

Appendix F
Cancer Outcomes Tables

Table F-1. Physical activity behavior

First Author/Year	Cancer Diagnoses	Intervention Type Timing PEACE Framework Category	Sampling Individual/Group (n) Per Group	Non Exercise Intervention Elements	PA Intensity PA Mode PA Frequency/Duration	Length of Intervention	Outcomes Reported	Significant Results
Courneya et al., 2002 ⁶² Courneya et al., 2003 ⁸³ RCT Home	All cancers possible Breast	Behavioral Post treatment Coping & Rehabilitation	Group (11) Comp 1 (11) Intervention 1	Group psychotherapy	65-75% estimated maximum heart rate Aerobic activity 20-30 minutes 3-5 days/week	10 weeks	Exercise (minutes) % performing ≥60 minutes of exercise/week % performing ≥150 minutes of exercise/week	p < .001 p < .001
Mock, et al. 1997 ⁹⁴ Mock et al. 1998 ⁹⁸ Non-RCT Home	Breast	Behavioral During treatment Coping	Individual (24) Comp 1 (22) Intervention 1	Not applicable	Self-paced Walking 20-30 minutes 4-5 days/week	6 weeks or 4-6 chemotherapy cycles	Exercise level [0-10 Exercise Rating Scale]	p < .001
Mock et al. 1994 ⁹⁹ RCT Home	Breast	Behavioral During treatment Coping	Individual (5) Comp 1 (9) Intervention 1	Support group	Self-paced Walking Aerobic activity 10-45 minutes 4-5 days/week	4-6 months	Exercise level [scale of 0-4 according to no minimum per day and no days per week walked]	ES 2.93
Mock et al. 2001 ⁹⁵ Pickett et al. 2002 ⁹⁶ RCT Home	Breast	Behavioral During treatment Coping	Individual (25) Comp 1 (23) Intervention 1	Not applicable	50-80% maximum heart rate Walking 15-30 minutes 5-6 days/week	6 weeks to 6 months	Exercise participation [PA self-report diary]	Not reported

Table F-1. Physical activity behavior (continued)

First Author/Year Study Design Intervention Setting	Cancer Diagnoses	Intervention Type Timing PEACE Framework Category	Sampling Individual/Group (n) Per Group	Non Exercise Intervention Elements	PA Intensity PA Mode PA Frequency/ Duration	Length of Intervention	Outcomes Reported	Significant Results
Segal et al., 2001 ⁸⁷ RCT Primary care Home	Breast	Behavioral & pre- planned exercise During treatment Coping	Individual (41) Comp 1 (40) Intervention 1: self-directed exercise (42) Intervention 2: supervised preplanned exercise	Not applicable	50-60% predicted maximum VO2 Walking Duration not reported 5 days/week	26 weeks	Exercise adherence (minutes) [self report PA logs]	Not reported

Table F-2. Physical fitness: cardiovascular, strength and flexibility

First Author/Year	Study Design Intervention Setting	Cancer Diagnoses	Intervention Type Timing PEACE Framework Category	Sampling Individual/Group (n) Per Group	Non Exercise Intervention Elements	PA Intensity PA Mode PA Frequency/ Duration	Length of Intervention	Outcomes Reported	Significant Results
Burnham & Wilcox, 2002 ⁸⁶	RCT Exercise facility	Breast Colon	Pre-planned exercise Post treatment Rehabilitation and health promotion	Individual (6) Comp 1 (6) Intervention 1 (6) Intervention 2	Not applicable	Intervention 1: 25-40% heart rate reserve Aerobic activity 14-32 minutes 3 days/week Intervention 2: 40-60% heart rate reserve Aerobic activity 14-32 minutes 3 days/week	10 weeks	Aerobic capacity ml/kg/min [treadmill] Flexibility [sit and reach/ lower body]	ES 0.668 ES 0.666
Courneya et al., 2003 ⁹⁰ Fairey et al., 2003 ¹⁰⁰	RCT Exercise facility	Breast	Pre-planned exercise Post treatment Rehabilitation and health promotion	Individual (28) Comp 1 (25) Intervention 1	Not applicable	70-75% maximum VO2 Aerobic activity 15-35 minutes 3 days/week	15 weeks	Heart rate (peak) Peak power output, Watts [cycle ergometer] Peak VO2 ml/kg/min [cycle ergometer] Power output at the ventilatory equivalent for CO2 [metabolic measurement cart]	p<.02 ES 0.950 ES 0.599 ES 0.860

Table F-2. Physical fitness: cardiovascular, strength and flexibility (continued)

