing beyond age 40: pregnancy outcome in 24,032 cases. *Obstet Gynecol*. 1999 Jan;93(1):9-14.

Morrison I. The elderly primigravida. *Am J Obstet Gynecol.* 1975 Feb 15;121(4):465-70.
Siega-Riz AM, Adair LS. Biological determinants of pregnancy weight gain in a Filipino population. *Am J Clin Nutr.* 1993 Mar;57(3):365-72.

About nine mothers in ten have not consumed the U.S. government recommended amounts of minerals and vitamins before conceiving their first child.

This figure is an estimate based on combining the low percentages of women who consume any one of the many nutrients for which there are RDA's. See:

Block G, Abrams B. Vitamin and mineral status of women of childbearing potential. *Ann N Y Acad Sci.* 1993 Mar 15;678:244-54.

Jameson S. Zinc status in pregnancy: The effect of zinc therapy on perinatal mortality, prematurity, and placental ablation. *Ann N Y Acad Sci.* 1993 678, 178-92.

St. Jeor, ST, Sutnick, MR, & Scott, BJ. Nutrition. In Blechman EA, Brownell KD. Handbook of behavioral medicine for women. Pergamon Press, 1988, 269-90.

Bendich A. Lifestyle and environmental factors that can adversely affect maternal nutritional status and pregnancy outcomes. *Ann N Y Acad Sci.* 1993 Mar 15;678:255-65.

... about 40% of all pregnancies are unplanned . . .

Bendich A. Lifestyle and environmental factors that can adversely affect maternal nutritional status and pregnancy outcomes. *Ann N Y Acad Sci.* 1993 Mar 15;678:255-65.

Hellerstedt WL, Pirie PL, Lando HA, Curry SJ, McBride CM, Grothaus LC, Nelson JC. Differences in preconceptional and prenatal behaviors in women with intended and unintended pregnancies. *Am J Public Health.* 1998 Apr;88(4):663-6.

... even if you start taking supplements, it often takes months or years to restore healthy levels of nutrients in your body.

Siega-Riz AM, Adair LS, Hobel CJ. Maternal hematologic changes during pregnancy and the effect of iron status on preterm delivery in a West Los Angeles population. *Am J Perinatol.* 1998;15(9):515-22.

Your relatives may have had illnesses . . . that raise your risk for similar problems.

A concise guide to women's mental health. American Psychiatric Press, 1997.

Women are more likely than men to enter parenthood with preexisting gastrointestinal . . .

Wolf JL. Bowel Function. In Primary care for women. Carlson KJ, Eisenstat SA. (eds.) Mosby-Year Book, 1995, 79.

... hormonal . . .

A concise guide to women's mental health. American Psychiatric Press, 1997.

Coleman T. A look at thyroid disease. *Healthgate.com.* 1997.

... or autoimmune conditions.

Komaroff AL. Fatigue and chronic fatigue syndrome. Primary care for women. Carlson KJ, Eisenstat SA (eds.) Mosby-Year Book, 1995, 452.

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... one mother in ten will have an episode of PPD ...

Sichel DA. Postpartum psychiatric disorders. In Primary care for women. Carlson KJ, Eisenstat SA. (eds.) Mosby-Year Book, 1995, 394-439.

Note that some experts, such as Shoshana Bennett, Ph.D., President of Postpartum Assistance for Mothers, believe that the frequency of PPD is even higher, especially when the whole range of psychological symptoms is considered.

If you did suffer from postpartum depression after your first baby, your chance triples of having PPD again with another child.

Personal communication, Shoshana Bennett, Ph.D., President of Postpartum Assistance for Mothers

Some women have a tendency toward depression, and this can be intensified by the hormonal fluctuations of motherhood.

Women's Health Advisor, April 2000, 3.

Marano HE. Depression: Beyond serotonin, Psychology Today, March/April, 1999, 73.

Also see Chapter 5.

Swimming Upstream

... your life would have moved at the speed of a walk [if you'd lived as a hunter-gatherer] while you provided for your needs and fulfilled your ambitions with a child on your hip or nearby.

See the work of Sarah Blaffer Hrdy, cited in Angier N, Primate Expert Explores Motherhood's Brutal Side, New York Times, February 8, 2000, Science Times, p. 2.

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... we can't help absorbing some of the billions of pounds of toxins released into the environment each year, which even leave traces in breast milk.

Rogan WJ. Pollutants in breast milk. Arch Pediatr Adolesc Med. 1996 Sep;150(9):981-90.

Byczkowski JZ, Gearhart JM, Fisher JW. "Occupational" exposure of infants to toxic chemicals via breast milk. Nutrition. 1994 Jan-Feb;10(1):43-8.

For a general discussion, see Lerner M. Curing a planet, Pacific Sun, June 23 - 29, 1999, 16.

The Effects on a Mother's Body

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... vitamin B6 ... is critical for hormone balance and the production of serotonin, a neurotransmitter that helps regulate mood and digestion.

See Chapter 5.

... magnesium ... is essential for sleep ...

See Chapter 5.

Recognizing Depletion

For example, the body of a woman generally reacts more intensely to stress than a man's does . . .

Gallucci WT, Baum A, Laue L, Rabin DS, Chrousos GP, Gold PW, Kling MA. Sex differences in sensitivity of the hypothalamic-pituitary-adrenal axis. *Health Psychol.* 1993 Sep;12(5):420-5.

[Chronic] stress relentlessly disturbs . . .

For general reviews, see:

Sapolsky RM. Why zebras don't get ulcers. W.H. Freeman Co., 1998.

Nelson L, Kenen R, Klitzman S. Turning things around: A women's occupational and environmental health resource guide. The National Women's Health Network, 1990.

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Regarding the gastrointestinal system, see:

Wolf JL. Bowel Function. In Primary care for women. Carlson KJ, Eisenstat SA. (eds.) Mosby-Year Book, 1995, 79-86.

Jameson S. Zinc status in pregnancy: The effect of zinc therapy on perinatal mortality, prematurity, and placental ablation. *Ann N Y Acad Sci.* 1993 678, 178-92.

Regarding the nervous system, see:

Newcomer JW, Selke G, Melson AK, Hershey T, Craft S, Richards K, Alderson AL. Decreased memory performance in healthy humans induced by stress-level cortisol treatment. *Arch Gen Psychiatry.* 1999 Jun;56(6):527-33.

Hamilton JA, Jensvold M. Personality, psychopathology, and depressions in women. In Brown LS, Ballou M (eds.), Personality and psychopathology: Feminist reappraisals. 116-43. The Guilford Press, 1992.

Associated Press wire service, in *San Francisco Chronicle*, August 20, 1998.

Women's Health Advisor, February, 2000, 6.

Regarding the immune system, see:

Licinio J, Gold PW, Wong ML. A molecular mechanism for stress-induced alterations in susceptibility to disease. *Lancet.* 1995 Jul 8;346(8967):104-6.

Kiecolt-Glaser JK, Page GG, Marucha PT, MacCallum RC, Glaser R. Psychological influences on surgical recovery. Perspectives from psychoneuroimmunology. *Am Psychol.* 1998 Nov; 53(11):1209-18.

Kiecolt-Glaser JK, Ogrocki P, Stout JC, Speicher CE, Glaser R. Marital quality, marital disruption, and immune function. *Psychosomatic Medicine.* 1987, 49, 13-34.

Friedman HS, Booth-Kewley S. The "disease-prone personality". A meta-analytic view of the construct. *Am Psychol.* 1987 Jun;42(6):539-55.

Researchers have found signs of depletion in mothers both in middle-class American populations and in Third World countries.

Jameson S. Zinc status in pregnancy: The effect of zinc therapy on perinatal mortality, prematurity, and placental ablation. *Ann N Y Acad Sci.* 1993 678, 178-92.

Merchant K, Martorell R. Frequent reproductive cycling: does it lead to nutritional depletion of mothers? *Progress in Food and Nutrition Science*, 12 (4), 1988: 339-69.

Miller JE. Birth intervals and perinatal health: An investigation of three hypotheses. *Family Planning Perspectives*, 23 (2), 1991: 62-70.

Winkvist A, Rasmussen KM, Habicht JP. A new definition of maternal depletion syndrome. *American Journal of Public Health*, 82 (5), 1992: 691-4.

... the research on women's health has lagged far behind that of men ...

Helmuth L. 2000. Women's health: Reports see progress, problems, in trials. *Science*, 288, 1562-3.

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... raising a family is associated with generally poorer health in women, especially as the number of pregnancies increases.

Kington R, Lillard L, Rogowski J. Reproductive history, socioeconomic status, and self-reported health status of women aged 50 years or older. *Am J Public Health*. 1997, 87, 33-7.

Woods NF, Hulka BS. Symptom reports and illness behavior among employed women and homemakers. *J Community Health*. 1979 Fall;5(1):36-45.

Wagener DK. et al. Women: Work and health. *Vital and Health Statistics - Series 3, Analytical and Epidemiological Studies*, 31, 1997: 1-91.

Jameson S. Zinc status in pregnancy: The effect of zinc therapy on perinatal mortality, prematurity, and placental ablation. *Ann N Y Acad Sci*. 1993 678, 178-92.

More specifically, studies have found that motherhood raises a woman's risk for:

... fatigue ...

Wagener DK. et al. Women: Work and health. *Vital and Health Statistics - Series 3, Analytical and Epidemiological Studies*, 31, 1997: 1-91.

... nutritional deficits ...

Jameson S. Zinc status in pregnancy: The effect of zinc therapy on perinatal mortality, prematurity, and placental ablation. *Ann N Y Acad Sci*. 1993 678, 178-92.

Merchant K, Martorell R. Frequent reproductive cycling: does it lead to nutritional depletion of mothers? *Progress in Food and Nutrition Science*, 12 (4), 1988: 339-69.

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Winkvist A, Rasmussen KM, Habicht JP. A new definition of maternal depletion syndrome. *American Journal of Public Health*, 82 (5), 1992: 691-4.

... diabetes ...

Lewis CE, Funkhouser E, Raczynski JM, Sidney S, Bild DE, Howard BV. Adverse effect of pregnancy on high density lipoprotein (HDL) cholesterol in young adult women. *American Journal of Epidemiology*. 1996, 144.

Simmons D. Parity, ethnic group, and the prevalence of type 2 diabetes: The Coventry Diabetes Study. *Diabetic Medicine*, 9 (8), 1992: 706-9.

... *gallbladder disease* ...

Kritz-Silverstein D, Barrett-Connor E, Wingard DL. The relationship between reproductive history and cholecystectomy in older women. *J Clin Epidemiol*. 1990;43(7):687-92.

Beral V. Long term effects of childbearing on health. *Journal of Epidemiology and Community Health*. 1985, 39, 343-346.

Scragg RK, McMichael AJ, Seamark RF. Oral contraceptives, pregnancy, and endogenous oestrogen in gall stone disease--a case-control study. *Br Med J (Clin Res Ed)*. 1984 Jun 16;288(6433):1795-9.

... *cardiovascular disease* ...

Ness RB, Harris T, Cobb J, Flegal KM, Kelsey JL, Balanger A, Stunkard AJ, D'Agostino RB. Number of pregnancies and the subsequent risk of cardiovascular disease. *N Engl J Med*. 1993 May 27;328(21):1528-33.

Beral V. Long term effects of childbearing on health. *Journal of Epidemiology and Community Health*. 1985, 39, 343-346.

Kvåle G, Heuch I, Nilssen S. Parity in relation to mortality and cancer incidence: A prospective study of Norwegian women. *Int J Epidemiology*, 23 (4), 1994: 691-99.

La Vecchia C et al. Menstrual and reproductive factors and the risk of myocardial infarction in women under fifty-five years of age. *American Journal of Obstetric Gynecology*, 1987, 157: 1108-1112.

Lewis CE, Funkhouser E, Raczynski JM, Sidney S, Bild DE, Howard BV. Adverse effect of pregnancy on high density lipoprotein (HDL) cholesterol in young adult women. *American Journal of Epidemiology*. 1996, 144.

Kritz-Silverstein D, Barrett-Connor E, Wingard DL. The relationship between multiparity and lipoprotein levels in older women. *J Clin Epidemiol*. 1992 Jul;45(7):761-7.

... *hormonal problems* ...

For example, greater parity (ie. having more children) increases the risk of PMS, or increases the severity of preexisting PMS. See:

Hsia LS, Long MH. Premenstrual syndrome. Current concepts in diagnosis and management. *J Nurse Midwifery* 1990 Nov-Dec;35(6):351-7.

Lurie S, Borenstein R. The premenstrual syndrome. *Obstet Gynecol Surv* 1990 Apr;45(4):220-8.

Freeman EW, Sondheimer SJ, Rickels K. Effects of medical history factors on symptom severity in women meeting criteria for premenstrual syndrome. *Obstet Gynecol* 1988 Aug;72(2):236-9.

... *kidney disease* ...

Beral V. Long term effects of childbearing on health. *Journal of Epidemiology and Community Health*. 1985, 39, 343-346.

... *some kinds of cancer* ...

Platz EA, Martinez ME, Grodstein F, Fuchs CS, Colditz GA, Stampfer MJ, Giovannucci E. Parity and other reproductive factors and risk of adenomatous polyps of the distal colorectum (United States). *Cancer Causes and Control*, 1997, 8, 894-903.

Kvåle G, Heuch I, Nilssen S. Parity in relation to mortality and cancer incidence: A prospective study of Norwegian women. *Int J Epidemiology*, 23 (4), 1994: 691-99.

Mosgaard BJ, Schou G, Lidegaard O, Andersen AN, Kjaer SK. Infertility, fertility drugs, and invasive ovarian cancer: a case-control study. *Fertility and Sterility*, 1997, 67, 1005-12.

... *a higher overall mortality rate* ...

Beral V. Long term effects of childbearing on health. *Journal of Epidemiology and Community Health*. 1985, 39, 343-346. In the most recent two-year period available for this study (1959-1960), mothers had an overall mortality rate 20% higher than comparably aged women who never had children.

Depleted Mother Syndrome

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Every year, [depletion] impacts millions of American women . . .

About four million women have a baby each year in the United States, three million of them for the first time, and about twenty million women are raising children age six or younger [*Statistical abstract*, 1997]. If at least one mother in ten goes through a period of measurable depletion lasting several months or longer, and if there typically are lingering effects of depletion on those mothers' mental or physical health, or her intimate relationships, then past or present depletion is a factor in the lives of millions of American women.

... *and it probably leads to billions of dollars in health care expenses and lost productivity.*

This is an estimate based on the societal costs of health conditions correlated with motherhood, such as depression, fatigue, cardiovascular disease, or nutritional deficits

The Effects on a Mother's Mind

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Storms of Anger

... *like "ghosts in the nursery," in the memorable phrase of the therapist, Selma Fraiberg.*

Fraiberg S, Adelson E, Shapiro V. Ghosts in the nursery. A psychoanalytic approach to the problems of impaired infant-mother relationships. *J Am Acad Child Psychiatry*. 1975 Summer;14(3):387-421.

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Fears and Worries

If her child has major health problems or is seriously injured, she could suffer the symptoms of acute stress disorder at the time . . . or posttraumatic stress disorder at a later point.

See Chapter 3 and its references.

Feeling Guilty or Inadequate

During the time you're home with children, you lose a source of pride and status through accomplishments at work.

Baruch GK, Biener L, Barnett RC. Women and gender in research on work and family stress. *Am Psychol*. 1987 Feb;42(2):130-6.

The way you think about all this makes a big difference in how you feel.

See any one of the numerous books on cognitive psychology, including:

Beck AT, Rush AJ, Shaw BF, Emery G. Cognitive therapy of depression. Guilford Books, 1987.

Burns DD. Feeling good. Wholecare, 1999.

Disturbed Mood

These knocks against self-esteem are just one of the many conditions faced by mothers known to cause depression.

Baruch GK, Biener L, Barnett RC. Women and gender in research on work and family stress. *Am Psychol*. 1987 Feb;42(2):130-6.

The rest include . . .

. . . sleep deprivation . . .

Johnson SL, Roberts JE. Life events and bipolar disorder: Implications from biological theories. Psychological Bulletin. 1995, 117, 434-449.

. . . stress. . .

Kandel DB, Davies M, Raveis VH. The stressfulness of daily social roles for women: Marital, occupational, and household roles. *Journal of Health and Social Behavior*. 1985, 26, 64-78.

. . . changes in physical appearance. . .

Kling KC, Hyde JS, Showers CJ, Buswell BN. Gender differences in self-esteem: A meta-analysis. *Psychological Bulletin*. 1999, 125, 470-500.

. . . ongoing issues with children . . .

Woods NF, Hulka BS. Symptom reports and illness behavior among employed women and homemakers. *J Community Health*. 1979 Fall;5(1):36-45.

For a general discussion of how seemingly intractable issues can lead to depression, see Seligman M. Helplessness. W.H. Freeman & Co., 1992.

. . . health concerns . . .

DeNeve KM, Cooper H. The happy personality: A meta-analysis of 137 personality traits and subjective well-being. *Psychological Bulletin*, 1998, 124, 197-229.

. . . marital conflict . . .

Baruch GK, Biener L, Barnett RC. Women and gender in research on work and family stress. *Am Psychol*. 1987 Feb;42(2):130-6.

Brown GW. Stress, social supports, and depression. Paper presented at Harvard University School of Public Health, Boston, MA, 1985, cited in Baruch GK, Biener L, Barnett RC. Women and gender in research on work and family stress. *Am Psychol*. 1987 Feb;42(2):130-6.

. . . and social isolation.

Reiss D, Price RH. National Research agenda for prevention research: The National Institute of Mental Health Report. *American Psychologist*, vol. 51, November, 1996, 1109-1115.

Brown GW. Stress, social supports, and depression. Paper presented at Harvard University School of Public Health, Boston, MA, 1985, cited in Baruch GK, Biener L, Barnett RC. Women and gender in research on work and family stress. *Am Psychol*. 1987 Feb;42(2):130-6.

While raising children, you've got about a fifty-fifty chance of going through a period of depressed mood . . .

Orr ST, James SA, Burns BJ, Thompson B. Chronic stressors and maternal depression: implications for prevention. *Am J Public Health*. 1989 Sep;79(9):1295-6.

Alfonso, et al. Dysphoric distress in childbearing women. *Journal of Perinatology*, 12 (4), 1992: 325 - 332.
Cowan CP, Cowan PA. When partners become parents. Lawrence Erlbaum, 1999.

Page 21

. . . depression wears more on a marriage than any other health problem.

Bouras N, Vanger P, Bridges PK. Marital problems in chronically depressed and physically ill patients and their spouses. *Comprehensive Psychiatry*, 27, 1986, 127-130.

Getting the Weight off Your Mind

Also, [her growing connections] probably increased the effectiveness of her immune system. . .

See Chapter 5 and its references.

The Effects on a Mother's Marriage

Page 24

Eight Times As Many Arguments

Kids bring an intense need for teamwork . . .

Belsky J, Kelly J. The transition to parenthood. Delacorte, 1995.

Cowan CP, Cowan PA. When partners become parents. Lawrence Erlbaum, 1999.

. . . but a mother and father often disagree about parenting practices or how to share the load fairly.

Roberts P, Moseley B. Father Time. *Psychology Today*, May/June, 1996.

. . . the average couple has eight times as many arguments after children arrive.

John Gottman, in Wood S. Happily Married . . . With Children, *Parenting Magazine*, February, 2000, 134.

. . . two couples in three report a sharp drop in satisfaction with their relationship once they become parents.

John Gottman, in Wood, S. Happily Married . . . With Children, *Parenting Magazine*, February, 2000, 134.

Struggles with your partner over childrearing are intensely distressing . . .

Baruch GK, Barnett R. Role quality, multiple role involvement, and psychological well-being in midlife women. *Journal of Personality and Social Psychology*, 1986, 51, 578-585.

... *and can lead to psychological problems.*

Kessler RC, McCrae JA. The effects of wives' employment on the mental health of men and women. *American Sociological Review*. 1982, 47, 216-227.

... *these quarrels wear on your health* ...

Coyne JC, DeLongis A. Going beyond social support: the role of social relationships in adaptation. *Journal of Consulting and Clinical Psychology*. 1986, 54, 454-60.

... *in part by increasing your blood pressure* ...

Ewart CK, Burnett KF, Taylor CB. Communication behaviors that affect blood pressure: An A-B--A-B analysis of marital interaction. *Behavior Modification*. 1983, 7, 331-344.

... *and weakening your immune system.*

Kiecolt-Glaser JK, Ogrocki P, Stout JC, Speicher CE, Glaser R. Marital quality, marital disruption, and immune function. *Psychosomatic Medicine*. 1987, 49, 13-34.

Burman B, Margolin G. Analysis of the association between marital relationships and health problems: An interactional perspective. *Psychological Bulletin*. 1992, 112, 39-63.

Page 27

Your Path Toward Well-Being, Health, and Support

Compared to women who haven't had children, mothers are generally more stressed ...

Barnett RC, Baruch GK. Women's involvement in multiple roles and psychological distress. *J Pers Soc Psychol*. 1985 Jul;49(1):135-45.

Campbell A, Converse P, Rodgers W. The quality of American life. Russell Sage Foundation, 1976.
Research reported in USA Today, August 4, 1999, 1.

... *more unhappy in their marriages* ...

Shapiro AF, Gottman JM, Carrere S. The baby and the marriage: identifying factors that buffer against decline in marital satisfaction after the first baby arrives. *J Fam Psychol*. 2000 Mar;14(1):59-70.

... *and more prone to illness.*

See references above for The Effects on a Mother's Body.

... *getting more support from your partner can boost your own physical and psychological health.*

Baumeister RF; Leary MR. The need to belong: Desire for interpersonal attachments as a fundamental human motivation. *Psychological Bulletin*. 1995 May Vol 117(3) 497-529.

REFERENCE NOTES

Chapter 2:
Reducing Your Stress

The variations in formatting of these references are due to some sources being medical journals while others being journals in other disciplines, such as psychology, where the conventions for references differ.

Rick Hanson, Ph.D.

Short-Term Stress Relief

Page 35

Five Minute Soothers

Listen to your favorite music . . .

In research reported in Kearns, B. (2000), Natural no-fail mood boosters, Good Housekeeping, March 2000, p. 152, one study found that listening to music lowered stress hormones.

Long-Term Stress Relief

Letting Go of Feelings

Page 40

. . . feeling let down by your partner could be amplified by experiences in which important people were not understanding or supportive when you were a child.

Atkinson, B. (1999). The emotional imperative psychotherapists cannot afford to ignore. Family Therapy Networker, July/August, 1999, 22-33.

Liberating Insight

Page 45

Many studies have found that this kind of self-talk is one of the most powerful ways to handle stresses effectively.

See the extensive literature on cognitive therapy.

Page 46

Box: Beliefs That Help Mothers Cope

Things could have gone much worse.

Research by Lawrence Senna, Ph.D. and colleagues reported in Psychology Today, September/October, 1999, p. 11.

Page 48

... meditation ... [is] a proven method of lowering blood pressure ...

Research from the Medical College of Georgia, reported in Phillips, E. (1999). Healthwatch, New Age Magazine, November/December, 1999, p. 34.

Pinning down their sources.

Many of these sources lurk in the shadows, outside of your conscious awareness.

"Virtually every leading cognitive psychologist today accepts the premise that mental processes go on outside of awareness." Cramer, P. (2000). Defense mechanisms in psychology today: Further processes for adaptation. American Psychologist, 55, 637-646, p. 638.

Atkinson, B. (1999). The emotional imperative psychotherapists cannot afford to ignore. Family Therapy Networker, July/August, 1999, 22-33.

Volumes have been written on how being a woman or a man shapes the way a person thinks.

See the extensive literature on gender and cognition, including the works of Sara Ruddick, Karen Horney, and Eleanor Maccoby.

Temperament and mood.

For a general review, see Rusting, C. J. (1998). Personality, mood, and cognitive processing of emotional information: Three conceptual frameworks. Psychological Bulletin, 124, 165-196.

Page 54

Cultivating Positive Experiences

Studies have shown that one of the most powerful ways to reduce stress - especially for a woman - is to have the experience of feeling connected to another person.

Taylor SE, Klein LC, Lewis BP, Gruenewald TL, Gurung RA, Updegraff JA. Biobehavioral responses to stress in females: tend-and-befriend, not fight-or-flight. Psychol Rev. 2000 Jul;107(3):411-29.

Page 55

Scheduling good times ...

Among other benefits,, scheduling positive events helps improve depressed mood. Folkman, S. & Moskowitz, J. T. (2000). Positive affect and the other side of coping. American Psychologist, 55, 647-654.

REFERENCE NOTES

Chapter 3:
Transforming Painful Emotions

The variations in formatting of these references are due to some sources being medical journals while others being journals in other disciplines, such as psychology, where the conventions for references differ.

Rick Hanson, Ph.D.

Page 60

Turning Sadness into Contentment

... at least one [mother] in eight will experience clinical depression . . .

A Concise Guide to Women's Mental Health. American Psychiatric Press, 1997.

... roughly half the mothers of young children today will suffer many of the symptoms of dysthymic disorder

Alfonso, et al. Dysphoric distress in childbearing women. *Journal of Perinatology*, 12 (4), 1992: 325 - 332. Cowan CP, Cowan PA. When partners become parents. Lawrence Erlbaum: 1999. Orr ST, James SA, Burns BJ, Thompson B. Chronic stressors and maternal depression: implications for prevention. *Am J Public Health*. 1989 Sep;79(9):1295-6.

Mourning Your Losses

For a general review of the psychological processes involved in loss, see the work of Robert Neimeyer, Ph.D., such as in the book he edited, Meaning reconstruction and the experience of loss.

Unlearning Helplessness

... "learned helplessness," a feeling of powerlessness and pessimism . . .

Stajkovic, A. D. & Luthans, F. (1998). Self-efficacy and work-related performance: A meta-analysis. *Psychological Bulletin*, 124, 240-261.

... learned helplessness is a powerful source of depression.

Seligman M.E. Learned optimism: How to change your mind and your life. Pocket Books, 1998.

Burns MO, Seligman ME. Explanatory style across the life span: evidence for stability over 52 years. *J Pers Soc Psychol*. 1989 Mar;56(3):471-7.

... when you think there's a fair chance you'll succeed, you're more willing to try.

Folkman, S. & Moskowitz, J. T. (2000). Positive affect and the other side of coping. *American Psychologist*, 55, 647-654.

Also see research reported in Azar, B. (1999). Mom's stress may affect early child development. *APA Monitor*, p. 21.

Page 61

... try to pay attention every day to the good news about ... Yourself

Folkman, S. & Moskowitz, J. T. (2000). Positive affect and the other side of coping. *American Psychologist*, 55, 647-654.

Page 62

When you're active, rather than passive, you feel better and you keep learning how to be ever more skillful at coping.

Aspinwall, L.G. & Taylor, S.E. (1997). A stitch in time: Self-regulation and proactive coping. *Psychological Bulletin*, 121, 417-436.

Talking Back to Sadness

Extensive research has shown that talking back to negative thoughts can lift a sad or depressed mood.

See review in Gloaguen V, Cottraux J, Cucherat M, Blackburn IM. A meta-analysis of the effects of cognitive therapy in depressed patients. *J Affect Disord*. 1998 Apr;49(1):59-72.

Many Ways to Feel More Contented

Page 65

Shine a light . . . Norman Rosenthal, M.D., quoted in Kearns, B. (2000), Natural no-fail mood boosters, *Good Housekeeping*, March 2000, p. 152.

Page 66

"Top Ten Topics for Future Presentations at Our Mother's Club" . . .

Adapted from a presentation given by the co-presidents of the Larkspur/Corte Madera Mother's Club, California, 1996.

Regular aerobic exercise . . . will increase the serotonin in your brain . . .

Vogel, G. (2000). New brain cells prompt new theory of depression. *Science*, 290, 258-259. Weil, A. *Self Healing*, 1, 8.

... and lift your mood, sometimes as much as an antidepressant would.

Babiyak M, Blumenthal JA, Herman S, Khatri P, Doraiswamy M, Moore K, Craighead WE, Baldewicz TT, Krishnan KR. Exercise treatment for major depression: maintenance of therapeutic benefit at 10 months. *Psychosom Med*. 2000 Sep-Oct;62(5):633-8.

Tkachuk GA, Martin GL. (1999). Exercise therapy for patients with psychiatric disorders: Research and clinical implications. Professional Psychology: Research and Practice, 30, 275-82.

Vogel, G. (2000). New brain cells prompt new theory of depression. *Science*, 290, 258-259.

Dimeo F, Bauer M, Varahram I, Proest G, Halter U. (2001). Benefits from aerobic exercise in patients with major depression: a pilot study. *British Journal of Sports Medicine*;35, 114-7.

Few things can improve your mood like the empathy, kindness, and emotional support of other people . . .

National Advisory Mental Health Council, Basic Behavioral Science Task Force. Basic behavioral science research for mental health: Family processes and social networks. *American Psychologist*. 1996 Jun Vol 51(6) 622-630.

. . . perceiving support is a key to alleviating mental and physical distress.

National Advisory Mental Health Council, Basic Behavioral Science Task Force. Basic behavioral science research for mental health: Family processes and social networks. *American Psychologist*. 1996 Jun Vol 51(6) 622-630.

Page 67

But by finding some form of community service . . . you'll . . . even access a kind of self-nurturing source inside as you nurture others.

Thanks to Micheal Elkin for this suggestion, from *The Family Therapy Networker*, January/February, 2000, 14.

Page 68

Extremes of Mood

Dysthymic disorder

Often co-exists with anxiety, feelings of guilt or inadequacy, brooding about the past, or major depressive episodes.

Flett, G.L. & Vredenburg, K. & Krames, L. (1997). The continuity of depression in clinical and nonclinical samples. *Psychological Bulletin*, 121, 395-416.

Clinical (major) depression

. . . women worldwide are more burdened by depression than by any other health condition.

National Institute of Mental Health, "Women hold up half the sky." Fact sheet available on the internet, 8/2/2000.

About eight percent of mothers are clinically depressed at any given time, and this rate jumps to twelve percent among women who have recently given birth.

Downey, G. & Coyne, J.C. (1990). Children of depressed parents: An integrative review. *Psychological Bulletin*, 108, 50-76.

Page 70

Remember what worked the last time you were depressed; you probably found some things that helped, and there's a good chance they'll work this time, too.

Thanks to Jacqueline Sparks, Ph.D. for this suggestion, from *The Family Therapy Networker*, January/February, 2000, 13.

Your partner can support you . . .

Jacobsen NS, Holtzworth-Munroe A, Schmalting KB. Marital therapy and spouse involvement in the treatment of depression, agoraphobia, and alcoholism. *J Consulting Clin Psy*, 1989, 82, 5-10.

There is more evidence that psychological factors cause depression than biochemical ones . . . Seligman, M.E.P. (1998). President's Column: Is depression biochemical? *American Psychological Association Monitor*, September, 1998, 2.

. . . psychotherapy is as effective or better for many people than antidepressants (and without the side effects), plus generally more successful at preventing relapse. And a person can certainly take an antidepressant while going through therapy; a combination of treatment methods can sometimes be more effective than either one alone.

Keller MB, McCullough JP, Klein DN, Arnow B, Dunner DL, Gelenberg AJ, Markowitz JC, Nemeroff CB, Russell JM, Thase ME, Trivedi MH, Zajecka J. A comparison of nefazodone, the cognitive behavioral-analysis system of psychotherapy, and their combination for the treatment of chronic depression. *N Engl J Med*. 2000 May 18;342(20):1462-70.

The size of the effects of psychotherapy also compare favorably to those of many medical interventions; see Rosenthal, R. (1990). How are we doing in soft psychology? *American Psychologist*, 45, 775-777.

Depression is a common complication of insomnia, chronic pain, illness, or medications . . .

Handout from Jean Hamilton, M.D., continuing education workshop, 1995.

In general, depression should be addressed through a combination of . . . stress reduction . . .

Vogel, G. (2000). New brain cells prompt new theory of depression. *Science*, 290, 258-259.

Finch JF, Okun MA, Pool GJ, Ruehlman LS. A comparison of the influence of conflictual and supportive social interactions on psychological distress. *J Pers*. 1999 Aug;67(4):581-621.

Research by Zindel Segal, Ph.D., reported in *Psychology Today*, November/December, 2000, p. 23 found that combining stress reduction techniques with psychotherapy significantly lowered the risk of relapse.

Turning Anxiety into Security

Page 72

. . . anxiety that is "over the top". . . wears on your body and mind . . .

Aspinwall, L.G. & Taylor, S.E. (1997). A stitch in time: Self-regulation and proactive coping. *Psychological Bulletin*, 121, 417-436.

Retraining the Worry Impulse

Page 75

. . . [meditation] has been shown to be quite effective in lowering anxiety.

Research by Kabat-Zinn, J. and colleagues, *General Hospital Psychiatry*, May, 1995, reported in Andrew Weil's *Self-Healing*, July 2000.

Massage . . . can reduce anxiety . . .

Field, T.M. (1998). Massage therapy effects. *American Psychologist*, 53, 1270-1281.

Dealing with Traumatic Stress

. . . mothers whose children have had serious illnesses or traumatic experiences often experience intrusive and intense images or memories, problems concentrating or making decisions, a heightened reactivity, or physical symptoms such as a pounding heart or headaches.

DeMier RL; Hynan MT; Harris HB; Manniello RL. Perinatal stressors as predictors of symptoms of posttraumatic stress in mothers of infants at high risk. *J Perinatol*, 1996 Jul-Aug, 16:4, 276-80.

Younger JB; Kendell MJ; Pickler RH (1997). Mastery of stress in mothers of preterm infants. *J Soc Pediatr Nurs*, 1997 Jan-Mar, 2:1, 29-35.

Rodrigue JR; Hoffmann RG 3rd; MacNaughton K; Graham-Pole J; Andres JM; Novak DA; Fennell RS. Mothers of children evaluated for transplantation: stress, coping resources, and perceptions of family functioning. *Clin Transplant*, 1996 Oct, 10:5, 447-50.

Timmons-Mitchell J; Chandler-Holtz D; Semple WE. Post-traumatic stress symptoms in mothers following children's reports of sexual abuse: an exploratory study. *Am J Orthopsychiatry*, 1996 Jul, 66:3, 463-7.

Page 76

If traumatic stress is affecting you, here are some ways to help yourself cope:

General acknowledgements for many of these suggestions to "Managing Traumatic Stress," American Psychological Association, 1998.

. . . talking about a traumatic experience can strengthen your immune system.

Pennebaker, J.W., Kiecolt-Glaser, J., & Glaser, R. (1988). Disclosure of traumas and immune function: Health implications for psychotherapy. *Journal of Consulting and Clinical Psychology*, 56, 239-245.

Both counseling and medication have been shown to be quite successful with traumatic stress and other forms of anxiety . . .

See research reported in Clay, R.A. (2000). Psychotherapy is cost-effective, *Monitor on Psychology*, January, 2000, 40-41.

Footnote: *It is estimated that 7 - 38% of girls have been sexually molested, 25 to 50 percent of women will be the victim of attempted or completed sexual assault, and 25 - 50% will be battered by an intimate partner.*

Handout from Jean Hamilton, M.D., continuing education workshop, 1995, including citations from Russell, D. (1964). Sexual Exploitation. Sage.

Turning Shame into a Sense of Worth

Page 77

. . . in a national survey, over half of the women said they were doing a worse job as a mom than their own mothers had done, compared to just eleven percent who thought they were doing better.

Survey by the Pew Research Center for the People and the Press, reported in the San Francisco Chronicle, May, 9, 1997, p. A15.

The demands of raising children can make it hard to spend to time with your friends, diminishing the sense of worth that many women derive through social connection.

Kling, K.C., Hyde, J.S., Showers, C. J. & Buswell, B. N. Gender differences in self-esteem: A meta-analysis. Psychological Bulletin, 125, 470-500.

Trained as a female to put the wants of others first. . .

Kling, K.C., Hyde, J.S., Showers, C. J. & Buswell, B. N. Gender differences in self-esteem: A meta-analysis. Psychological Bulletin, 125, 470-500.

Getting unfairly critical or angry with yourself lowers your well-being, makes it harder to cope . . .

Kling, K.C., Hyde, J.S., Showers, C. J. & Buswell, B. N. Gender differences in self-esteem: A meta-analysis. Psychological Bulletin, 125, 470-500.

Turning Anger into a Peaceful Heart

Page 86

Studies have found that the more children a woman has, the more time she spends with them or doing housework, or the more hassles she has with childcare or her kids, the more angry she's likely to be.

Ross, C.E. & Van Willigen, M. (1996). Gender, parenthood, and anger. Journal of Marriage and the Family, 58, 572-584.

Aber JL, Belsky J, Slade A, Crnic K. Stability and change in mothers' representations of their relationship with their toddlers. Dev Psychol. 1999 Jul;35(4):1038-47.

Page 92

. . . we suggest you ask your heart . . .

Acknowledgements to The Institute of HeartMath for this idea; it has developed effective, research-based techniques for using the innate wisdom of the heart to lower stress, boost the immune system, and improve well-being. You can find out more in The HeartMath Solution, HarperSanFrancisco, 1999.

REFERENCE NOTES

Chapter 4:
Staying Well

The variations in formatting of these references are due to some sources being medical journals while others being journals in other disciplines, such as psychology, where the conventions for references differ.

Rick Hanson, Ph.D.

Getting Enough Sleep

When Your Children Are Little

Page 97

From the child's standpoint, co-sleeping is usually the most desirable option.

For a review, see McKenna, J.J., Cultural influences on infant and childhood sleep biology, and the science that studies it: Toward a more inclusive paradigm. *Zero to Three*, December, 1999/January 2000, 9-18.

Studies have found that co-sleeping is associated with children who are more likely to . . .

. . . sleep better

Hayes, M.J., Roberts, S.M., & Stowe, R. Early childhood cosleeping: parent-child and parent-infant interactions. *Infant Mental Health Journal*, 1996, 17, 348-357

. . . be less fearful . . .

Heron, P. Nonreactive co-sleeping and child behavior. Master's thesis, University of Bristol, Bristol, United Kingdom, 1994.

. . . handle stress well . . .

Heron, P. Nonreactive co-sleeping and child behavior. Master's thesis, University of Bristol, Bristol, United Kingdom, 1994.

. . . behave in school . . .

Forbes, J.F., Weiss, D.S., & Folen, R.A. The cosleeping habits of military children. *Military Medicine*, 1992, 157, 196-200.

. . . and be independent.

Heron, P. Nonreactive co-sleeping and child behavior. Master's thesis, University of Bristol, Bristol, United Kingdom, 1994.

Page 98

... the risk of Sudden Infant Death Syndrome (SIDS) in cosleeping arrangements was one-fourth as likely as down-the-hall arrangements when obvious risks were avoided.

Mitchell, E.A. & Thompson, J.M.D. Cosleeping increases the risks of the sudden infant death syndrome, but sleeping in the parent's bedroom lowers it. In Rognum, T.O., Sudden infant death syndrome in the nineties. Oslo: Scandinavian University Press, 1995, 266-269.

When the Baby Is Sleeping but You're Not

Page 103**Box: Using Supplements and Herbs**

Some herbs and supplements can interact with prescription medications, or have side effects that complicate the diagnosis or treatment of an illness.

Eliason BC, Kruger J, Mark D, Rasmann DN. Dietary supplement users: demographics, product use, and medical system interaction. J Am Board Fam Pract 1997 Jul-Aug; 10, 265-71.

Evans AM. Influence of dietary components on the gastrointestinal metabolism and transport of drugs. Ther Drug Moni 2000 Feb; 22, 131-6.

... prescription drugs are the source of over 100,000 deaths each year (through side effects, interactions with other medications, or overdoses).

Rep. Dan Burton, quoted in the San Francisco Chronicle, June 16, 1999.

San Francisco Chronicle, May 10, 1999, A5.

Page 104

Valerian . . . can help bring on or deepen sleep. . .

Fugh-Berman A, Cott JM. (1999). Dietary supplements and natural products as psychotherapeutic agents. Psychosom Med, 61, 712-28.

... supplementing 5-HTP has been shown to be useful for sleep.

Nakazawa Y, Hasuzawa H, Kotorii T, Ohkawa T, Sakurada H, Nonaka K, Dainoson K. Study on the effects of L-5HTP on the stages of sleep in man as evaluated by using sleep deprivation. Folia Psychiatr Neurol Jpn. 1980;34(2):83-7.

Satoh S, Matsumura H, Nakajima T, Onoe H, Sakai K, Nakajima T, Jouvet M, Hayaishi O. Promotion of sleep by prostaglandin D2 in rats made insomniac by pretreatment with para-chlorophenylalanine. Neurosci Res. 1994 Nov;21(1):41-50.

For a general review, see Birdsall TC. 5-Hydroxytryptophan: a clinically-effective serotonin precursor. Altern Med Rev. 1998 Aug;3(4):271-80.

Page 105

... modern research has shown [acupuncture] to be helpful with many ailments, including pain, stroke, depression.

For a general review, see Pelletier, K. (2000). The best alternative medicine: What works? What does not? Simon and Schuster, 138-151.

... and sleep.

Phillips KD, Skelton WD. Effects of individualized acupuncture on sleep quality in HIV disease. *J Assoc Nurses AIDS Care*. 2001 Jan-Feb;12(1):27-39.

Montakab H., [Acupuncture and insomnia], *Forschende Komplementarmedizin* 1999;6:29-31 [German].

Huang KC.. Acupuncture: The past and the present. In Acupuncture in Internal Medicine. Vantage Press; 1996:185-186.

It is unclear why homeopathy might work, yet some well-controlled studies have found significant effects.

For a review, see Pelletier, K. (2000). The best alternative medicine: What works? What does not? Simon and Schuster, 198-214. Also see the references on homeopathy in the reference notes to chapter 5.

Eating Right

#1 Protein

Page 111

... recent studies have found that eggs do not increase the risk of heart disease, and in fact they may raise the level of good, HDL cholesterol.

Kritchevsky SB, Kritchevsky D. Egg consumption and coronary heart disease: an epidemiologic overview. *J Am Coll Nutr*. 2000 Oct;19(5 Suppl):549S-555S.

McNamara DJ. The impact of egg limitations on coronary heart disease risk: do the numbers add up? *J Am Coll Nutr*. 2000 Oct;19(5 Suppl):540S-548S.

Weggemans RM, Zock PL, Katan MB. Dietary cholesterol from eggs increases the ratio of total cholesterol to high-density lipoprotein cholesterol in humans: a meta-analysis. *Am J Clin Nutr*. 2001 May;73(5):885-91.

Try to minimize fish at the top of the ocean food - like tuna, shark, or swordfish - because mercury and other toxins increase as you move up the chain.

See recent FDA guidelines, reported in San Francisco Chronicle, January 13, 2001, A6.

Page 112

Soybeans ... may ... help prevent cardiovascular disease and cancer.

Weisburger JH. Prevention of cancer and other chronic diseases worldwide based on sound mechanisms. *Biofactors*. 2000;12(1-4):73-81.

Barnes S, Boersma B, Patel R, Kirk M, Darley-Usmar VM, Kim H, Xu J. Isoflavonoids and chronic disease: mechanisms of action. *Biofactors*. 2000;12(1-4):209-15.

van der Schouw YT, de Kleijn MJ, Peeters PH, Grobbee DE. Phyto-oestrogens and cardiovascular disease risk. *Nutr Metab Cardiovasc Dis.* 2000 Jun;10(3):154-67.

Page 113

#2: Vegetables

Vegetables . . . contain . . . phytoestrogens, hormonelike substances that seem to help balance estrogen.

Bolt HM, Janning P, Michna H, Degen GH. Comparative assessment of endocrine modulators with oestrogenic activity: I. Definition of a hygiene-based margin of safety (HBMOS) for xeno-oestrogens against the background of European developments. *Arch Toxicol.* 2001 Jan;74(11):649-62.

Bingham SA, Atkinson C, Liggins J, Bluck L, Coward A. Phyto-oestrogens: where are we now? *Br J Nutr.* 1998 May;79(5):393-406.

Adlercreutz H, Mazur W. Phyto-oestrogens and Western diseases. *Ann Med.* 1997 Apr;29(2):95-120.

. . . fresh vegetables . . . have many more nutrients than ones that are canned, dried, or frozen . . .

Appendix G, in Whitney, E.N. & Rolfes, S.R. Understanding Nutrition (7th ed.), West Publishing Company, 1996.

Page 116

#3: Unrefined oils and essential fatty acids

[Essential fatty acids] are often deficient in mothers, since they are drawn on heavily to grow a baby during pregnancy and breast milk is loaded with them, and most women don't have anywhere near enough to start with.

Simopoulos AP. Essential fatty acids in health and chronic disease. *Am J Clin Nutr.* 1999 Sep;70(3 Suppl):560S-569S.

Horrocks LA, Yeo YK. Health benefits of docosahexaenoic acid (DHA) *Pharmacol Res.* 1999 Sep;40(3):211-25.

Uauy R, Hoffman DR. Essential fat requirements of preterm infants. *Am J Clin Nutr* 2000 Jan;71(1 Suppl):245S-50S.

Holman RT, Johnson SB, Ogburn PL. Deficiency of essential fatty acids and membrane fluidity during pregnancy and lactation. *Proc Natl Acad Sci U S A.* 1991 Jun 1;88(11):4835-9.

Increasing your intake of one type of of EFA's - omega-3 oils found in fish and flax - can help prevent cardiovascular disease, rheumatoid arthritis, asthma, diabetes and depression.

Mischoulon D, Fava M. Docosahexanoic acid and omega-3 fatty acids in depression. *Psychiatr Clin North Am.* 2000 Dec;23(4):785-94.

Freeman MP. Omega-3 fatty acids in psychiatry: a review. *Ann Clin Psychiatry.* 2000 Sep;12(3):159-65.

Harris WS, Isley WL. Clinical trial evidence for the cardioprotective effects of omega-3 fatty acids. *Curr Atheroscler Rep.* 2001 Mar;3(2):174-9.

Mori TA, Beilin LJ. Long-chain omega 3 fatty acids, blood lipids and cardiovascular risk reduction. *Curr Opin Lipidol.* 2001 Feb;12(1):11-7.

Simopoulos AP. Essential fatty acids in health and chronic disease. *Am J Clin Nutr.* 1999 Sep;70(3 Suppl):560S-569S.

- Alexander JW. Immunonutrition: the role of omega-3 fatty acids. *Nutrition*. 1998 Jul-Aug;14(7-8):627-33.
- Ariza-Ariza R, Mestanza-Peralta M, Cardiel MH. Omega-3 fatty acids in rheumatoid arthritis: an overview. *Semin Arthritis Rheum*. 1998 Jun;27(6):366-70.
- Arm JP, Thien FC, Lee TH. Leukotrienes, fish-oil, and asthma. *Allergy Proc*. 1994 May-Jun;15(3):129-34.

Page 117

But today, the average is about 20:1 omega-6's to omega-3's!

Simopoulos AP. Essential fatty acids in health and chronic disease. *Am J Clin Nutr*. 1999 Sep;70(3 Suppl):560S-569S.

... and one of the results, for instance, is a greater tendency toward inflammation . . .

Simopoulos AP. Essential fatty acids in health and chronic disease. *Am J Clin Nutr*. 1999 Sep;70(3 Suppl):560S-569S.

... - to which mothers are already vulnerable.

Due to autoimmune processes, and perhaps other factors; see chapter 5.

Page 118

... a depleted person often lacks some of the enzymes or co-factors needed to convert flax oil into the long-chain fatty acids your body needs . . .

Erasmus, U. Fats that Heal, Fats that Kill. Alive Books:1993, 261.

#4: Unrefined, Varied Whole Grains

Page 119

... certain chemicals within grains called phytates can interfere with the absorption of minerals. . .

Hallberg L, Rossander L, Skanberg AB. Phytates and the inhibitory effect of bran on iron absorption in man. *Am J Clin Nutr*. 1987 May;45(5):988-96.

Goodheart RS, Shils ME. Modern nutrition in health and disease (6th Ed.). Lee & Febiger, 1980.

#5: Organic Foods

Organic foods have fewer toxic molecules, because they contain no pesticides or artificial fertilizers.

For example, see Podwall D, Dresner HS, Lipetz J, Steinberg JJ. Variation in the deoxynucleotide composition between organic and nonorganic strawberries. *Ecotoxicol Environ Saf*. 1999 Nov;44(3):259-70.

Page 120

Organic foods also tend to have more nutritious molecules - especially minerals - because they come from richer soils.

Worthington V. 1999, Altern Ther Health Med 1998 Jan;4(1):58-69. Effect of agricultural methods on nutritional quality: a comparison of organic with conventional crops.

Doctor's Data Lab, Journal of Applied Nutrition, Vol 45, 1993; cited in Haas, Elson, The Staying Healthy Shoppers Guide, Celestial Arts.

... organic foods usually taste better. . .

Reganold, JP, Glover JD, Andrews PK, Hinman HR. Sustainability of three apple production systems. Nature 410, 926-930 (19 April 2001).

Page 122

#6: Supplements

Almost all women . . . already have significant nutritional deficits when they start their first pregnancy. . .

See Chapter 1.

... it takes many months, and often years, of taking supplements to restore healthy levels of nutrients (especially minerals) to a run-down body.

Siege-Riz AM, Adair LS, Hobel CJ. Maternal hematologic changes during pregnancy and the effect of iron status on preterm delivery in a West Los Angeles population. Am J Perinatol. 1998;15(9):515-22.

... the amount of vitamin C that prevents scurvy is less than that which brings the greatest cardiovascular health across a lifetime.

Law MR, Morris JK.. By how much does fruit and vegetable consumption reduce the risk of ischaemic heart disease? Eur J Clin Nutr. 1998 Aug;52(8):549-56.

Kendler BS. Recent nutritional approaches to the prevention and therapy of cardiovascular disease. Prog Cardiovasc Nurs. 1997 Summer;12(3):3-23.

A growing body of research has substantiated the benefits of above-DV levels of various nutrients for gastrointestinal dysfunction, depression, hormonal disturbances, and autoimmune diseases . . .

See Chapter 5.

Page 123

... do not take more than 5000 IU of vitamin A if you are pregnant. . .

Committee Opinion (1998). American College of Obstetricians and Gynecologists, #196, January, 1998.

[Vitamin] B-5 enables the body to make adrenal hormones.

See Chapter 5.

Vitamin B-6 helps balance the endocrine system. . .

See Chapter 5.

Page 124

#7: Sugar

The average American today eats over 150 pounds per year of refined sugars . . .

Newsweek, July 13, 1998, 72.

High consumption of sugar (and the elevated levels of insulin that come with it) is also associated with Type II diabetes, weight gain, bloating, fatigue, arthritis, migraines, lowered immune function, gallstones, obesity, breast cancer, and cardiovascular disease. And sugar is depleting . . .

For a general review, see Crayhon, R. Nutrition made simple. M. Evans & Co., Inc., 54 -55.

Regarding breast cancer, see Bruning PF, Bonfrer JM, van Noord PA, Hart AA, de Jong-Bakker M, Nooijen WJ. Insulin resistance and breast-cancer risk. *Int J Cancer*. 1992 Oct 21;52(4):511-6.

. . . sugar forcefeeds microbes in the digestive tract - which is already vulnerable to infection due to maternal stress - leading to impaired nutrient absorption, diarrhea, gas, or fatigue.

See Chapter 5.

Page 125

. . . people who drink sugar-sweetened drinks tend to eat just as much as those who drink water.

Rolls BJ, Kim S, Fedoroff IC. Effects of drinks sweetened with sucrose or aspartame on hunger, thirst and food intake in men. *Physiol Behav*. 1990 Jul;48(1):19-26.

Also see Booth DA. Mechanisms from models--actual effects from real life: the zero-calorie drink-break option. *Appetite*. 1988;11 Suppl 1:94-102.

And if you do keep dessert around, try to have only one kind, since we eat more if there's a variety.

Research reported in Gorman, C.. *Food Tips for Tots*, Time, August 9, 1999, 78.

. . . many people have still reported negative reactions [from aspartame], including headaches and depression . . .

Van den Eeden SK, Koepsell TD, Longstreth WT Jr, van Belle G, Daling JR, McKnight B. Aspartame ingestion and headaches: a randomized crossover trial. *Neurology* 1994 Oct;44(10):1787-93.

Walton RG, Hudak R, Green-Waite RJ. Adverse reactions to aspartame: double-blind challenge in patients from a vulnerable population. *Biol Psychiatry* 1993 Jul 1-15;34(1-2):13-7.

Using artificial sweeteners doesn't seem to help people lose weight . . .

Lavin JH, French SJ, Read NW. The effect of sucrose- and aspartame-sweetened drinks on energy intake, hunger and food choice of female, moderately restrained eaters. *Int J Obes Relat Metab Disord* 1997. Jan;21(1):37-42.

Eisenberg A, Murkoff, HE, Hathaway, SE. What to expect when you're expecting (2nd Ed.), Workman Publishing, 1991, 62.

Page 126

Exercising Regularly

... exercise will improve your cardiovascular health, strengthen your immune system, and help prevent obesity and adult-onset diabetes.

LaFontaine T, Dabney S, Brownson R, Smith C. The effect of physical activity on all cause mortality compared to cardiovascular mortality: a review of research and recommendations. *Mo Med*. 1994 Apr;91(4):188-94.

Smekal G, Pokan R, Baron R, Tschan H, Bachi N. [Amount and intensity of physical exercise in primary prevention]. *Wien Med Wochenschr*. 2001;151(1-2):7-12. [German.]

Ryan AS. Insulin resistance with aging: effects of diet and exercise. *Sports Med*. 2000 Nov;30(5):327-46.

Avoiding Health Hazards

Page 135

Environmental Toxins

... toxic chemicals ... have been linked to numerous health problems, including endometriosis, autoimmune conditions, hormonal irregularities, and cancer.

Kaiser J. Evidence mounts that tiny particles can kill. *Science*, 7 July 2000, 289, 22-3.

DuBrow, A. Endometriosis: New developments. *The Network News, National Women's Health Network*, September/October, 1999, 1.

Crinnion WJ. *Environmental Medicine, Part 1: The human burden of environmental toxins and their common health effects*. *Altern Med Rev* 2000;5(1):52-63.

Kaiser, J. Panel cautiously confirms low-dose effects. *Science*, 2000, 290, 695697.

New York Times wire service, reported in *San Francisco Chronicle*, August 31, 1998, p. A7.

Page 136

Air pollution can build up indoors . . .

Nelson, L., Kenen, R., & Klitzman, S. (1990). Turning things around: A women's occupational and environmental health resource guide. *The National Women's Health Network*.

Smoking Tobacco

... 20 percent or more of the people who smoke will die from it.

Data from CDC Office of Women's Health

... one woman in six smokes, and over 150,000 women die from tobacco-related causes every year.

Data from CDC Office of Women's Health.

Weissman, R. Women and tobacco. *The Network News, Women's Health Network*, March/April, 2001, 1.

Also see Women and Smoking: A report of the Surgeon General, 2001. Office on Smoking and Health, Centers for Disease Control and Prevention.

... smoking weakens your immune system . . .

Silverstein P. Smoking and wound healing. *Am J Med*. 1992 Jul 15;93(1A):22S-24S.

[Smoking] contributes to diseases of the heart and lungs, stroke, osteoporosis, and early menopause.

Data from CDC Office of Women's Health

A baby whose mother smokes is twice as likely to die of SIDS . . .

Eisenberg A, Murkoff, HE, Hathaway, SE. What to expect when you're expecting (2nd Ed.), Workman Publishing, 1991, 54.

. . . and her older children are more likely to have asthma, pneumonia, and bronchitis; secondhand smoke causes 150,000 to 300,000 lower respiratory tract infections annually in American infants and toddlers.

Data from CDC Office of Women's Health

Page 139

Abusing Alcohol or Drugs

Drinking weakens the immune system and increases the risk of heart disease, diabetes, cirrhosis of the liver, and cancer.

Thakker KD. An overview of health risks and benefits of alcohol consumption. Alcohol Clin Exp Res. 1998 Oct;22(7 Suppl):285S-298S.

Nilsson P, Berglund G. Prevention of cardiovascular disease and diabetes: lessons from the Malmo Preventive Project. J Intern Med. 2000 Dec;248(6):455-62.

Burzynski NJ, Yancey JM, Fletcher DR, Flynn MB. The carcinogenic risks of alcoholic beverages: implications for cancer education. J Cancer Educ. 1995 Spring;10(1):34-6.

If a mother drinks too much, it's no good for her children . . .

Weinberg NZ. Cognitive and behavioral deficits associated with parental alcohol use. J Am Acad Child Adolesc Psychiatry. 1997 Sep;36(9):1177-86.

. . . using drugs during pregnancy - even unwittingly, before you realize you're pregnant - can harm the baby.

Dicker M, Leighton EA. Trends in the US prevalence of drug-using parturient women and drug-affected newborns, 1979 through 1990. Am J Public Health, 1994, 84, 1433-8.

Page 140

. . . people self-medicate with alcohol and drugs in order to cope with depression . . .

Moscato BS, Russell M, Zielezny M, Bromet E, Egri G, Mudar P, Marshall JR. Gender differences in the relations between depressive symptoms and alcohol problems: a longitudinal perspective. Am J Epidemiol, 1997, 146, 966-74.

Page 141

Carrying Excessive Weight

Excess weight is associated with many health problems, including diabetes, heart disease, breast cancer, colon cancer, and gall bladder disease.

Ford ES, Williamson DF, Liu S. Weight changes and diabetes incidence: findings from a national cohort of US adults. Am J Epidemiol, 146, 214-22.

Allison DB, Faith MS, Heo M, Kotler, DP. Hypothesis concerning the U-shaped relation between body mass index and mortality. *Am J Epidemiol* 1997, 146, 339-49.

About one woman in three is considered, by current medical standards, to be overweight.

Newsweek, July 13, 1998.

. . . the best way to get to and then stay at a healthy weight has always been the same: get regular exercise - the key to losing weight . . .

Women's Health Advisor, November, 1999, 7.

Detoxifying Your Body

Page 144

Studies have linked poor detoxification to several diseases, including fibromyalgia, chronic fatigue syndrome, Parkinson's disease, and cancer.

For reviews, see:

Liska, AJ; The detoxification enzyme systems; *Altern Med Rev* 1998;3(3); 187 - 198.

Crinnion, Walter; Environmental medicine, part I: The human burden of environmental toxins and their common health effects; *Altern Med Rev*, 2000;5(1) 52 - 63.

Also see Murray and Pizzorno, Encyclopedia of natural medicine, 1998, 104 - 125 for a detailed explanation of detoxification.

. . . taurine, methionine, glutamine, and glycine can also be helpful to liver detoxification.

Crinnion WJ. Environmental Medicine, Part 2 - Health Effects of and Protection from Ubiquitous Airborne Solvent Exposure. *Altern Med Rev* 2000;5(2):133-143.

. . . silymarin, which functions as an antioxidant and prevents depletion of glutathione.

Flooorora K, et al Milk thistle (*Silybum marianum*) for the therapy of liver disease. *Am J of Gastroenterol* 1998; 93(2): 139-43.

Monograph: *Silybum marianum* (no author cited) *Altern Med Rev*, 1999, 4(4) 272-274.

REFERENCE NOTES

Introduction to Part Two

... *as a whole, raising children will probably be the most stressful experience of your life.*

Note the number of different stressors that apply to mothers in inventories of stress, such as the classic Life Change Unit Scale in Cline, D.W. & Chosy, J.J. (1972). A prospective study of life changes and subsequent health changes, *Archives of General Psychiatry*, 27, 51-53.

REFERENCE NOTES

Chapter 5:

What to Do If You're Getting Depleted

The variations in formatting of these references are due to some sources being medical journals while others being journals in other disciplines, such as psychology, where the conventions for references differ.

Jan's Story: "I'm Going to Get Better!"

Page 153

. . . my gastrointestinal tract had already been disturbed by years of antibiotics . . .

Vander, A.J., Sherman, J.H., & Luciano, D.S. (1994). Human physiology: The mechanisms of body function. McGraw-Hill, 728.

Gorbach SL. Perturbation of intestinal microflora. *Vet Hum Toxicol* 1993;35 Suppl 1:15-23.

Kennedy MJ, Volz PA. Ecology of *Candida albicans* gut colonization: inhibition of *Candida* adhesion, colonization, and dissemination from the gastrointestinal tract by bacterial antagonism. *Infect Immun*. 1985 Sep;49(3):654-63.

Catanzaro, JA, Green, L. (1997). Microbial ecology and dysbiosis in human medicine. *Alt Med Rev*, 2, 202-9.

Spectrum of Care

Page 158

Box: A Brief History of Medicine

Posted on the internet and quoted in *The Family Therapy Networker*, May/June, 2000, 19.

Your Gastrointestinal System

Page 159

The surface area of your small intestine would cover an entire tennis court. . .

Personal communication, Scott Anderson, M.D., 1999

Your intestines are home to vast populations of microorganisms.

Gorman, C. (1998). Healthy germs. *Time*, December 28, 1998, 197.

. . . bacteria normally comprise about 40% of the dry weight of stool, with roughly 400 billion bacteria per gram.

Catanzaro, JA, Green, L. (1997). Microbial ecology and dysbiosis in human medicine. *Alt Med Rev*, 2, 202-9.

The beneficial microflora aid digestion, make essential vitamins . . .

Marz, R.B. (1999). *Medical nutrition from Marz (2nd ed.)*. Omni Press, 19.
Course syllabus of Michael Rosenbaum, M.D. Nutritional therapies for immune dysfunction and gastrointestinal disorders. May 19, 2001.

What Can Disturb the Gastrointestinal System

Page 160

. . . stress can disrupt the delicate balance of the microbial ecology in the digestive tract . . .

Bailey MT, Coe CL. Maternal separation disrupts the integrity of the intestinal microflora in infant rhesus monkeys. *Dev Psychobiol*. 1999 Sep;35(2):146-55.

Huis in 't Veld JH. [Gastrointestinal flora and health in man and animal]. *Tijdschr Diergeneeskd*. 1991 Mar 1;116(5):232-9.

Moore, WE, Cato, EP, Holdeman LV. Some current concepts in intestinal bacteriology. *Am J Clin Nut*, 1978; 31: s33-s42: Cited in Kelly GS. (1999). Nutritional and botanical interventions to assist with the adaptation to stress. *Altern Med Rev*; 4:249-265.

A mother's reliance on quick foods . . . [with] lots of white flour and sugar . . . can foster a population explosion of harmful microorganisms

Numerous studies demonstrate this with regard to yeast. For a sampling, see:

Pizzo G, Giuliana G, Milici ME, Giangreco R. Effect of dietary carbohydrates on the in vitro epithelial adhesion of *Candida albicans*, *Candida tropicalis*, and *Candida krusei*. *New Microbiol* 2000 Jan;23(1):63-71.

Weig M, Werner E, Frosch M, Kasper H. Limited effect of refined carbohydrate dietary supplementation on colonization of the gastrointestinal tract of healthy subjects by *Candida albicans*. *Am J Clin Nutr*. 1999 Jun;69(6):1170-3. [Note that this study gave extra carbohydrates for just one week; nonetheless, subjects who already had high levels of oral candida still showed an increase in yeast.]

Samaranayake YH, MacFarlane TW, Aitchison TC, Samaranayake LP. The in vitro lysozyme susceptibility of *Candida albicans* cultured in carbohydrate-supplemented media. *Oral Microbiol Immunol*. 1993 Jun;8(3):177-81.

Samaranayake YH, MacFarlane TW, Samaranayake LP, Aitchison TC. The in vitro lysozyme susceptibility of *Candida* species cultured in sucrose supplemented media. *Microbios*. 1993;74(298):23-8.

Vargas SL, Patrick CC, Ayers GD, Hughes WT. Modulating effect of dietary carbohydrate supplementation on *Candida albicans* colonization and invasion in a neutropenic mouse model. *Infect Immun*. 1993 Feb;61(2):619-26.

Nikawa H, Samaranayake LP, Hamada T. Modulation of the anti-*Candida* activity of apo-lactoferrin by dietary sucrose and tunicamycin in vitro. *Arch Oral Biol*. 1995 Jun;40(6):581-4.

Note also that sugars and refined carbohydrates could promote yeast overgrowth by weakening the immune system; see Murray, M. & Pizzorno, J. (1998). *Encyclopedia of natural medicine (2nd ed.)*. Prima Publishing, 151-152.

We could not find references for or against the effect of dietary sugar and refined carbohydrates on microorganisms besides yeast, so this effect is speculative at present. On the other hand, numerous health practitioners who work with dysbiosis, including Jan, have made clinical observations that increases in sugar and refined flour intake are linked to a worsening of symptoms, while decreases are followed by an improvement. At a minimum, it's a reasonable possibility that sugar and refined carbohydrates worsen dysbiosis - on top of the other, well established reasons for reducing or eliminating one's consumption of those foods.

Dysbiosis has been linked to numerous symptoms, including constipation, diarrhea, cramping, and inflammation in the digestive tract.

For example, see:

Zoppi G, Cinquetti M, Luciano A, Benini A, Muner A, Bertazzoni Minelli E. The intestinal ecosystem in chronic functional constipation. *Acta Paediatr.* 1998 Aug;87(8):836-41.

Neut C, Guillemot F, Gower-Rousseau C, Biron N, Cortot A, Colombel JF. [Treatment of diversion colitis with short-chain fatty acids. Bacteriological study]. *Gastroenterol Clin Biol.* 1995 Nov;19(11):871-5. French.

For a general review, see Catanzaro, JA, Green, L. (1997). Microbial ecology and dysbiosis in human medicine. *Alt Med Rev*, 2, 202-9.

... these factors may lead to what is called a food sensitivity ...

Ahmed T, Fuchs GJ. Gastrointestinal allergy to food: a review. *J Diarrhoeal Dis Res* 1997 Dec;15(4):211-23.

Proujansky R, Winter HS, Walker WA. Gastrointestinal syndromes associated with food sensitivity. *Adv Pediatr* 1988;35:219-37.

Butkus SN, Mahan LK. Food allergies: immunological reactions to food. *J Am Diet Assoc* 1986 May;86(5):601-8.

... these oversized, only partially processed "macromolecules" are strange: they could be a threat, so the body's defenses are mobilized to protect you.

For a review, see Miller, A. (1997). The pathogenesis, clinical implications, and treatment of intestinal hyperpermeability. *Alternative Medicine Review*, 2, 330-345.

Disturbances in neurotransmitters such as serotonin can trouble your digestive tract.

Schmulson MJ. Brain-gut interaction in irritable bowel syndrome: new findings of a multicomponent disease model. *Isr Med Assoc J.* 2001 Feb;3(2):104-10.

De Ponti F, Tonini M. Irritable bowel syndrome: new agents targeting serotonin receptor subtypes. *Drugs.* 2001;61(3):317-32.

... irregularities in thyroid hormone (more likely after children) can lead to constipation (low thyroid) or diarrhea (high thyroid).

Thomas E. Nolan, Chapter 9, p. 222, in Novak's Gynecology, (12th Ed.), Jonathan S. Berek, 1996, Williams and Wilkins.

Signs and Symptoms of Disturbance in the GIS

Page 161

... there is some evidence that food sensitivities can lead to an overactive immune system in general . . .

Bozic, CR. et al. (1996). Neurogenic amplification of immune complex inflammation. *Science*, 273, 1722-1725.

Meggs, W.J. (1995). Neurogenic switching: A hypothesis for a mechanism for shifting the site of inflammation in allergy and chemical sensitivity. *Environmental Health Perspectives*, 103, 54-56.

... an apparent association between vaginal yeast infections and an overgrowth of yeast in the digestive tract.

Miles MR, Olsen L, Rogers A. Recurrent vaginal candidiasis. Importance of an intestinal reservoir. *JAMA*. 1977 Oct 24;238(17):1836-7. Therapy of candidal vaginitis: the effect of eliminating intestinal *Candida*. Nystatin Multicenter Study Group. *Am J Obstet Gynecol*. 1986 Sep;155(3):651-5.

... the toxins excreted by pathogenic microbes may lead to fatigue, inflammation, depressed mood, or poor memory.

Catanzaro, JA, Green, L. (1997). Microbial ecology and dysbiosis in human medicine. *Alt Med Rev*, 2, 202-9. Shaw, W. (1998). Biological treatments for autism and PDD, 31-65 and 105-107.

Gastrointestinal Assessment

Footnote: ***Yet high levels . . . [of yeast] can . . . cause constipation or diarrhea, increase the likelihood of vaginal infections, and produce microtoxins that can weaken your immune system.***

Talwar P, Chakrabarti A, Chawla A, Mehta S, Walia BN, Kumar L, Chugh KS. Fungal diarrhoea: association of different fungi and seasonal variation in their incidence. *Mycopathologia*. 1990 May;110(2):101-5.

Therapy of candidal vaginitis: the effect of eliminating intestinal *Candida*. Nystatin Multicenter Study Group. *Am J Obstet Gynecol*. 1986 Sep;155(3):651-5.

Sutton P, Newcombe NR, Waring P, Mullbacher A. In vivo immunosuppressive activity of gliotoxin, a metabolite produced by human pathogenic fungi. *Infect Immun*. 1994 Apr;62(4):1192-8.

Beaver JP, Waring P. A decrease in intracellular glutathione concentration precedes the onset of apoptosis in murine thymocytes. *Eur J Cell Biol*. 1995 Sep;68(1):47-54.

But for a caution on over-estimating the impact of candida, see Odds FC. *Candida infections: an overview*. *Crit Rev Microbiol* 1987;15(1):1-5.

Balancing Your Gastrointestinal System

Page 161Energetic

... acupuncture could help balance your GIS.

Chan J, Carr I, Mayberry JF. The role of acupuncture in the treatment of irritable bowel syndrome: a pilot study. *Hepatology*. 1997 Sep-Oct;44(17):1328-30.

We've also seen homeopathy be useful for . . . specific gastrointestinal symptoms.

See Pelletier, K. (2000). The best alternative medicine: What works? What does not? Simon and Schuster, 209.

Page 164

Dietary

Try to consume about 35 grams of fiber each day.

Guideline from the National Institute of Health. Also see Marz, R.B. (1999). Medical nutrition from Marz (2nd ed.). Omni Press: Portland, Oregon. p. 25.

Fiber . . . supports beneficial bacteria.

Schneeman BO. Carbohydrates: significance for energy balance and gastrointestinal function. J Nutr 1994 Sep;124(9 Suppl):1747S-1753S.

Page 166

Selected Cookbooks If You Have an Allergy.

From a list compiled by the American Academy of Asthma, Allergy, and Immunology (www.aaaai.org).

Supplements

. . . essential fatty acids are needed for the walls of your intestines, plus they may help with serious GI disturbances, such as ulcerative colitis.

Almallah, YZ, et al. (1998). Distal procto-colitis, natural cytotoxicity, and essential fatty acids. American Journal of Gastroenterology, 93, 804-9.

. . . hydrochloric acid is required for proper digestion, particularly of proteins and minerals.

Kelly, G. S. (1997). Hydrochloric acid: Physiological functions and clinical implications. Alternative Medicine Review, 2, 116-27.

Although TV commercials describe acid stomach as if it were epidemic, in fact, low acid is a more common problem.

Rogers, Kassarjuan, Z, et al. Hypochlorhydria: A factor in Nutrition. Ann Rev Nutr 9:271-285, 1989.

Page 167

[Intensive Daily Dose of]. L-glutamine . . .

Zieglar, T.R. (1996). Glutamine from basic science to clinical applications. Nutrition, 12, 568-70.

Page 168

Licorice root . . . can reduce gastric pain and even help heal ulcers.

Murray, M. & Pizzorno, J. (1998). Encyclopedia of natural medicine (2nd ed.). Prima Publishing, 185.

Several herbs can help control the populations of microorganisms, including garlic, goldenseal, and oregano.

- Birdsall, T.C. (1997). Gastrointestinal candidiasis: Fact or fiction? *Alternative Medicine Review*, 2, 346-354.
- Stiles, J.C. (1995). The inhibition of candida albicans by oregano. *Journal of Applied Nutrition*, 47, 96-102.
- Hammer KA, Carson CF, Riley TV. Antimicrobial activity of essential oils and other plant extracts. *J Appl Microbiol* 1999, 86, 985-90.
- Murray, M. & Pizzorno, J. (1998). Encyclopedia of natural medicine (2nd ed.). Prima Publishing, 185.

Probiotics

These beneficial microorganisms crowd out pathogenic ones . . .

- Kopp-Hoolihan L. Prophylactic and therapeutic uses of probiotics: a review. *J Am Diet Assoc.* 2001 Feb;101(2):229-38. 19:
- Goldin BR. Health benefits of probiotics. *Br J Nutr.* 1998 Oct;80(4):S203-7.
- Vander, A.J., Sherman, J.H., & Luciano, D.S. (1994). Human physiology: The mechanisms of body function. McGraw-Hill, 703.
- Gorbach, S. (2000). Probiotics and gastrointestinal health. *American Journal of Gastroenterology*, 5, Supplement 2000, 52-54.
- Pochapin, M. (2000). Effect of probiotics on Clostridium difficile diarrhea. *American Journal of Gastroenterology*, 5, Supplement 2000, 511-513.

Western medicine

The treatment options include antidiarrheal agents, antispasmodics, and low doses of antidepressants.

For example, for a review of approaches to irritable bowel syndrome, see Camilleri M (2001). Management of the irritable bowel syndrome. *Gastroenterology*, 120, 652-68. Or see Wald A. (1999). Irritable bowel syndrome. *Curr Treat Options Gastroenterology*, 2, 13-19.

Your Nervous System

What Can Disturb the Nervous System

Page 170

Stress . . . creating a biochemical highway to depressed mood . . .

Orr ST, James SA, Burns BJ, Thompson B. Chronic stressors and maternal depression: implications for prevention. *Am J Public Health.* 1989 Sep;79(9):1295-6.

Aspinwall LG, Taylor SE. A stitch in time: self-regulation and proactive coping. *Psychol Bull.* 1997 May;121(3):417-36.

. . . and poorer . . . memory.

Newcomer JW, Selke G, Melson AK, Hershey T, Craft S, Richards K, Alderson AL. Decreased memory performance in healthy humans induced by stress-level cortisol treatment. *Arch Gen Psychiatry.* 1999 Jun;56(6):527-33.

. . . taurine has a calming, soothing function in the brain . . . It is well known that taurine is an inhibitory neurotransmitter; it also brings magnesium into the cells, which is calming.

... there's a high demand for [taurine] during breastfeeding . . .

Braverman, E.R. (1997). The healing nutrients within (2nd ed.). Keats Publishing, 163.

... fluctuations in estrogen or progesterone . . . can disturb neurotransmitter systems, leading to depression, anxiety, or a poorer memory .

Fink G, Sumner BE, Rosie R, Grace O, Quinn JP. Estrogen control of central neurotransmission: effect on mood, mental state, and memory. *Cell Mol Neurobiol.* 1996 Jun;16(3):325-44.

Archer JS. NAMS/Solvay Resident Essay Award. Relationship between estrogen, serotonin, and depression. *Menopause.* 1999 Spring;6(1):71-8.

Gray JA (1971). Sex differences in emotional behavior in mammals including Man: *Endocrine bases. Acta Psychologica*, 35, 29-46.

Carpenter, S. (2001). Does estrogen protect memory? *Monitor on Psychology*, January 2001, 52-3.

Thyroid dysregulation after childbirth, or due to an autoimmune condition related to motherhood, can lead to depression.

Bishnoi, A. Postpartum thyroiditis: Clinical significance and recommendations for screening. *Primary Care Update, OB/GYNS.* 2 (5), 174-76, 1995.

Page 171

... as cortisol rises due to stress, DHEA declines . . .

Laughlin GA, Dominguez CE, Yen SS, Nutritional and endocrine-metabolic aberrations in women with functional hypothalamic amenorrhea. *J Clin Endocrinol Metab.* 1998, Jan;83(1):25-32.

Cacioppo JT, Berntson GG, Malarkey WB, Kiecolt-Glaser JK. Autonomic, neurendocrine and immune responses to psychological stress: the reactivity hypothesis. *Annals of the New York Academy of Sciences*, 1998, May1; 840: 664-73.

... which has been linked to depressed mood.

Michael A, Jenaway A, Paykel ES, Herbert J. Altered salivary dehydroepiandrosterone levels in major depression in adults. *Biol Psychiatry.* 2000 Nov 15;48(10):989-95.

Barrett-Connor E, von Muhlen D, Laughlin GA, Kripke A. Endogenous levels of dehydroepiandrosterone sulfate, but not other sex hormones, are associated with depressed mood in older women: the Rancho Bernardo Study. *J Am Geriatr Soc.* 1999 Jun;47(6):685-91.

Heuser I, Deuschle M, Luppa P, Schweiger U, Standhardt H, Weber B. Increased diurnal plasma concentrations of dehydroepiandrosterone in depressed patients. *J Clin Endocrinol Metab.* 1998 Sep;83(9):3130-3.

Takebayashi M, Kagaya A, Uchitomi Y, Kugaya A, Muraoka M, Yokota N, Horiguchi J, Yamawaki S. Plasma dehydroepiandrosterone sulfate in unipolar major depression. Short communication. *J Neural Transm.* 1998;105(4-5):537-42.

Cawood EH, Bancroft J. Steroid hormones, the menopause, sexuality and well-being of women. *Psychol Med.* 1996 Sep;26(5):925-36.

... allergies and inflammation . . . can lower your mood.

Marshall PS (1993) Allergy and depression: A neurochemical threshold model of the relation between the illnesses. *Psychol Bull*, 113: 23-43. Bell IR,
 Jasnowski ML, Kagan J, King DS. (1991) Depression and allergies: survey of a nonclinical population. *Psychother Psychosom* 1991;55(1):24-31.

Gastrointestinal dysfunction due to maternal stress can have a similar effect.

Masand PS, Kaplan DS, Gupta S, Bhandary AN, Nasra GS, Kline MD, Margo KL.. Major depression and irritable bowel syndrome: is there a relationship? *J Clin Psychiatry* 1995 Aug;56(8):363-7.

Talley NJ, Weaver AL, Zinsmeister AR. Impact of functional dyspepsia on quality of life. *Dig Dis Sci* 1995 Mar;40(3):584-9.

Song JY, Merskey H, Sullivan S, Noh S. Anxiety and depression in patients with abdominal bloating. *Can J Psychiatry* 1993 Sep;38(7):475-9.

Walker EA, Katon WJ, Jemelka RP, Roy-Bryne PP. Comorbidity of gastrointestinal complaints, depression, and anxiety in the Epidemiologic Catchment Area (ECA) Study. *Am J Med* 1992 Jan 24;92(1A):26S-30S.

Kumar D, Pfeffer J, Wingate DL. Role of psychological factors in the irritable bowel syndrome. *Digestion* 1990;45(2):80-7.

Balancing the Neurotransmitters of Mood

Page 172

Energetic

Acupuncture can lift mildly depressed mood.

Luo H, Meng F, Jia Y, Zhao X. (1998). Clinical research on the therapeutic effect of the electro-acupuncture treatment in patients with depression. *Psychiatry Clin Neurosci* 52, Suppl: S338-40.

Ulett GA, Han S, Han JS. (1998). Electroacupuncture: Mechanisms and clinical applications. *Biol Psychiatry*, 44, 129-38.

Eich H, Agelink MW, Lehmann E, Lemmer W, Klieser E. Acupuncture in patients with minor depressive episodes and generalized anxiety. Results of an experimental study. [German] *Fortschr Neurol Psychiatr*. 2000 Mar;68(3):137-44.

Musculoskeletal.

Regular exercise . . . often provides a strong boost for mild depression, sometimes working as well as an antidepressant.

Babyak M, Blumenthal JA, Herman S, Khatiri P, Doraiswamy M, Moore K, Craighead WE, Baldewicz TT, Krishnan KR. Exercise treatment for major depression: maintenance of therapeutic benefit at 10 months. *Psychosom Med*. 2000 Sep-Oct;62(5):633-8.

Tkachuk GA, Martin GL. (1999). Exercise therapy for patients with psychiatric disorders: Research and clinical implications. *Professional Psychology: Research and Practice*, 30, 275-82.

Vogel, G. (2000). New brain cells prompt new theory of depression. *Science*, 290, 258-259. Dimeo F, Bauer M, Varahram I, Proest G, Halter U. (2001). Benefits from aerobic exercise in patients with major depression: a pilot study. *British Journal of Sports Medicine*;35, 114-7.

Dietary

... please don't go on a low-protein diet if you tend toward depressed mood, since it could plunge you into a bout of depression.

Smith KA, Williams C, Cowen PJ. Impaired regulation of brain serotonin function during dieting in women recovered from depression. *Br J Psychiatry*. 2000 Jan;176:72-5.

Page 173

... eliminating sugar can improve mood ...

See studies reported in Werbach, M.R. (1999). Nutritional influences on mental illness (2nd ed.). Third Line Press, 223.

Also see research by Dr. Kelly Kreitsch (1988) reported in Pelletier, K. (2000). The best alternative medicine: What works? What does not? Simon and Schuster, 148.

... significant changes in brainwaves have been documented in some individuals after saying goodbye to sweets.

Christenson, I. (1991) The roles of caffeine and sugar in depression. *Nutritional Reports*, 9, March, 1991.

Eliminating caffeine and alcohol can help as well.

See Werbach, M.R. (1999). Nutritional influences on mental illness (2nd ed.). Third Line Press, 223 -225. Also see research by Dr. Kelly Kreitsch (1988) reported in Pelletier, K. (2000). The best alternative medicine: What works? What does not? Simon and Schuster, 189.

Supplements

... deficits in the nutrients listed in the table below are associated with depressed mood ... Supplementation, especially when there is a deficiency, could improve your mood.

In general, see Werbach, M.R. (1999). Nutritional influences on mental illness (2nd ed.). Third Line Press, 225-273.

For vitamins, see Benton D, Haller J, Fordy J. Vitamin supplementation for 1 year improves mood. *Neuropsychobiology*. 1995;32(2):98-105.

For essential fatty acids, see:

Bruinsma KA, Taren DL. Dieting, essential fatty acid intake, and depression. *Nutr Rev*. 2000 Apr;58(4):98-108.

Maes M, Smith R, Christophe A, Cosyns P, Desnyder R, Meltzer H. Fatty acid composition in major depression: decreased omega 3 fractions in cholesteryl esters and increased C20: 4 omega 6/C20:5 omega 3 ratio in cholesteryl esters and phospholipids. *J Affect Disord*. 1996 Apr 26;38(1):35-46.

Adams PB, Lawson S, Sanigorski A, Sinclair AJ. Arachidonic acid to eicosapentaenoic acid ratio in blood correlates positively with clinical symptoms of depression. *Lipids*. 1996 Mar;31 Suppl:S157-61.

Tyrosine ... is the basis for the neurotransmitters norepinephrine and dopamine, which are involved in the regulation of mood.

Young SN. Behavioral effects of dietary neurotransmitter precursors: basic and clinical aspects. *Neurosci Biobehav Rev* 1996 Summer;20(2):313-23.

Meyers, S. (2000). Use of neurotransmitter precursors for treatment of depression, *Alternative Medicine Review*, 5, February, 2000, 64-71.

If you are deficient in tyrosine, or its amino acid precursor, phenylalanine, supplementing one of these may help improve your mood.

Leyton M, Young SN, Pihl RO, Etezadi S, Lauze C, Blier P, Baker GB, Benkelfat C. Effects on mood of acute phenylalanine/tyrosine depletion in healthy women. *Neuropsychopharmacology*. 2000 Jan;22(1):52-63.

Leonard BE. The role of noradrenaline in depression: a review. *J Psychopharmacol* 1997;11(4 Suppl):S39-47.

One, well-controlled study found no benefit for tyrosine, but its participants were not screened for deficiency in the first place: Gelenberg AJ, Wojcik JD, Falk WE, Baldessarini RJ, Zeisel SH, Schoenfeld D, Mok GS. Tyrosine for depression: a double-blind trial. *J Affect Disord* 1990 Jun;19(2):125-32.

Another amino acid, taurine, can also help take the edge off of irritability or tension . . .

Through its inhibitory effects as a neurotransmitter, and through up-regulating intracellular magnesium.

Page 174

. . . low levels of SAME are associated with depressed mood, and several well-controlled studies have found that supplementing SAME is often quite effective in relieving depression . . .

Bressa GM. S-adenosyl-l-methionine (SAME) as antidepressant: meta-analysis of clinical studies. *Acta Neurol Scand Suppl*. 1994;154:7-14.

Bottiglieri T, Laundry M, Crellin R, Toone BK, Carney MW, Reynolds EH. Homocysteine, folate, methylation, and monoamine metabolism in depression. *J Neurol Neurosurg Psychiatry*. 2000 Aug;69(2):228-32.

Fugh-Berman A, Cott JM. Dietary supplements and natural products as psychotherapeutic agents. *Psychosom Med*. 1999 Sep-Oct;61(5):712-28.

Bell KM, Potkin SG, Carreon D, Plon L. S-adenosylmethionine blood levels in major depression: changes with drug treatment. *Acta Neurol Scand Suppl*. 1994;154:15-8.

Kagan BL, Sultzer DL, Rosenlicht N, Gerner RH. Oral S-adenosylmethionine in depression: a randomized, double-blind, placebo-controlled trial. *Am J Psychiatry*. 1990 May;147(5):591-5.

. . . and [SAME] also seems helpful for joint pain.

Women's Health Advisor, November 1999, 7.

The most commonly used daily dosage of SAME is 400 - 800 mg . . . We suggest starting at 200 mg - especially if you are sensitive to medications - or at 100 mg if you have a history of panic attacks; a person with manic-depression should take SAME only under medical supervision.

Jibrin J. (1999). Mood lifters. *New Age*. November/December, 1999, 40.

Studies have shown that supplementing . . . 5-hydroxytryptophan . . . is often successful in the treatment of mild depression.

Zmilacher K, Battagay R, Gastpar M (1988). L-5-hydroxytryptophan alone and in combination with a peripheral decarboxylase inhibitor in the treatment of depression. *Neuropsychobiology*, 20, 28-35.

Byerley WF, Judd LL, Reimherr FW, Grosser BI. (1987). 5-hydroxytryptophan: A review of its antidepressant efficacy and adverse effects. *J Clin Psychopharmacol*, 7, 127-37.

Angst J, Woggon B, Schoepf J. The treatment of depression with L-5-hydroxytryptophan versus imipramine. Results of two open and one double-blind study. *Arch Psychiatr Nervenkr*. 1977 Oct 11;224(2):175-86.

For a general review, see Meyers, S. (2000). Use of neurotransmitter precursors for depression, *Alternative Medicine Review*, 5, February, 2000, 64-71.

... the dosage of 5-HTP commonly used in studies of depression is 200 - 300 mg/day ...

Murray, M. (1998). 5-HTP: The natural way to overcome depression, obesity, and insomnia. Bantam Books.

Herbs

[St. John's wort is] helpful for mild depression about 50 to 80 percent of the time ...

Kim HL, Streltzer J, Goebert D. (1999). St. John's wort for depression: A meta-analysis of well-defined clinical trials. *J Nerv Ment Dis*, 187, 532-8.

Woelk W. (2000). Comparison of St. John's wort and imipramine for treating depression: randomised controlled trial. *BMJ*, 321, 536-9.

Linde K, Ramirez G, Mulrow Cd, Pauls A, Weidenhammer W, Melchart D (1996) St. John's wort for depression: an overview and meta-analysis of randomized clinical trials. *BMJ*, 313, 253-8.

... though [St. John's wort] does not appear to be an effective treatment for severe depression.

Shelton RC, Keller MB, Gelenberg A, Dunner DL, Hirschfeld R, Thase ME, Russell J, Lydiard RB, Crits-Cristoph P, Gallop R, Todd L, Hellerstein D, Goodnick P, Keitner G, Stahl SM, Halbreich U. Effectiveness of St John's wort in major depression: a randomized controlled trial. *JAMA*. 2001 Apr 18;285(15):1978-86.

Page 175

About two to twenty percent of people taking St. John's wort suffer side effects ...

Werbach, M.R. & Murray, M.T. (2000). Botanical influences on illness: A sourcebook of clinical research (2nd ed.). Third Line Press, 251, 254-5.

Murray, M. & Pizzorno, J. (1998). Encyclopedia of natural medicine (2nd ed.). Prima Publishing, 396-7.

If you are on any prescription medication - in particular, for contraception, blood pressure, or HIV - ask your doctor before trying St. John's wort.

Women's health Advisor, 5, June, 2001, 7.

San Francisco Chronicle, May 27, 2001, A8.

... in several studies [kava] was as effective as benzodiazepines (valium, etc.), but without the drawbacks of these drugs (e.g., impaired mental activity or addiction).

Murray, M. & Pizzorno, J. (1998). Encyclopedia of natural medicine (2nd ed.). Prima Publishing, California, 397.

Do not take kava if you have Parkinson's disease.

Dr. Andrew Weil's Self-Healing, July, 2000, 3.

... these side effects [dryness and scales] can usually be reversed by reducing or eliminating this herb.

Murray, M. & Pizzorno, J. (1998). Encyclopedia of natural medicine (2nd ed.). Prima Publishing, 397.

Natural hormones

Page 176

Supplementing DHEA can often help lift a depressed mood, particularly if there is an "adrenal insufficiency" . . .

Arlt W, Callies F, Allolio B. DHEA replacement in women with adrenal insufficiency--pharmacokinetics, bioconversion and clinical effects on well-being, sexuality and cognition. *Endocr Res.* 2000 Nov;26(4):505-11.

Arlt W, Callies F, van Vlijmen JC, Koehler I, Reincke M, Bidlingmaier M, Huebler D, Oettel M, Ernst M, Schulte HM, Allolio B. Dehydroepiandrosterone replacement in women with adrenal insufficiency. *N Engl J Med.* 1999 Sep 30;341(14):1013-20.

Bloch M, Schmidt PJ, Danaceau MA, Adams LF, Rubinow DR. Dehydroepiandrosterone treatment of midlife dysthymia *Biol Psychiatry.* 1999 Jun 15;45(12):1533-41.

Wolkowitz OM, Reus VI, Keebler A, Nelson N, Friedland M, Brizendine L, Roberts E. Double-blind treatment of major depression with dehydroepiandrosterone. *Am J Psychiatry.* 1999 Apr;156(4):646-9.

Western medicine

Anti-depressant medications have been one of the great medical success stories in this century, and millions have used them to good effect.

See Quitkin FM, Rabkin JG, Gerald J, Davis JM, Klein DF. (2000). Validity of clinical trials of antidepressants. *Am J Psychiatry,* 157: 327-37.

... pregnant or breastfeeding women need to be very careful about the use of anti-depressants.

Yoshida K, Smith B, Kumar R. Psychotropic drugs in mothers' milk: a comprehensive review of assay methods, pharmacokinetics and of safety of breast-feeding. *J Psychopharmacol.* 1999;13(1):64-80.

Misri S, Burgmann A, Kostaras D. Are SSRIs safe for pregnant and breastfeeding women? *Can Fam Physician.* 2000 Mar;46:626-8, 631-3.

Your Endocrine System

Page 177

... hormones affect memory. . .

Birge, SJ. Is there a role for estrogen therapy in the prevention and treatment of dementia? *J American Geriatric Society,* 1996, 44; 865.

... self-control . . .

Dawood, MY. In Textbook of gynecology, Copeland LJ, Saunders, (Eds.), Ohio State University Press, 2000, 611.

... *and mood.*

Altshuler LL, Hendrick V, Parry B. Pharmacological management of premenstrual disorder. *Harv Rev Psychiatry* 1995 Jan-Feb;2(5):233-45.

Research by Spinelli, M, reported in Raymond, N. (1999). Hormones get you down, *Psychology Today*, September/October, 1999, 24

What Can Disturb the Endocrine System

Page 178

... *progesterone and estrogen levels may end up settling down to somewhere other than an optimal point. . .*

For a general discussion, see Chapter 8, Endocrinology of pregnancy, in Speroff L, Glass RH, Kase, NG. Clinical gynecological endocrinology and infertility, Williams and Wilkins, 1994.

[Stress] tends to rattle your progesterone, estrogen, insulin, cortisol, and thyroid hormones.

Vander, A.J., Sherman, J.H., & Luciano, D.S. (1994). Human physiology: The mechanisms of body function. McGraw-Hill, 753.

... *about one woman in ten will develop an autoimmune disease of the thyroid gland in the postpartum period.*

Davies TF. The thyroid immunology of the postpartum period. *Thyroid* 1999 Jul;9(7):675-84.

... *the risk of thyroid problems increases three to four times after having children.*

Struve & Haupt, Influence of previous pregnancies on the prevalence of thyroid nodules in women. *Thyroid*, Spring, 1993; 3(1):7-9.

Page 179

... *sometimes this restoration of normal cycling does not occur smoothly, especially if you were prone to menstrual irregularities, or are now eating poorly or are under a good deal of stress.*

Textbook of gynecology, Copeland LJ, Saunders, (Eds.), Ohio State University Press, 2000.

Digestive imbalance can throw off the delicate rhythms of the hormonal dance . . .

Bland, J. (2001). New approaches to anti-aging: Nutritional neuroendocrinology. Course syllabus, published by The Institute for Functional Medicine, Inc., 124-6.

... *and deficiencies in key nutrients that are required for hormone function can also weaken the dancers.*

Werbach, M.R. (1996). Nutritional influences on illness (2nd ed.). Third Line Press: Tarzana, California, 542-9.

... *ups and downs in the neurotransmitters that regulate mood affect your hormones as well.*

Steinberg S, Annable L, Young SN, Liyanage N.P A placebo-controlled clinical trial of L-tryptophan in premenstrual dysphoria. *Biol Psychiatry* 1999 Feb 1;45(3):313-20.

Park SB, Williamson DJ, Cowen PJ. Do the endocrine and subjective effects of d-fenfluramine predict response to selective serotonin reuptake inhibitors? *Int Clin Psychopharmacol* 1995 Nov;10(4):215-20.

Freeman EW, Rickels K, Sondheimer SJ, Polansky M. Differential response to antidepressants in women with premenstrual syndrome/premenstrual dysphoric disorder: a randomized controlled trial. *Arch Gen Psychiatry* 1999 Oct;56(10):932-9.

Disturbances in the immune system can trigger autoimmune reactions that attack endocrine glands such as the thyroid . . .

A gender gap in autoimmunity, Whitacre, CC, Reingold SC, O'Looney, PA, *Science* 238(5406)Feb 26, 1999, 1277-78.

Smith DA, Germolec DR. Introduction to immunology and autoimmunity. *Environmental Health Perspectives*, 1999, Oct; 107, Supplement.

Signs and Symptoms of Disturbance in the Endocrine System

. . . these are some symptoms that might indicate hormonal imbalances . . .

For a general review, see Speroff L, Glass RH, Kase, NG. Clinical gynecological endocrinology and infertility, Williams and Wilkins, 1994.

For the potential connection between depressed mood and low estrogen, see research by Spinelli, M, reported in Raymond, N. (1999). Hormones get you down, *Psychology Today*, September/October, 1999, 24.

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Assessing the Endocrine System

. . . Since cortisol normally rises and falls over the course of the day . . .

Speroff L, Glass RH, Kase, NG. Clinical gynecological endocrinology and infertility, Williams and Wilkins, 1994.

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Balancing Your Menstrual Cycle

PMS has many different faces, and no single solution.

For general reviews, see:

Chapter 15, Speroff L, Glass RH, Kase, NG. Clinical gynecological endocrinology and infertility, Williams and Wilkins, 1994, 515-523.

Head, Kathleen; *Premenstrual Syndrome: Nutritional and Alternative Approaches*; *Alt Med Review* 1997;2(1):12-25).

The ways in which your body is using and metabolizing hormones probably play a role [in PMS] as well.

Chapter 15, Speroff L, Glass RH, Kase, NG. Clinical gynecological endocrinology and infertility, Williams and Wilkins, 1994, 515-523.

. . . imbalances in various neurotransmitters have been implicated in PMS.

Head, Kathleen. Premenstrual syndrome: Nutritional and alternative approaches; *Alt Med Review* 1997;2(1):12-25).

Page 183

Musculoskeletal

... regular exercise promotes the production of carrier proteins . . .

Speroff L, Glass RH, Kase, NG. Clinical gynecological endocrinology and infertility, Williams and Wilkins, 1994.

Kraemer WJ, Staron RS, Hagerman FC, Hikida RS, Fry AC, Gordon SE, Nindl BC, Gotshalk LA, Volek JS, Marx JO, Newton RU, Hakkinen K The effects of short-term resistance training on endocrine function in men and women. *European Journal of Applied Physiology and Occupational Physiology* 1998 June;78(1):69-76.

... one study showed that women who participate in sports experience much less PMS than those who don't.

Choi, P.Y., Salmon, P, Symptom changes across the menstrual cycle in competitive sportswomen, exercisers, and sedentary women, *British J Clin Psychol*34 (1995): 447-60.

Regular massages can help [PMS] as well . . .

Hernandez-Reif M, Martinez A, Field T, Quintero O, Hart S, Burman I. Premenstrual symptoms are relieved by massage therapy. *J Psychosom Obstet Gynaecol.* 2000 Mar;21(1):9-15.

Dietary

You are likely to have less PMS if you eat less (or no) sugar, refined carbohydrates, caffeine, alcohol, and dairy products, and if you increase your intake of fruits, vegetables, and other fiber rich complex carbohydrates.

Werbach, M.R. (1996). Nutritional influences on illness (2nd ed.). Third Line Press, 540-2.

Murray, M. & Pizzorno, J. (1998). Encyclopedia of natural medicine (2nd ed.). Prima Publishing, 742-4.

Cruciferous vegetables . . . have a compound called indole-3-carbinol (I3C), which has been shown to affect the metabolism of estrogen in a positive way. . .

Michnovicz, JJ et al, Changes in levels of urinary estrogen metabolites after oral indole-3-carbinol treatment in humans, *J Natl Cancer Inst.* 1997; 89(10):718-23.

... some of the metabolites of estrogen have been implicated in the role this hormone might play in a woman's health problems, and indole-3-carbinol appears to help protect the body from some of the effects of these metabolites.

Kabat GC, Chang CJ, Sparano JA, Sepkovic DW, Hu XP, Khalil A, Rosenblatt R, Bradlow HL. Urinary estrogen metabolites and breast cancer: a case-control study. *Cancer Epidemiol Biomarkers Prev.* 1997 Jul;6(7):505-9.

Bradlow HL, Sepkovic DW, Telang NT, Osborne MP. Indole-3-carbinol. A novel approach to breast cancer prevention. *Ann N Y Acad Sci.* 1995 Sep 30;768:180-200.

Page 184

If your estrogen levels were too high, the "competitive binding" of phytoestrogens to the receptors would be beneficial, gentling the impact of estrogen on your body.

Murray, M. & Pizzorno, J. (1998). Encyclopedia of natural medicine (2nd ed.). Prima Publishing, 744.

Supplements

On top of . . . the MSDA's of . . . most especially calcium. . .

Thys-Jacobs S, Starkey P, Bernstein D, Tian J. Calcium carbonate and the premenstrual syndrome: Effects on premenstrual and menstrual symptoms. Premenstrual Syndrome Study Group. Am J Obstet Gynecol. 1998 Aug;179(2):444-52.

. . . supplementing intensive daily doses of certain nutrients may bring even greater balance to your menstrual cycle, particularly if that nutrient is lacking in your body

Vitamin B6 –

Doll H, Brown S, Thurston A, Vessey M. Pyridoxine (vitamin B6) and the premenstrual syndrome: a randomized crossover trial. J R Coll Gen Pract. 1989 Sep;39(326):364-8.

But also see Kleijnen J, Ter Riet G, Knipschild P. Vitamin B6 in the treatment of the premenstrual syndrome--a review. Br J Obstet Gynaecol. 1990 Sep;97(9):847-52.

. . . supplementing magnesium as well [as B-6] may have a synergistic effect.

De Souza MC, Walker AF, Robinson PA, Bolland K. A synergistic effect of a daily supplement for 1 month of 200 mg magnesium plus 50 mg vitamin B6 for the relief of anxiety-related premenstrual symptoms: a randomized, double-blind, crossover study. J Womens Health Gend Based Med. 2000 Mar;9(2):131-9.

Vitamin E –

London RS, Murphy L, Kitlowski KE, Reynolds MA. Efficacy of alpha-tocopherol in the treatment of the premenstrual syndrome. J Reprod Med. 1987 Jun;32(6):400-4.

London RS, Sundaram GS, Murphy L, Goldstein PJ. The effect of alpha-tocopherol on premenstrual symptomatology: a double-blind study. J Am Coll Nutr. 1983;2(2):115-22.

Magnesium –

Walker AF, De Souza MC, Vickers MF, Abeyasekera S, Collins ML, Trinca LA. Magnesium supplementation alleviates premenstrual symptoms of fluid retention. J Womens Health. 1998 Nov;7(9):1157-65.

Fachinetti F, Borella P, Sances G, Fioroni L, Nappi RE, Genazzani AR. Oral magnesium successfully relieves premenstrual mood changes. Obstet Gynecol. 1991 Aug;78(2):177-81.

For a general discussion, also see:

Head, Kathleen; Premenstrual Syndrome: Nutritional and Alternative Approaches; Alt Med Review 1997;2(1):12-25).

Murray, M. & Pizzorno, J. (1998). Encyclopedia of natural medicine (2nd ed.). Prima Publishing, 744-9.

Herbs

The western herb, Vitex agnus-castus (chasteberry), has been shown to be helpful for PMS. . .

Dittmar, FW, et al, [Premenstrual syndrome treatment with a phytopharmaceutical], TW Gynakol 5(1):60-8, 1992. German

. . . but do not take [chasteberry] if you are using oral contraceptives.

Women's Health Advisor, June, 2001, 7.

Page 185

Natural hormones

The research evidence is mixed for using progesterone to reduce PMS . . .

Well-controlled studies that have found progesterone to be helpful include:

Magill PJ. Investigation of the efficacy of progesterone pessaries in the relief of symptoms of premenstrual syndrome. Progesterone Study Group. Br J Gen Pract 1995 Nov;45(400):589-93.

Baker ER, Best RG, Manfredi RL, Demers LM, Wolf GC. Efficacy of progesterone vaginal suppositories in alleviation of nervous symptoms in patients with premenstrual syndrome. J Assist Reprod Genet 1995 Mar;12(3):205-9.

Hellberg D, Claesson B, Nilsson S. Premenstrual tension: a placebo-controlled efficacy study with spironolactone and medroxyprogesterone acetate. Int J Gynaecol Obstet 1991 Mar;34(3):243-8.

Dennerstein L, Spencer-Gardner C, Gotts G, Brown JB, Smith MA, Burrows GD. Progesterone and the premenstrual syndrome: a double blind crossover trial. Br Med J (Clin Res Ed) 1985 Jun 1;290(6482):1617-21.

Yet other solid studies have found no benefit greater than placebo, including:

Freeman EW, Rickels K, Sondheimer SJ, Polansky M. A double-blind trial of oral progesterone, alprazolam, and placebo in treatment of severe premenstrual syndrome. JAMA 1995 Jul 5;274(1):51-7.

Freeman E, Rickels K, Sondheimer SJ, Polansky M. Ineffectiveness of progesterone suppository treatment for premenstrual syndrome. JAMA 1990 Jul 18;264(3):349-53.

Western medicine

OCA's can impose an artificial balance on your menstrual cycle . . .

Altshuler LL, Hendrick V, Parry B. Pharmacological management of premenstrual disorder. Harv Rev Psychiatry. 1995 Jan-Feb;2(5):233-45.

. . . but {OCA's} also interfere with vitamin metabolism (including B6) . . .

St. Jeor, S.T., Sutnick, M.R., & Scott, B.J. (1988). Nutrition. In Blechman, E.A. & Brownell, K.D. Handbook of behavioral medicine for women. New York: Pergamon Press, 269-290.

Bendich A. Lifestyle and environmental factors that can adversely affect maternal nutritional status and pregnancy outcomes. Ann N Y Acad Sci. 1993 Mar 15;678:255-65.

. . . fluoxetine - and perhaps other antidepressants - can often relieve the depressed mood some women have with PMS, and sometimes other discomfort as well

Dimmock PW, Wyatt KM, Jones PW, O'Brien PM. Efficacy of selective serotonin-reuptake inhibitors in premenstrual syndrome: a systematic review. Lancet. 2000 Sep 30;356(9236):1131-6.

Pearlstein TB, Stone AB, Lund SA, Scheft H, Zlotnick C, Brown WA. Comparison of fluoxetine, bupropion, and placebo in the treatment of premenstrual dysphoric disorder. J Clin Psychopharmacol. 1997 Aug;17(4):261-6.

Steiner M, Romano SJ, Babcock S, Dillon J, Shuler C, Berger C, Carter D, Reid R, Stewart D, Steinberg S, Judge R. The efficacy of fluoxetine in improving physical symptoms associated with premenstrual dysphoric disorder. BJOG. 2001 May;108(5):462-8.

Balancing Thyroid Hormone

After a woman has children, it's more common to see thyroid levels that are too low than too high . . .

Premawardhana LD, Parkes AB, Ammari F, John R, Darke C, Adams H, Lazarus JH. Postpartum thyroiditis and long-term thyroid status: prognostic influence of thyroid peroxidase antibodies and ultrasound echogenicity. J Clin Endocrinol Metab. 2000 Jan;85(1):71-5.

Supplements

Page 186

. . . deficits [in iodine] are still widespread . . .

Centers for DiseaseControl and Prevention, reported in San Francisco Chronicle, October 1, 1998, A4.

150 milligrams is the DV [of iodine], but some practitioners go as high as 600 milligrams.

Marz, R.B. (1999). Medical nutrition from Marz (2nd ed.). Omni Press, 142-3.

Selenium and zinc help activate thyroid hormone. . .

Kelly, G. (2000). Peripheral metabolism of thyroid hormones. Alternative Medicine Review, August, 2000, 5, pp. 306-333.

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Balancing Your Adrenal Hormones

Your hypothalamus and pituitary could become so used to high levels of stress hormones that it takes increasing amounts to get these glands to stop ordering the adrenals to release more cortisol, etc.

Holsboer F, Grasser A, Friess E, Wiedemann K. Steroid effects on central neurons and implications for psychiatric and neurological disorders. Ann N Y Acad Sci. 1994 Nov 30;746:345-59; discussion 359-61.

Your adrenal glands could become desensitized or exhausted, so that they produce insufficient hormones even when the alarm bells are ringing . . .

Heim C, Ehlert U, Hellhammer DH. The potential role of hypocortisolism in the pathophysiology of stress-related bodily disorders. Psychoneuroendocrinology. 2000 Jan;25(1):1-35.

. . . now it feels harder than ever to kick into gear, and you may be more prone to allergies and joint pain (since cortisol inhibits inflammation). . .

Jeffries, W. Safe uses of cortisol. Charles C Thomas, 1996, 37.

Footnote: *These are simplified summaries of extremely complex processes that involve other aspects of the body as well, such as the hippocampus, a part of your brain.*

Heuser I. Anna-Monika-Prize paper. The hypothalamic-pituitary-adrenal system in depression. Pharmacopsychiatry 1998 Jan;31(1):10-3.

Page 188

... even one night of poor sleep leads to elevated cortisol levels the next day.

Leproult R, Copinschi G, Buxton O, Van Cauter E. Sleep loss results in an elevation of cortisol levels the next evening. *Sleep*. 1997 Oct;20(10):865-70.

Energetic

... acupuncture can affect the hypothalamic-pituitary-adrenal (HPA) axis. . .

Liu Z, Sun F, Li J, Wang Y, Hu K. Effect of acupuncture on weight loss evaluated by adrenal function. *J Tradit Chin Med*. 1993 Sep;13(3):169-73.

Shatkina GV, Belitskaia RA, Malygina SI, Dunaev VI, Oberg OK, Buianova SN, Bragin EO. [Corrective effect of reflexotherapy on the hypophyseal-ovarian and sympathetic-adrenal systems after ovariectomy]. *Akush Ginekol (Mosk)*. 1991 Oct;(10):58-61. Russian.

Bobkova AS, Gaponiuk PI, Korovkina EG, Sherkovina TI, Leonova MV. [The effect of acupuncture on endocrine regulation in hypertensive patients]. *Vopr Kurortol Fizioter Lech Fiz Kult*. 1991 Jan-Feb;(1):29-32. Russian.

Liu ZC. [Effect of acupuncture and moxibustion on hypothalamus-pituitary-adrenal axis suffering from simple obesity]. *Zhong Xi Yi Jie He Za Zhi*. 1990 Nov;10(11):656-9, 643-4. Chinese.

Belitskaia RA, Shumova OV, Oberg OK, Levashova II, Bragin EO. [The sympathetic-adrenal system during reflex analgesia used in the treatment of a pathological preliminary period]. *Akush Ginekol (Mosk)*. 1989 Nov;(11):27-30. Russian.

Bragin EO, Malygina SI, Zharova TV, Erygina EG. [Functional changes in the pituitary-adrenal system during the action of electroacupuncture on patients with spinal osteochondrosis]. *Vopr Kurortol Fizioter Lech Fiz Kult*. 1989 May-Jun;(3):40-4. Russian.

Musculoskeletal

Yoga is a well-researched and powerful method of stress relief that can have specific impact on the adrenal hormones.

Selvamurthy W, Sridharan K, Ray US, Tiwary RS, Hegde KS, Radhakrishnan U, Sinha KC. A new physiological approach to control essential hypertension. *Indian J Physiol Pharmacol*. 1998 Apr;42(2):205-13.

Telles S, Nagarathna R, Nagendra HR. Breathing through a particular nostril can alter metabolism and autonomic activities. *Indian J Physiol Pharmacol*. 1994 Apr;38(2):133-7.

Pelletier, K. (2000). The best alternative medicine: What works? What does not? Simon and Schuster, 247.

Supplements

A deficiency of pantothenic acid - vitamin B5 - can weaken the adrenal glands. . .

Kelly GS. (1999). Nutritional and botanical interventions to assist with the adaptation to stress. *Altern Med Rev*; 4: 249-265.

Murray, M. & Pizzorno, J. (1998). Encyclopedia of natural medicine (2nd ed.). Prima Publishing, 186.

Vitamin C . . . increases adrenal function . . .

Kelly GS. (1999). Nutritional and botanical interventions to assist with the adaptation to stress. *Altern Med Rev*; 4:256.

... *but chronic stress depletes it.*

Marz, R.B. (1999). Medical nutrition from Marz (2nd ed.). Omni Press, 236.

The amino acid, tyrosine, is the precursor to norepinephrine (as well as dopamine), and numerous studies have shown it to improve the adaptation to stress.

For a review, see Kelly GS. (1999). Nutritional and botanical interventions to assist with the adaptation to stress. *Altern Med Rev*; 4: 249-265.

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[Phosphatidylserine] might help balance the stress feedback system in your body . . .

Kelly GS. (1999). Nutritional and botanical interventions to assist with the adaptation to stress. *Altern Med Rev*; 4: 249-265.

If stress has thrown off your sleep clock, try methylcobalamin . . .

See studies cited in Kelly GS. (1999). Nutritional and botanical interventions to assist with the adaptation to stress. *Altern Med Rev*; 4: 249-265.

Herbs

Siberian and Panex ginseng appear to have an "adaptogenic" effect on the adrenal glands.

Kelly GS. (1999). Nutritional and botanical interventions to assist with the adaptation to stress. *Altern Med Rev*; 4: 249-265.

Licorice binds to the hormone receptors of cortisol, creating a cortisol-like effect . . .

Kelly GS. (1999). Nutritional and botanical interventions to assist with the adaptation to stress. *Altern Med Rev*; 4: 249-265..

In about a fifth of the population, high doses of licorice lead to hypertension . . .

Kelly GS. (1999). Nutritional and botanical interventions to assist with the adaptation to stress. *Altern Med Rev*; 4: 249-265..

Natural hormones and Western medicine

In cases of severe adrenal exhaustion, hydrocortisone . . . can be given . . .

Jeffries, W. Safe uses of cortisol. Charles C Thomas, 1996..

Your Immune System

Page 190

What Can Disturb the Immune System

Stress

... *stress stimulates the release of corticosteroid hormones, and these suppress both arms of your immune system . . .*

Vander, A.J., Sherman, J.H., & Luciano, D.S. (1994). Human physiology: The mechanisms of body function. McGraw-Hill, 751-752.

... a woman's immune system is more active than a man's is . . .

Whitaker, Rheingold, Lo'Looney. Gender gap in autoimmunity. *Science* 29 Feb, 1999, 238 (5406), 1277-78.

... an allergen that would once trigger no more than a few sneezes for you could now lead to hives or asthma.

Kay, AB. Allergy and allergic disease. *New England Journal of Medicine*, 344(1), Jan 4, 2001,30-36.

Stress also seems to play a role in the development and severity of autoimmune illness . . .

There's an extensive literature on this subject. See, for example:

Elenkov IJ, Chrousos GP. Stress, cytokine patterns and susceptibility to disease. *Baillieres Best Pract Res Clin Endocrinol Metab* 1999 Dec;13(4):583-95.

Kung AW. Life events, daily stresses and coping in patients with Graves' disease. *Clin Endocrinol (Oxf)* 1995 Mar;42(3):303-8.

Johnson EO, Moutsopoulos HM. Neuroendocrine manifestations in Sjogren's syndrome. Relation to the neurobiology of stress. *Ann N Y Acad Sci* 2000;917:797-808.

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Nutritional deficits

... an activated B-cell will produce about a thousand antibodies per second before dying in a day or two.

Vander, A.J., Sherman, J.H., & Luciano, D.S. (1994). Human physiology: The mechanisms of body function. McGraw-Hill, Chapter 20.

... a lack of protein. . .

Vander, A.J., Sherman, J.H., & Luciano, D.S. (1994). Human physiology: The mechanisms of body function. McGraw-Hill, 725.

... or a shortage in any one of numerous nutrients - such as vitamin C or zinc - will lower its resistance to disease.

Murray, M. & Pizzorno, J. (1998). Encyclopedia of natural medicine (2nd ed.). Prima Publishing, 150-158.

Weakened thymus

Stress is linked to a shrinkage of the thymus gland. . .

Murray, M. & Pizzorno, J. (1998). Encyclopedia of natural medicine (2nd ed.). Prima Publishing, 149-150.

... and a drop in its hormones that regulate certain immune functions.

Murray, M. & Pizzorno, J. (1998). Encyclopedia of natural medicine (2nd ed.). Prima Publishing: Rocklin, California, 147.

Nutrient shortages - especially antioxidants - make [the thymus] gland more susceptible to the effects of aging.

Murray, M. & Pizzorno, J. (1998). Encyclopedia of natural medicine (2nd ed.). Prima Publishing, 158.

... surges in estrogen - such as those during pregnancy - inhibit the thymus and may have lingering effects.

Seiki K, Sakabe K. Sex hormones and the thymus in relation to thymocyte proliferation and maturation. Arch Histol Cytol. 1997 Mar;60(1):29-38.

Kincade PW, Medina KL, Smithson G. Sex hormones as negative regulators of lymphopoiesis. Immunol Rev. 1994 Feb;137:119-34.

Okasha SA, Ryu S, Do Y, McCallip RJ, Nagarkatti M, Nagarkatti PS. Evidence for estradiol-induced apoptosis and dysregulated T cell maturation in the thymus. Toxicology. 2001 May 28;163(1):49-62.

Lai ZW, Fiore NC, Gasiewicz TA, Silverstone AE. 2,3,7,8-Tetrachlorodibenzo-p-dioxin and diethylstilbestrol affect thymocytes at different stages of development in fetal thymus organ culture. Toxicol Appl Pharmacol 1998 Apr;149(2):167-77.

For a general discussion, see Chao TC. Female sex hormones and the immune system. Changgeng Yi Xue Za Zhi. 1996 Mar;19(1):95-106.

Also see Pryor K. Preventing thymic atrophy. Vitamin Research News, November, 1999.

Fetal tissue

It is possible that the immune system may interpret those fetal cells as "foreign," putting it on red alert, now more likely to over-react and develop an auto-immune disease.

Nelson JL, Furst DE, Maloney S, Gooley T, Evans PC, Smith A, Bean MA, Ober C, Bianchi DW. Microchimerism and HLA-compatible relationships of pregnancy in scleroderma. Lancet. 1998 Feb 21;351(9102):559-62.

Nelson J.L. (1999) Microchimerism and Scleroderma, Current Rheumatology Report, 1, 15-21.

Other systems of the body

Depression, for instance, is associated with slower rate of recovery from illness and less effective white blood cell activity.

Kubera M, ET AL (2000). Plasma levels of interleukin-6, interleukin-10, and interleukin-1 receptor antagonist in depression: comparison between the acute state and after remission. Polish Journal of Pharmacology, 52, 237-41.

Bell IR, Jasnoski ML, Kagan J, King DS. Depression and allergies: survey of a nonclinical population. Psychother Psychosom. 1991;55(1):24-31.

Penninx BW, Guralnik JM, Pahor M, Ferrucci L, Cerhan JR, Wallace RB, Havlik RJ. Chronically depressed mood and cancer risk in older persons. J Natl Cancer Inst. 1998 Dec 16;90(24):1888-93.

... low estrogen can reduce the effectiveness of your immune system.

Whitacre, CC, Reingold SC, O'Looney, PA. A gender gap in autoimmunity, Science 238(5406)Feb 26,1999, 1277-78.

... healthy levels of estrogen, progesterone, oxytocin, and prolactin help control overzealous immune function.

Wise PM, Dubal DB, Wilson ME, et al. Minireview: Neuroprotective effects of estrogen: New insights into mechanisms of action. Endocrinology, 142(3):969-73, March, 2001.

Rapid fluctuations in these hormones - from stress, weaning, new pregnancies, etc. - can lead to hair-trigger immune responses, increasing the chance of an autoimmune disease.

Wilder RL. Hormones, pregnancy and autoimmune diseases. Annals of the NY Academy of Sciences, 840:45-50, May 1, 1998.

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Signs and Symptoms of Disturbance in the Immune System

If your immune system is weakened, you are prone to suffer more frequent, severe, and lingering diseases, from the common cold to serious infections.

Vander, A.J., Sherman, J.H., & Luciano, D.S. (1994). Human physiology: The mechanisms of body function. McGraw-Hill, Chapter 20.

Strengthening and Balancing Your Immune System

. . . a positive outlook, social support, and low stress will nurture the healing powers of your body.

Vollhardt, L.T. (1992) Psychoneuroimmunology: A literature review. American Journal of Orthopsychiatry, 61, 35-47.

Vander, A.J., Sherman, J.H., & Luciano, D.S. (1994). Human physiology: The mechanisms of body function. McGraw-Hill, 725.

Bittman BB, et al. Composite effects of group drumming music therapy on modulation of neuroendocrine-immune parameters in normal subjects. Alternative Therapies: Health and Medicine, 2001 Jan;7(1):38-47.

. . . angry quarrels depress immune system function . . .

Kiecolt-Glaser, J.K., Malarkey, W.B., Chee, M., Newton, T., Cacioppo, J.T., Mao, H.Y., & Glaser, T. (1993). Negative behavior during marital conflict is associated with immunological down-regulation. Psychosomatic Medicine, 55, 395-409.

Kiecolt-Glaser, J.K., Glaser, R., Cacioppo, J.T., MacCallum, R.C., Snyder-Smith, M., Kim, C., Malarkey, W.B. (1997). Marital conflict in older adults: Endocrinological and immunological correlates. Psychosomatic Medicine, 59, 339-49.

Kiecolt-Glaser JK, Fisher LD, Ogrocki P, Stout JC, Speicher CE, Glaser R. Marital quality, marital disruption, and immune function. Psychosom Med. 1987 Jan-Feb;49(1):13-34.

. . . try to get lots of deep sleep, since that's when your brain and body produce several substances that enhance immune function.

For a review, see Modofsky, H. (1995). Sleep and the immune system. International Journal of Immunopharmacology, 17, 649-54.

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An additional option is to use hypnosis or guided imagery, which have been shown to enhance immune function.

Kiecolt-Glaser, J.K., & Glaser, R., (1992). Psychoneuroimmunology: Can psychological interventions modulate immunity? Journal of Consulting and Clinical Psychology, 60, 569-75.

Energetic***Acupuncture can increase both white blood cells and T-cells . . .***

Joos S, Schott C, Zou H, Daniel V, Martin E. Immunomodulatory effects of acupuncture in the treatment of allergic asthma: a randomized controlled study. *J Altern Complement Med*. 2000 Dec;6(6):519-25.

Bianchi M, Jotti E, Sacerdote P, Panerai AE. Traditional acupuncture increases the content of beta-endorphin in immune cells and influences mitogen induced proliferation. *Am J Chin Med* 1991;19(2):101-4.

Also see Pelletier, K. (2000). The best alternative medicine: What works? What does not? Simon and Schuster, 146.

. . . studies have successfully used [homeopathic] remedies to control the symptoms of hay fever, asthma, and rheumatoid arthritis.

Pelletier, K. (2000). The best alternative medicine: What works? What does not? Simon and Schuster, 203-207.

Musculoskeletal.***Moderate exercise boosts the levels of several kinds of white blood cells, but strenuous exercise - like running a 10K race - briefly lowers lymphocytes, natural killer cells, and antibodies in your respiratory and digestive tracts.***

Course syllabus of Michael Rosenbaum, M.D. Nutritional therapies for immune dysfunction and gastrointestinal disorders. May 19, 2001. P. 8.

. . . massage and even affectionate touching have also been shown to increase immune system function.

Field, T. M. (1996). Touch therapies for pain management and stress reduction. In R. J. Resnick & H. R. Ronald (Eds.), Health psychology through the life span: Practice and research opportunities, 313-321. American Psychological Association.

For a general review, see Field TM. Massage therapy effects. *Am Psychol*. 1998 Dec;53(12):1270-81.

Dietary.***Lots of vegetables and a reasonable amount of fruit will give you immune-boosting carotenes and flavonoids.***

Werbach, M.R. (1996). Nutritional influences on illness (2nd ed.). Third Line Press, 363.

A solid serving of protein at every meal will also keep your immune system humming along.

Murray, M. & Pizzorno, J. (1998). Encyclopedia of natural medicine (2nd ed.). Prima Publishing, 151.

Werbach, M.R. (1996). Nutritional influences on illness (2nd ed.). Third Line Press, 354.

And it's critical to minimize sugar and refined flours: besides wearing on your body and general and thus affecting the immune system indirectly . . .

Recall our discussion of the effects of gastrointestinal problems, depressed mood, and hormonal gyrations on the immune system, all of which are increased with high sugar intake.

. . . sugars have direct effects as well.

Murray, M. & Pizzorno, J. (1998). Encyclopedia of natural medicine (2nd ed.). Prima Publishing, 151-152.

Marz, R.B. (1999). Medical nutrition from Marz (2nd ed.). Omni Press, 354-355.

... consuming about two sodas' worth of sugar knocked down the effectiveness of white blood cells . . .

See research reported in Murray, M. & Pizzorno, J. (1998). Encyclopedia of natural medicine (2nd ed.). Prima Publishing, 151.

... a low-fat diet with minimal caffeine has also been shown to improve immune function.

Marz, R.B. (1999). Medical nutrition from Marz (2nd ed.). Omni Press, 354-355.

Box: How to Lower Your Risk for Autoimmune Disease after Children

Autoimmune diseases are the fourth leading cause of disability among women in America.

Autoimmune disease in women - the facts. From the website of the American Autoimmune Related Diseases Association (www.aarda.org).

... cross-reactivities in which an antibody to a pathogen or allergen (or white blood cells that have "learned" to attack those antigens) mistakenly targets some part of your own body.

For example, see Mackay, C. R. & von Andrian, U.H. (2001). Memory T-cells: Local heroes in the struggle for immunity. *Science*, 291, 2323.

... researchers have found associations between strep throat and rheumatic fever.

Research reported in Kalb, C. & Raymond, J. Autoimmune disorders, *Newsweek (Special issue)*, 55.

Minimize exposure to allergens and foods to which you are sensitive.

Kjeldsen K, Krajch J, et al (1991). Controlled trial of fasting and one year vegetarian diet for rheumatoid arthritis. *Lancet* 338: 899-902.

... balance your essential fatty acids. . .

Werbach, M.R. (1996). Nutritional influences on illness (2nd ed.). Third Line Press, 103-105.

Eliminate trans-fatty acids, and reduce saturated fats.

Fernandes, G. (1994). Dietary lipids and risk of autoimmune disease. Clin Immunol Immunopathol, 72(2): 193-7.

Try quercetin, which has been shown to regulate allergenic and inflammatory reactions.

Monograph on quercetin [no author], *Alternative Medicine Review*, 3, 140-3.

Werbach, M.R. (1996). Nutritional influences on illness (2nd ed.). Third Line Press, 44.

Thornhill SM, Kelly AM. Natural treatment of perennial allergic rhinitis. *Altern Med Rev*. 2000 Oct;5(5):448-54. Monograph on quercetin [no author]. *Alternative Medicine Review*, 3, 1998, 140-3.

Supplements

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[Antioxidants] are generally most effective in combination with one another . . .

Bland, J. (1996). The beta-carotene controversy in perspective. *Journal of Applied Nutrition*, 48, 42-5.

Vitamin A . . . also stimulates white blood cell activity and antibody response.

Sembe, R.D., Vitamin A: Immunity and Infection. Clin Ing Dis 19 (1994) 489-99.

Marz, R.B. (1999). Medical nutrition from Marz (2nd ed.). Omni Press, 171.

. . . you could take 5000 IU's [of vitamin A] per day, or as much as 50,000 IU for a few days at the onset of an illness.

Murray, M. & Pizzorno, J. (1998). Encyclopedia of natural medicine (2nd ed.). Prima Publishing, 154, 161.

Marz, R.B. (1999). Medical nutrition from Marz (2nd ed.). Omni Press, 171.

Vitamin C supports many aspects of the immune system . . .

Marz, R.B. (1999). Medical nutrition from Marz (2nd ed.). Omni Press, 239-240.

Murray, M. & Pizzorno, J. (1998). Encyclopedia of natural medicine (2nd ed.). Prima Publishing, 155.

For maximum immune support, you could try the intensive daily dose . . .

Marz, R.B. (1999). Medical nutrition from Marz (2nd ed.). Omni Press, 239-241.

Vitamin E helps the immune system in several ways. . .

Meydani, et. al Vitamin supplementation enhances cell-mediated immunity in healthy elderly subjects. Am J Clin Nutr 52:557-63, 1990.

Werbach, M.R. (1996). Nutritional influences on illness (2nd ed.). Third Line Press, 359.

. . . the intensive daily dose is 800 IU.

Murray, M. & Pizzorno, J. (1998). Encyclopedia of natural medicine (2nd ed.). Prima Publishing, 155-6.

. . . high doses of beta-carotene alone may be harmful. . .

Bland, J. (1996). The beta-carotene controversy in perspective. Journal of Applied Nutrition, 48, 42-5.

A deficiency in nearly any B-vitamin will weaken the immune system. . .

Werbach, M.R. (1996). Nutritional influences on illness (2nd ed.). Third Line Press, 354,357.

. . . and vitamins B6, B12, and folic acid are particularly important.

Murray, M. & Pizzorno, J. (1998). Encyclopedia of natural medicine (2nd ed.). Prima Publishing, 156.

Iron deficiency (even when minimal) lessens the effectiveness of several parts of your immune system.

Beisel, W.R., Edelman, R. Naus, K, & Susskind, R. M. (1981). Single-nutrient effects on immunologic functions: Report of a workshop sponsored by the Department of Food and Nutrition and its nutrition advisory group of the American Medical Association. Journal of the American Medical Association, 245, 53-8.

Zimmer JP, Garza C, Heller ME, Butte N, Goldman AS. Postpartum maternal blood helper T (CD3 + CD4 +) and cytotoxic T (CD3 + CD8 +) cells: correlations with iron status, parity, supplement use, and lactation status. Am J Clin Nutr 1998 May;67(5):897-904.

Werbach, M.R. (1996). Nutritional influences on illness (2nd ed.). Third Line Press, 360.

Murray, M. & Pizzorno, J. (1998). Encyclopedia of natural medicine (2nd ed.). Prima Publishing, 156.

... low iron levels are widespread among women in general, and mothers in particular can have a shortage of iron due to the lingering effects of pregnancy, which typically drains about 700 mg of iron from your body.

Anderson HM. Maternal Hematologic Disorders. In Maternal-Fetal Medicine: Principles and Practice. WB Saunders Co., 1984, 798-801.

Patterson AJ, Brown WJ, Powers JR, Roberts DC. Iron deficiency, general health and fatigue: Results from the Australian Longitudinal Study on Women's Health. *Qualitative Life Research*, 2000;9(5):491-7.

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Selenium shortages weaken many aspects of the immune system.

Werbach, M.R. (1996). Nutritional influences on illness (2nd ed.). Third Line Press, 361.

Murray, M. & Pizzorno, J. (1998). Encyclopedia of natural medicine (2nd ed.). Prima Publishing, 157.

Additionally, a well-controlled study reported in the *Journal of the American Medical Association* (Clark, et al; *JAMA* 1997 May 21;277(19):1520) studied 1312 survivors of melanoma over six years and showed that supplementing 200 mcg. per day of selenium, compared with a control group who received a placebo, decreased the total risk of death from cancer by half, and decreased the incidence of non-melanoma cancer by thirty-five per cent.

Even when blood levels of selenium are normal, taking 200 mcg per day has been shown to help the immune response.

Roy, M, Supplementation with Selenium and Human Immune Cell Functions I: Effect on Lymphocyte Proliferation and Interleukin 2 Receptor Expression. *Biol Trans Elem Res* 41 (1994), 103-14. With 200 Mcg of selenium, this study found an 118 % increase in ability of lymphocytes to kill tumor cells and a 82.3 % increase in the activity of natural killer cells.

... zinc deficiency decreases immune system activity, while supplementation enhances it.

J.C. Godfrey, et al. Zinc gluconate and the common cold: A controlled clinical study. *The Journal of International Medical Research*, June 1992: 20(3): 234-46.

Odeh, M. The role of zinc in acquired immunodeficiency syndrome. *Journal of Internal Medicine*, 1992; 231; 463-69.

... in one study, this dosing [of zinc] shortened the duration of colds by 64 percent.

Eby, GA; Reduction in duration of common colds by zinc gluconate in a double blind study; *Antimicrob Agents Chemother* 25(1):20-4, 1984.

... thymus extracts can restore or enhance immune function.

Kouttab NM, Prada M, Cazzola P. (1989). Thymomodulin: biological properties and clinical applications. *Med Oncol Tumor Pharmacother* 1989;6(1):5-9.

Herbs

Astragalus is used in Chinese medicine as a long-term immune tonic and for active viral injections.

Chu, O.T. et al, Immunotherapy with Chinese Medical Herbs. *J Clin Lab Immunol* 25 (1988) 119-29.

Chang, H.M. *Pharmacology and applications of Chinese materia medica*. Singapore World Scientific, 1987, 1941-46.

Pelletier, K. (2000). The best alternative medicine: What works? What does not? Simon and Schuster, 123.

Echinacea has been shown to boost the immune system, particularly when used at the beginning of a cold, flu, or respiratory infection.

Braunig B, et al; Echinacea Purpea radice for strengthening the immune response to flu-like infections." Z Phytother 13 (1992) 7-13 .

Percival, S.S. (2000) Use of echinacea in medicine. Biochemical Pharmacology, 60, 155-8.

Pelletier, K. (2000). The best alternative medicine: What works? What does not? Simon and Schuster, 340.

... do not use [echinacea] if you are prone to allergies . . .

Mullins R. Allergic reactions to echinacea. Paper presented at AAAAI 56th Annual Meeting, March 3-8, 2000; San Diego, CA cited in The Integrative Medicine Consult, May, 2000, 56.

... or have an autoimmune disease.

Pelletier, K. (2000). The best alternative medicine: What works? What does not? Simon and Schuster, 340.

Probiotics

... there are intriguing indications that certain probiotics, such as lactobacillus, can stimulate the non-specific immune system . . .

Gura, T. (2001) Innate immunity: Ancient system gets new respect. Science, 16 March, 2001, 291, 2068-2071.

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Giving probiotics to pregnant or breast feeding women has also been shown to decrease allergic eczema in their babies . .

Probiotics in primary prevention of atopic disease: A randomised placebo-controlled trial. Lancet 2001, Apr7;357 (9262): 1076-9.

Natural hormones

DHEA appears able to both buffer the impact of stress on the immune system, as well as provide general support.

Loria RM. (1997). Antigluocorticoid function of androstenediol. Psychoneuroendocrinology 1997;22 Suppl 1:S103-8.

Padgett DA, Loria RM, Sheridan JF. (2000). Steroid hormone regulation of antiviral immunity. Ann N Y Acad Sci 2000;917:935-43.

REFERENCE NOTES

Chapter 6:
Communicating with Your Partner

The variations in formatting of these references are due to some sources being medical journals while others being journals in other disciplines, such as psychology, where the conventions for references differ.

Page 203

It is an amazing but true thing that practically the only people who ever say mean, insulting, wounding things to us are those of our own households.

Dorothea Dix, quoted in Gottman, J., Notarius, C., Gonso, J., & Markman, H. (1976). A couple's guide to communication. Research Press.

Page 204

A Civil Tongue

Thirty years of research have shown that the key to a loving and lasting marriage is how the spouses interact with each other.

Gottman, JM & Levenson, RW. 1983. Marital interaction: Physiological linkage and affective exchange. *Journal of Personality and Social Psychology*, 45, 587-597.

Kurdek, LA. 1999. The nature and predictors of the trajectory of change in marital quality for husbands and wives over the first 10 years of marriage. *Dev Psy*, 15, 1283-96.

In strong couples, positive interactions outnumber the negative ones by three or more to one.

Gottman G, Silver N. Why marriages succeed or fail. Fireside, 1995.

Besides feeling awful, negative interactions stress your body . . .

Gottman, JM & Levenson, RW. 1983. Marital interaction: Physiological linkage and affective exchange. *Journal of Personality and Social Psychology*, 45, 587-597.

An atmosphere of marital conflict . . . [is] a risk factor for [children] developing depression, anxiety, and behavior problems.

Fendrich M, Warner V, Weissman MM. Family risk factors, parental depression, and psychopathology in offspring. *Developmental Psychology*. 1990 Jan Vol 26(1) 40-50.

Sternberg KJ, Lamb ME, Greenbaum C, Cicchetti D, Dawud S, Cortes RM, Krispin O, Lorey, F. Effects of domestic violence on children's behavior problems and depression. *Developmental Psychology*. 1993 Jan Vol 29(1) 44-52. R

eiss, D. & Price, R.H. National research agenda for prevention research: The National Institute of Mental Health Report. *American Psychologist*, vol. 51, November, 1996, 1109-1115.

Davies PT, Cummings EM. Marital conflict and child adjustment: An emotional security hypothesis. *Psychological Bulletin*. 1994 Nov Vol 116(3) 387-411.

National Advisory Mental Health Council, Basic Behavioral Science Task Force. Basic behavioral science research for mental health: Family processes and social networks. *American Psychologist*. 1996 Jun Vol 51(6) 622-630.

Frequent quarrels also wear down marital bonds.

Karney, BR & Bradbury, TN. 1997. Neuroticism, marital interaction, and the trajectory of marital satisfaction. *J of Pers and Soc Psy*, 72, 1075-92.

Disagreements . . . usually increase after children.

See Chapter 1.

How to Make a Conversation Go Badly

Page 205

Every communication contains two messages: the explicit content and an implicit statement about the relationship between the speaker and listener.

Tannen D. You just don't understand. Quilt, 1990.

If You or He Is Upset

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. . . about one woman in ten will be seriously assaulted at least once by her husband . . .

National Advisory Mental Health Council, Basic Behavioral Science Task Force. Basic behavioral science research for mental health: Family processes and social networks. *American Psychologist*. 1996 Jun Vol 51(6) 622-630.

. . . and the odds of this increase - sadder still - if there are children in the home.

Research by John Fantuzzo, Ph.D. and colleagues, reported in *APA Monitor*, October, 1995, 48.

Empathy

If you sense that he really gets how it is for you, you feel less stressed. . .

Chapman HA, Hobfoll SE, Ritter C. Partners' stress underestimations lead to women's distress: A study of pregnant inner-city women. *Journal of Personality & Social Psychology*. 1997 Aug Vol 73(2) 418-425.

Receiving Empathy

Page 216

Box: Research on Mothers

Mothers are more emotionally affected by parenthood than fathers.

Ross, CE & Van Willigan, M. 1996. Gender, parenthood, and anger. *J of Marriage and the Fam*, 58, 572-84.

Childrearing and housework are mainly done by mothers.

Belsky, J. & Pensky, E. 1988. Marital change across the transition to parenthood. *Marriage and Fam Rev*, 12, 133-56.

Ruble, D, Fleming, AS, Hackel, LS, & Stangor, C. 1988. Changes in the marital relationship during the transition to parenthood: Effects of violated expectations concerning the division of household labor. *J of Pers & Soc Psy*, 55, 78-87.

Inequities in the total workload make mothers upset, angry, and even depressed.

Schwartzberg NS, Dytell RS. Dual-earner families: the importance of work stress and family stress for psychological well-being. *J Occup Health Psychol* 1996 Apr;1(2):211-223.

Ross, CE & Van Willigan, M. 1996. Gender, parenthood, and anger. *J of Marriage and the Fam*, 58, 572-84.

Lennon MC, Wasserman GA, Allen R. Infant care and wives' depressive symptoms. *Women Health* 1991;17(2):1-23.

A mother is likely to sometimes feel pulled in opposing directions by her partner and her children.

Barnett, RC & Baruch (1985). Women's involvement in multiple roles and psychological distress. *J of personality and Social Psychology*, 49: 135-145.

Childcare hassles rattle mothers more than fathers . . .

Lennon MC, Wasserman GA, Allen R. Infant care and wives' depressive symptoms. *Women Health* 1991;17(2):1-23

. . . and working mothers experience more stress and overload from juggling both roles than their husbands do.

Am J Community Psychol 1989 Dec;17(6):755-783. Contributions of a supportive work environment to parents' well-being and orientation to work.

Greenberger E, Goldberg WA, Hamill S, O'Neil R, Payne CK, Lewis, S. & Cooper, CL. (1988). Stress in dual-earner families. In BA Gutek, AH STromberg, & L. Larwood (Eds.), *Women and work (vol. 3)*, 139-168). Sage; (cited in Schwartzberg, NS & Dytell, RS (1996). Dual-earner families: The importance of work stress and family stress for psychological well-being. *J of Occup Health Psychology*, 2: 211-223).

A mother is probably more affected by the pressures in her husband's job than he is by the pressures in hers.

Crouter, AC, Bumpus, MF, Maguire, MC, & McHale, SM. (1999). Linking parents' work pressure and adolescents' well-being: Insights into dynamics of dual-earner families. *Developmental Psychology*. 35: 1453-61.

Women typically experience a sharper drop in marital satisfaction after children than men do.

Kurdek, LA. 1999. The nature and predictors of the trajectory of change in marital quality for husbands and wives over the first 10 years of marriage. *Dev Psy*, 15, 1283-96. Kurdek, LA. 1996. Parenting satisfaction and marital satisfaction in mothers and fathers with young children. *J of Fam Psy*, 10, 331-42.

... women ... usually place a higher value on relationships ... Tannen D. *You just don't understand*. Quilt, 1990.

... and are more economically vulnerable to the impact of divorce.

The average standard of living of divorced mothers is substantially below that of divorced fathers, and these differences persist for many years after the divorce.

A woman is ... and twice as likely to seek a divorce.

Research reported in the American Psychological Association Monitor, October, 1994.

... you're no longer a free agent, but nested now in a web of connections and obligations that tugs at your every move. Barnett, RC & Baruch (1985). Women's involvement in multiple roles and psychological distress. *J of personality and Social Psychology*, 49: 135-145.

Page 220

Empathy for a Father

Yet that tends to draw him into working longer hours ...

Research by Elaina Rose, Ph.D., reported in *Psychology Today*, November/December, 2000.

Page 221

... ninety percent of the employees surveyed in such companies in one study said he should not take a single day [of parental leave].

Pleck, JH. 2000. Balancing work and family. *Scientific American Presents Defining Men*, 38-43.

Page 222

Translating Mom-speak and Dad-speak

For references for points made throughout this section, see Tannen D. *You just don't understand*. Quilt, 1990.

Page 227

Speaking Your Mind

But repeatedly holding back your true feelings will ... wear on your health.

Haynes, S. G. & Feinleib, M. (1980). Women, work, and coronary heart disease: Prospective findings from the Framingham Study, *American Journal of Public health*, 70, 133-141.

... you have to be able to openly address any issues in your partner - such as a drinking problem or depression - that affect him, you, or the kids.

Jacob T, Krahn GL, Leonard K. Parent-child interactions in families with alcoholic fathers. *Journal of Consulting & Clinical Psychology*. 1991 Feb Vol 59(1) 176-181.

Phares V, Compas BE. The role of fathers in child and adolescent psychopathology: Make room for daddy. *Psychological Bulletin*. 1992 May Vol 111(3) 387-412.

Page 228

Positive Support

... researchers have found that receiving emotional support from one's partner is a powerful way to reduce the stress of parenting . . .

Deater-Deckard K, Scarr S. Parenting stress among dual-earner mothers and fathers: Are there gender differences? *Journal of Family Psychology*. 1996 Mar Vol 10(1) 45-59.

... and increase personal well-being.

National Advisory Mental Health Council, Basic Behavioral Science Task Force. Basic behavioral science research for mental health: Family processes and social networks. *American Psychologist*. 1996 Jun Vol 51(6) 622-630.

REFERENCE NOTES

Introduction to Part Four

The variations in formatting of these references are due to some sources being medical journals while others being journals in other disciplines, such as psychology, where the conventions for references differ.

... quarrels increase your blood pressure, wear down your immune system, and disturb your hormones.

For a review, see Kiecolt-Glaser JK, Newton TL. Marriage and health: His and hers. *Psychological Bulletin*, 2001, 127, 472-503.

... an atmosphere of tension and conflict increases the risk that their children will feel insecure ...

Frosch, CA, Mangelsdorf, SC, & McHale, JL. Marital behavior and the security of preschooler-parent attachment relationships. *J of Fam Psych*, 14, 144-61.

... and develop psychological problems.

Webster, -Stratton, C. & Hammond, M. (1999) Marital conflict management skills, parenting style, and early onset conduct problems: processes and pathways. *J Child Psychology and Psychiatry*. 40: 917-27.

Kelly, JB (1998). Marital conflict, divorce, and children's adjustment. *Child Adol Psychiatry Clin N Am*. 7:259-71.

REFERENCE NOTES

Chapter 7:
Partners in Parenthood

The variations in formatting of these references are due to some sources being medical journals while others being journals in other disciplines, such as psychology, where the conventions for references differ.

Parenting from the Same Page

Page 232

Parents often have different values or styles in childrearing. . .

Belsky J, Kelly J. The transition to parenthood. Delacorte, 1994.

Cowan CP, Cowan PA. When partners become parents. Basic Books, 1993.

Hastings PD, Grusec JE. Parenting goals as organizers of responses to parent-child disagreement. *Developmental Psychology*. 1998 May Vol 34(3) 465-479.

Leeper C, Anderson KJ, Sanders P. Moderators of gender effects on parents' talk to their children: A meta-analysis. *Developmental Psychology*. 1998 Jan Vol 34(1) 3-27.

Page 233

Taking Steps Yourself

Hundreds of studies have shown that a father is fundamentally just as able to parent with love and skill as a mother.

Pruett, KD (1997). How men and children affect each other's development. *Zero to Three*, August/September, 1997, 3-11.

Lamb, M. E. (1997). Fathers and child development: An introductory overview and guide. In ME Lamb (Ed.), The role of the father in child development (3rd ed.), 1-18. Wiley.

For example, when babies cry, the typical father gets just as upset inside as his wife does. . .

Lamb, M. (1978). Qualitative aspects of mother-and-father-infant attachments. *Infant Behavior and Development*, 1, 265-75; (cited in Pruett, KD (1997). How men and children affect each other's development. *Zero to Three*, August/September, 1997, 3-11).

Page 236

Taking Steps Together

Page 240

Negotiating your differencesPage 245

Since people in conflict usually overestimate their differences . . .

Thompson, L (1995). "They saw a negotiation": Partisanship and involvement in negotiations. *J of Pers and Soc Psych*, 68, 839-53.

Talking about misunderstandings or broken agreements

Fulfilling commitments is the basis of trust in any relationship.

For example, Appraising one's partner as undependable is associated with low satisfaction in marriage. Rempel, JK, Holmes, JG, & Zanna, MP. 1985. Trust in close relationships. *J of Pers and Soci Psy*, 49, 95-112.

Page 247

Sharing the Load

The average mother works altogether fifteen to twenty hours more per week than the father of her children, whether she is drawing a paycheck or not.

See Chapter 1.

Even when a mother makes as much or more money than her husband . . .

Nearly half of all married women make as much money or more than their husbands. Families and Work Institute (1995). *Women: The new providers*. New York: Whirlpool Foundation Study; (cited in Silverstein, LB & Auerbach, CF (1999). Deconstructing the essential father, *American Psychologist*, 54, 397-407).

Within this group of married women, mothers of young children are likely to make less money than women who have no children or who have older children. Nonetheless, a substantial percentage remains of mothers of young children who contribute as much or more as their husband to the family budget - and to childcare and housework as well. Biernat, M & Wortman, CB. 1991. Sharing of home responsibilities between professionally employed women and their husbands. *J of Pers and Soc Psy*, 60, 844-60. Hochschild, A. The second shift: Working parents and the revolution at home. Viking Press.

Page 248

Since tending to young children is more stressful than most jobs . . .

See Chapter 1.

. . . even if each of them spends about the same amount of time doing tasks, the mother typically does the high-stress ones . . .

See Chapter 1.

Even when there is nothing left for her to do, a mother often feels stressfully vigilant and on call . . .

Light, KC (1997). Quoted in *Science News*, August 23, 1997, 122.

Studies have shown that fathers who are less involved have kids who are less responsible . . .

Radin, N. 1982. Primary caregiving and role-sharing fathers. In M.E. Lamb (Ed.), *Nontraditional families: Parenting and child development*. pp. 173-204. Hillsdale, NJ: Erlbaum; (cited in Deutsch, FM, Lussier, JB, & Servis, LJ. 1993. Husbands at home: Predictors of paternal participation in childcare and housework. *J of Pers & Soc Psy*, 65, 1154-66.)

. . . less able to solve problems . . .

Easterbrooks, MA & Goldberg, WA. 1984. Toddler development in the family: Impact of father involvement and parenting characteristics. *Child Dev*, 55, 740-752.

. . . less confident, and have lower self-esteem.

Servis, LJ & Deutsch, FM. 1992. Paternal participation in childcare and its effects on children's self-esteem. Paper presented at the Eastern Psychological Association Meeting, Boston; (cited in Deutsch, FM, Lussier, JB, & Servis, LJ. 1993. Husbands at home: Predictors of paternal participation in childcare and housework. *J of Pers & Soc Psy*, 65, 1154-66.)

Inequities also eat away at a marriage, reducing the satisfaction of each spouse.

For wives: Deutsch, FM, Lussier, JB, & Servis, LJ. 1993. Husbands at home: Predictors of paternal participation in childcare and housework. *J of Pers & Soc Psy*, 65, 1154-66.

For husbands: Blair, SL, Wenk, D, & Hardesty, C. 1994. Marital quality and paternal involvement: Interconnections of men's spousal and parental roles. *J of Men's Studies*, 2, 221-37.

They deplete a mother, increasing her stress . . .

Hoffman, LW. 1989. Effects of maternal employment in the two-parent family. *Amer Psy*, 44, 283-92.

Deater-Deckard K, Scarr S. Parenting stress among dual-earner mothers and fathers: Are there gender differences? *Journal of Family Psychology*. 1996 Mar Vol 10(1) 45-59.

. . . giving her less time to recharge her batteries . . .

Hochschild, A. The second shift: Working parents and the revolution at home. Viking Press.

. . . and lowering her mood.

Lennon MC, Wasserman GA, Allen R. Infant care and wives' depressive symptoms. *Women Health*. 1991;17(2):1-23.

Schwartzberg, NS & Dytell, RS (1996). Dual-earner families: The importance of work stress and family stress for psychological well-being. *J of Occup Health Psychology*, 2: 211-223.

Steil, JM & Turetsky, BA. 1987. Is equal better: The relationship between marital equality and psychological symptomatology. In S. Oscamp (Ed.) Family process and problems: Social psychological aspects. Sage, 73-97; (cited in Deutsch, FM, Lussier, JB, & Servis, LJ. 1993. Husbands at home: Predictors of paternal participation in childcare and housework. *J of Pers & Soc Psy*, 65, 1154-66).

. . . lack of help from the father exposes a working mother to more stress than any other single factor.

Ducker, D. (1994). Research on women physicians with multiple roles: A feminist perspective. *J Am Med Womens Assoc*, 49: 78-84.

Hoffman, LW. 1989. Effects of maternal employment in the two-parent family. *Amer Psy*, 44, 283-92.

Page 249

Avoiding the nitty-gritty tasks of tending to young children . . . usually makes a father feel less connected . . .

Roggman, LA & Peery, JC. 1988. Caregiving, emotional involvement, and parent-infant play. *Early Child Dev and Care*, 34, 191-99.

Russell, G. 1982. Shared caregiving families: An Australian model. In M.E. Lamb (Ed.), Nontraditional families: Parenting and child development. Erlbaum, 139-72; (cited in Deutsch, FM, Lussier, JB, & Servis, LJ. 1993. Husbands at home: Predictors of paternal participation in childcare and housework. *J of Pers & Soc Psy*, 65, 1154-66).

. . . competent . . .

Baruch, GK & Barnett, RC. 1986. Consequences of fathers' participation in family work: Parents' role strain and well-being. *J of Pers and Soc Psy*, 51, 983-92.

. . . or satisfied with parenthood.

Easterbrooks, MA & Goldberg, WA. 1984. Toddler development in the family: Impact of father involvement and parenting characteristics. *Child Dev*, 55, 740-752.

Clear Facts

. . . commonly a father feels he is doing more than his wife thinks he does . . .

Schwartzberg, NS & Dytell, RS (1996). Dual-earner families: The importance of work stress and family stress for psychological well-being. *J of Occup Health Psychology*, 2: 211-223.

. . . one study asked dual-earner couples how they handled childrearing tasks, and 43 percent of the men answered "50-50" - but only 19 percent of their wives agreed.

Research by the Families and Work Institute, 1993, reported in *Newsweek*, May 12, 1997, p. 67.

Page 250

Clear Principles

A father's active involvement with childcare depends in part on . . . his beliefs about the importance of fathers to children . . .

Palkovitz, R. 1984. Parental attitudes and fathers' interactions with their 5-month-old infants. *Dev Psy*, 20, 1054-60.

. . . and his feeling that masculine men can be skillful with little kids.

Crouter, AC, Perry-Jenkins, M, Huston, T, & McHale, SM. 1987. Processes underlying father involvement in dual-earner and single-earner families. *Dev Psy*, 23, 431-440.

Aldous, J, Mulligan, GM, & Bjarnason, T. 1998. Fathering over time: What makes the difference? *J of Marriage and the Fam*, 60, 809-20.

Bonney, JF, Kelley, ML, & Levant, RF. 1999. A model of fathers' behavioral involvement in child care in dual-earner families. *J of Fam Psy*, 13, 401-15

The amounts and kinds of housework he does are shaped by his ideas about the fundamental equality of the sexes.

Deutsch, FM, Lussier, JB, & Servis, LJ. 1993. Husbands at home: Predictors of paternal participation in childcare and housework. *J of Pers & Soc Psy*, 65, 1154-66.

Your psychology influences him as well, through your expectations and willingness to assert yourself.

Barnett, RC & Baruch, GK. 1987. Determinants of fathers' participation in family work. *J of Marriage and the Fam*, 49, 29-40.

Belsky, J. & Volling, BL. 1987. Mothering, Fathering and marital interaction in the family triad during infancy: Exploring family system's processes. In PW Berman & FA Pedersen (Eds.), Men's transitions to parenthood. Erlbaum, 37-63.

Berardo, DH, Shehan, LL, & Leslie, GR. 1987. A residue of tradition: Jobs, careers and spouse time in housework. *J of Marriage and the Fam*, 49, 381-90; (cited in Bonney, JF, Kelley, ML, & Levant, RF. 1999. A model of fathers' behavioral involvement in child care in dual-earner families. *J of Fam Psy*, 13, 401-15).

But speaking your mind can be hard if you . . . Feel guilty about pursuing your own career and try to compensate by going overboard on childcare and housework.

Deutsch, FM, Lussier, JB, & Servis, LJ. 1993. Husbands at home: Predictors of paternal participation in childcare and housework. *J of Pers & Soc Psy*, 65, 1154-66.

Page 251

Biology plays a part as well.

For citations for this paragraph and the one that follows, see Geary, DC (2000). Evolution and proximate expression of human paternal investment. *Developmental Psychology*, 126, 55-77.

The balance of power in a father between mating effort and parental investment is greatly affected by social and psychological factors.

Silverstein LB. Primate research, family politics, and social policy: Transforming "cads" into "dads." *Journal of Family Psychology*. 1993 Dec Vol 7(3) 267-282.

Page 254

Clear Agreements

Page 256

He might say that he'll get more involved when the kids are older and it feels more "natural."

Deutsch, FM, Lussier, JB, & Servis, LJ. 1993. Husbands at home: Predictors of paternal participation in childcare and housework. *J of Pers & Soc Psy*, 65, 1154-66.

Men are more likely than women to let their relationship with their children be affected by their feelings about their spouse.

Belsky J, Spanier GB, Rovine M. Stability and change in marriage across the transition to parenthood. *Journal of Marriage & the Family*. 1983 Aug Vol 45(3) 567-577.

Page 257

. . . it could also mean that you're getting stuck with more than your share of the housework, which is often boring, unpleasant . . .

Deutsch, FM, Lussier, JB, & Servis, LJ. 1993. Husbands at home: Predictors of paternal participation in childcare and housework. *J of Pers & Soc Psy*, 65, 1154-66.

. . . and even depressing.

Glass, J & Fujimoto, T. 1994. Housework, paid work and depression among husbands and wives. *J of Health and Soc Behaviour*, 35, 179-191.

Page 258

A demanding job may be one way that he fulfills his sense of responsibility as a provider . . .

Bonney, JF, Kelley, ML, & Levant, RF. 1999. A model of fathers' behavioral involvement in child care in dual-earner families. *J of Fam Psy*, 13, 401-15.

Even with the best of motives, his big job is like an elephant in the living room, limiting the space that's left for family.

Bonney, JF, Kelley, ML, & Levant, RF. 1999. A model of fathers' behavioral involvement in child care in dual-earner families. *J of Fam Psy*, 13, 401-15.

Aldous, J, Mulligan, GM, & Bjarnason, T. 1998. Fathering over time: What makes the difference? *J of Marriage and the Fam*, 60, 809-20.

Page 260

Box: Your Values for Life and Money

Imagine that you have just a few years to live.

Stephen Levine has written a beautiful book related to this subject entitled A year to live. Three Rivers Press, 1998.

REFERENCE NOTES

Chapter 8:
Staying Intimate Friends
After Becoming Parents

The variations in formatting of these references are due to some sources being medical journals while others being journals in other disciplines, such as psychology, where the conventions for references differ.

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... since it's normal to be reluctant to get close ... to someone you feel routinely ... let down by ...

For example, one study found that working fathers were more focused on their emotional relationship with their spouses, while working mothers were more affected in their marriage by how much help their partner gave them at home; see research reported in the APA Monitor, June, 1996, 6.

Page 263

... there is no doubt in our minds that all children suffer in a divorce, and many are injured psychologically as well.

O'Connor TG, Caspi A, DeFries JC, Plomin R. Are associations between parental divorce and children's adjustment genetically mediated? An adoption study. *Developmental Psychology*. 2000 Jul Vol 36(4) 429-437.

Amato PR, Keith B. Parental divorce and the well-being of children: A meta-analysis. *Psychological Bulletin*. 1991 Jul Vol 110(1) 26-46.

National Advisory Mental Health Council, Basic Behavioral Science Task Force. Basic behavioral science research for mental health: Family processes and social networks. *American Psychologist*. 1996 Jun Vol 51(6) 622-630.

The initial breakup is stressful for ... parents ...

Bloom BL, Asher SJ, White SW. Marital disruption as a stressor: a review and analysis. *Psychol Bull*. 1978 Jul;85(4):867-94.

Kiecolt-Glaser JK, Fisher LD, Ogrocki P, Stout JC, Speicher CE, Glaser R. Marital quality, marital disruption, and immune function. *Psychosom Med*. 1987 Jan-Feb;49(1):13-34.

Ringback Weitof G, Haglund B, Rosen M. Mortality among lone mothers in Sweden: a population study. *Lancet*. 2000 Apr 8;355(9211):1215-9.

... there's usually a wound in the family that lasts for years; it can include ... more room to diverge in parenting practices ...

Maccoby EE, Buchanan CM, Mnookin RH, Dornbusch SM. Postdivorce roles of mothers and fathers in the lives of their children. *Journal of Family Psychology*. 1993 Jun Vol 7(1) 24-38.

... grappling with new partners or stepparents ...

Fine MA, Voydanoff P, Donnelly BW. Relations between parental control and warmth and child well-being in stepfamilies. *Journal of Family Psychology*. 1993 Sep Vol 7(2) 222-232.

National Advisory Mental Health Council, Basic Behavioral Science Task Force. Basic behavioral science research for mental health: Family processes and social networks. *American Psychologist*. 1996 Jun Vol 51(6) 622-630.

... single mothers tend to have worse physical and mental health than married ones.

Benzeval M. The self-reported health status of lone parents. *Soc Sci Med*. 1998 May;46(10):1337-53.

National Advisory Mental Health Council, Basic Behavioral Science Task Force. Basic behavioral science research for mental health: Family processes and social networks. *American Psychologist*. 1996 Jun Vol 51(6) 622-630.

Sex after Children

Will Change Diapers for Sex

Page 285

... the tidal wave of passion you felt early in your relationship was due in part to brain chemicals that inevitably recede after a few years ...

See Love, P. What is this thing called love? *Family Therapy Networker*, March/April, 1999, 34-44, or her book, Hot Monogamy: Essential Steps to More Passionate, Intimate Lovemaking. Plume, 1999.

Kindling a Desire for More

Page 291

... the majority of women fantasize sexually at one time or another, and such fantasizing is associated with fewer sexual problems or dissatisfaction.

Leitenberg, H. & Henning, K. (1995) Sexual Fantasy, *Psychological Bulletin*, 117, 469-496.

Making Room for Two When Baby Makes Three

Page 302

Sex is boring

To rekindle some zest, you could start by thinking about or writing down a list of things you would like to try or change in your sex life ...

Thanks to Anne Semans and Cathy Winks for this suggestion, in their helpful book, The Mother's Guide to Sex. Three Rivers Press, 2001.

REFERENCE NOTES

Chapter 9:

Juggling Motherhood and Work

The variations in formatting of these references are due to some sources being medical journals while others being journals in other disciplines, such as psychology, where the conventions for references differ.

Making Choices about Working

Page 312

... studies have found that mothers who work are healthier than mothers who do not. . .

Rosenfeld, J.A. (1992). Maternal work outside the home and its effect on women and their families. *Journal of the American Medical Women's Association*, 47 (2), 1992: 47-53.

Woods, N.F. & Hulka, B.S. (1979). Symptom reports and illness behavior among employed women and homemakers. *Journal of Community health*, 5, 36-45.

Footnote

... women who work are likely to be better educated. . .

Crouter AC, MacDermid SM, McHale SM, Perry-JenkinsM. Parental monitoring and perceptions of children's school performance and conduct in dual- and single-earner families. *Developmental Psychology*. 1990 Jul Vol 26(4) 649-657.

... which is associated with better health practices and less illness. . .

Hofer TP, Katz SJ. Healthy behaviors among women in the United States and Ontario: the effect on use of preventive care. *Am J Public Health*, 1996, 86, 1755-9.

They also tend to be more healthy in the first place, since ill people are less likely to seek work.

For a discussion of the "healthy worker effect," see Repetti RL, Matthews KA, Waldron I. Employment and women's health: Effects of paid employment on women's mental and physical health. *American Psychologist*. 1989 Nov Vol 44(11) 1394-1401.

Also see Waldron I, Herold J, Dunn D. How valid are self-report measures for evaluating relationships between women's health and labor force participation? *Women & Health*, 1982, 7, 53-66.

Page 313

The Costs of Working for You

Physically demanding work . . . has been associated with poorer health in mothers, especially during the first year after giving birth.

Houston, B.K., Cates, D.S. & Kelly, K.E. Job stress, psychosocial strain, and physical health problems in women employed full-time outside the home and homemakers. *Women and Health*, 19 (1), 1992: 1-26.

Rosenfeld, J.A. (1992). Maternal work outside the home and its effect on women and their families. *Journal of the American Medical Women's Association*, 47 (2), 1992: 47-53.

McGovern, P., Dowd, B., Gjerdingen, D., Moscovice, I., Kochevar, L., & Lohman, W. (1997). Time off work and postpartum health of employed women. *Medical Care*, 35, 507-521.

Jobs that offer the employee little say . . . are a risk factor for cardiovascular problems in mothers.

Haynes, S. G. & Feinleib, M. (1980). Women, work, and coronary heart disease: Prospective findings from the Framingham Study, *American Journal of Public Health*, 70, 133-141.

Page 315

. . . an employed mother typically sleeps about five or six hours a week less than a stay-at-home mom.

Research reported by the Washington Post, in the San Francisco Chronicle, May 26, 2000.

. . . the hassles of investigating, managing, or changing childcare usually land on you . . .

Nelson, L., Kenen, R., & Klitzman, S. (1990). Turning things around: A women's occupational and environmental health resource guide. The National Women's Health Network, 8.

. . . as the difficulty of arranging for childcare rises, a mother's health tends to decline.

McGovern, P., Dowd, B., Gjerdingen, D., Moscovice, I., Kochevar, L., & Lohman, W. (1997). Time off work and postpartum health of employed women. *Medical Care*, 35, 507-521.

Naerde A, Tambs K, Mathiesen KS, Dalgard OS, Samuelsen SO. Symptoms of anxiety and depression among mothers of pre-school children: effect of chronic strain related to children and child care-taking. *J Affect Disord*. 2000 Jun;58(3):181-99.

. . . if you are already heavily burdened . . . a job could be the proverbial straw that breaks your back.

Macran, S., Clarke, L., & Joshi, H. Women's health: Dimensions and differentials. *Social Science Medicine*, 42 (9), 1996: 1203-1216.

. . . full-time employed mothers of infants report greater stress than do full-time homemakers with infants, and they often neglect their own health to cope with their total workload.

Walker, L.O. & Best, M.A. Well-being of mothers with infant children: A preliminary comparison of employed women and homemakers. *Women & Health*, 17 (1), 1991: 71-89.

The Costs of Working for Both You and Your Family

Stresses from work can wear you down so you have less to give at home.

Repetti RL, Wood J. Effects of daily stress at work on mothers' interactions with preschoolers. *Journal of Family Psychology*. 1997 Mar Vol 11(1) 90-108.

... returning to work (especially full-time) usually leads a mother to wean earlier than she otherwise would ...

Visness CM, Kennedy KI. Maternal employment and breast-feeding: findings from the 1988 National Maternal and Infant Health Survey. *Am J Public Health*, 1997, 87, 945-50.

Fein SB, Roe B. The effect of work status on initiation and duration of breast-feeding. *Am J Public Health*, 1998, 88, 1042-6.

For a general review of the tensions between breastfeeding and employment, see: Galtry J. Lactation and the labor market: breastfeeding, labor market changes, and public policy in the United States. *Health Care Women Int*. 1997 Sep-Oct;18(5):467-80.

... continuing to breastfeed seems to help shield you from the effects of stress.

Taylor SE, Klein LC, Lewis BP, Gruenewald TL, Gurung RA, Updegraff JA. Biobehavioral responses to stress in females: tend-and-befriend, not fight-or-flight. *Psychol Rev*. 2000 Jul;107(3):411-29.

... the benefits [of breastfeeding] for children include a boost in IQ and fewer illnesses. . .

Heinig MJ. Host defense benefits of breastfeeding for the infant. Effect of breastfeeding duration and exclusivity. *Pediatr Clin North Am*. 2001 Feb;48(1):105-23, ix.

Lawrence RA. Breastfeeding: benefits, risks and alternatives. *Curr Opin Obstet Gynecol*. 2000 Dec;12(6):519-24. Pletta KH, Eglash A, Choby K. Benefits of breastfeeding: a review for physicians. *WMJ*. 2000 Apr;99(2):55-8.

... the American Academy of Pediatrics recommends that mothers nurse for at least one year, and the World Health Organization recommends at least two years.

Griffith, K. To wean or not to wean: who says when is enough. *Mothering*, November/December, 1999, 63-67.

Page 316

... your kids ... in childcare [are] more frequently ill from exposure to other children who are sick.

McGovern, P., Dowd, B., Gjerdingen, D., Moscovice, I., Kochevar, L., & Lohman, W. (1997). Time off work and postpartum health of employed women. *Medical Care*, 35, 507-521.

Some research has found that moderate, high-quality childcare, especially past the first birthday, has - on average - some benefits for language development without disrupting the attachment relationship between a typical parent and child, though it does seem to make many kids somewhat more aggressive.

For reviews of this complex topic (tilted a bit, in our view, toward minimizing the impacts on children and families – and the mothers themselves - of mothers working for pay), see:

Scarr A. American child care today. *American Psychologist*. 1998 Feb Vol 53(2) 95-108.

Scarr S, Phillips D, McCartney K Working mothers and their families. *American Psychologist*. 1989 Nov Vol 44(11) 1402-1409.

Making It Work to Work

Page 327

Working at home

At least four million corporate employees work from home at least part-time . . .

Telework 2000 Survey, International Telework Association and Council, reported in Working Mother, February, 2001, p. 13.

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Getting help from your husband

While fathers whose wives work tend to do more than fathers whose wives are full-time moms, working mothers still typically do more total work than their husbands.

Hoffman LW. Effects of maternal employment in the two-parent family. American Psychologist. 1989 Feb Vol 44(2) 283-292.

. . . researchers have found that dads who help more with caring for children have greater well-being than dads who do not.

Ozer EM, Barnett RC, Brennan RT, Sperling J. Does child care involvement increase or decrease distress among dual-earner couples? Womens Health. 1998 Winter;4(4):285-311.

Handling business travel

. . . millions of women – many of them mothers – [go on a business trip] each year.

Benenson, L. Working Mother, March 2001, p. 6.

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. . . two in three parents have turned down a business trip . . .

Koss-Feder, L. Working Mother, March 2001, p. 44.

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Learning from others

Part-time professionals can link up with each other, like attorney mothers who . . .

Thanks to Deborah Epstein Henry for this suggestion, reported in Working Mother, February, 2001, p. 18.

REFERENCE NOTES

Appendices

The variations in formatting of these references are due to some sources being medical journals while others being journals in other disciplines, such as psychology, where the conventions for references differ.

Appendix A: Defining Depleted Mother Syndrome

Page 336

Differential Diagnosis

Postpartum depression

...PPD... is a major depressive episode that begins within four weeks of delivery...
Diagnostic and Statistical Manual of Mental Disorders (4th edition) (DSM-IV)

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The "maternal depletion syndrome"

... we found references to a "maternal depletion syndrome" suffered by malnourished women in Third World countries who commonly bear and breastfeed multiple children with short birth intervals.

For a review of this construct, see: Winikoff B, Castle MA. Defining maternal depletion syndrome. Am J Public Health. 1993 Jul;83(7):1052.

CFS is a complex disorder of uncertain etiology, occurring twice as frequently in women as in men, that is characterized by extreme, chronic fatigue unexplainable by other causes. It is distinct from DMS... For a review of CFS, see: Komaroff AL. Fatigue and chronic fatigue syndrome. In Primary Care for Women. Carlson, K.J., & Eisenstat, S.A. (Eds.). Mosby, 451-56.

Appendix E: The Insider's Guide

Page 357

Four Guidelines for Navigating Within the Spectrum of Care

Page 359

... the majority of the practices used day to day in Western medicine have not yet been evaluated in multiple, high-quality studies.

Robert Califf, M.D., quoted in Time magazine, October 12, 1998, 68.

Footnote

Unfortunately, many people have little choice about their health care professionals, usually for financial reasons.

For example, about 4.3 million mothers make too much money to qualify for public assistance but too little to afford health insurance. San Francisco Chronicle, May 11, 2001, A12.

Page 360

Footnote

... the "placebo effect" ... appears quite small in research studies. Hrobjartsson A. The uncontrollable placebo effect. Eur J Clin Pharmacol. 1996;50(5):345-8.

Page 362

Making Sense of the Findings

Page 363

Compared to what?

The "normal range" is typically set between the 2.5 to 97.5 percentiles ...

National Committee for Clinical Laboratory Standards. How to define and determine reference intervals in the clinical laboratory; approved guideline. Wayne, PA: NCCLS, 1995. NCCLS Document C28 - A.