First Author/Year	Study Design Intervention Setting	Cancer Diagnoses	Intervention Type Timing PEACE Framework Category	Sampling Individual/Group (n) Per Group	Non Exercise Intervention Elements	PA Intensity PA Mode PA Frequency/ Duration	Length of Intervention	Outcomes Reported	Significant Results
Courneya, et al., 2002 ⁸² Courneya et al., 2003 ⁸³	RCT Home	All cancers possible Breast	Behavioral Post treatment Coping and rehabilitation	Group (11) Comp 1 (11) Intervention 1	Group psychotherapy	65-75% estimated maximum heart rate Aerobic activity 20-30 minutes 3-5 days/week	10 weeks	Cardiovascular endurance [modified Balke Treadmill Test] Flexibility [sit and reach test]	ES 0.00 ES 0.024
Dimeo et al., 1997 ¹⁰¹	RCT Primary care	Breast Germ cell Sarcoma Lung Adenosarcinoma Neuroblastoma	Pre-planned exercise During treatment Coping	Individual (37) Comp 1 (33) Intervention 1	Not applicable	50% heart rate reserve Aerobic activity 15 minutes 7 days/week	Not clear/day of hospital discharge	Maximum performance (km/hour)	ES 0.319
Dimeo et al., 1997 ¹⁰²	Non-RCT Primary care	Breast Non-small cell lung carcinoma Sarcoma Semioma Non- Hodgkin's lymphoma	Pre-planned exercise Post treatment Rehabilitation	Individual (16) Comp 1 (16) Intervention 1	Not applicable	80% maximum heart rate Walking 15-30 minutes 5 days/week	6 weeks	Physical maximum performance (km/hour) [treadmill test]	ES 0.535

Table F-2. Physical fitness: cardiovascular, strength and flexibility (continued)

First Author/Year	Study Design Intervention Setting	Cancer Diagnoses	Intervention Type Timing PEACE Framework Category	Sampling Individual/Group (n) Per Group	Non Exercise Intervention Elements	PA Intensity PA Mode PA Frequency/ Duration	Length of Intervention	Outcomes Reported	Significant Results
MacVicar et al., 1989 ⁸⁸	RCT Exercise facility	Breast	Pre-planned exercise During treatment Coping	Individual (16) Comp 1 (11) Intervention 1 (18) Intervention 2	Not applicable	Intervention 1: Low intensity Non-aerobic Stretching and flexibility Duration not reported 3 days/week Intervention 2: 60-80% heart rate reserve Aerobic interval training 3 days/week	10 weeks	Heart rate Maximum test time VO2 maximum L/min (cycle ergometer) Workload maximum (cycle ergometer)	p<.04 p<.01 p<.01 p<.01
MacVicar et al., 1986 ¹¹²	Non-RCT Unknown	Breast	Pre-planned exercise During treatment Coping	Individual (4) Comp 1 (6) Intervention 1 (6) Intervention 2	Not applicable	60-85% maximum heart rate on pre-test aerobic assessment Aerobic activity 3 days/week	10 weeks	VO2 maximum L/min (cycle ergometer)	Mean change reported Functional capacity increased in intervention group
Mock, et al., 1997 ⁹⁴ Mock et al., 1998 ⁹⁸	Non-RCT Home	Breast	Behavioral During treatment Coping	Individual (24) Comp 1 (22) Intervention 1	Not applicable	Self-paced Walking 20-30 minutes 4-5 days/week	6 weeks or 4-6 chemo-therapy cycles	Physical fitness [12 minute walk test]	p<.003
Mock et al., 1994 ⁹⁹	RCT Home	Breast	Behavioral During treatment Coping	Individual (5) Comp 1 (9) Intervention 1	Support group	Self-paced Walking 10-45 minutes 4-5 days/week	4-6 months	Physical fitness [12 minute walk test]	ES 1.242

Table F-2. Physical fitness: cardiovascular, strength and flexibility (continued)

First Author/Year	Study Design Intervention Setting	Cancer Diagnoses	Intervention Type Timing PEACE Framework Category	Sampling Individual/Group (n) Per Group	Non Exercise Intervention Elements	PA Intensity PA Mode PA Frequency/ Duration	Length of Intervention	Outcomes Reported	Significant Results
Mock et al., 2001 ⁹⁵ Pickett et al., 2002 ⁹⁷	RCT Home	Breast	Behavioral During treatment Coping	Individual (25) Comp 1 (23) Intervention 1	Not applicable	50-80% maximum heart rate Walking 15-30 minutes 5-6 days/ week	6 weeks to 6 months	Exercise fitness [12- minute walk test]	p<.01
Nieman et al., 1995 ¹⁰³	RCT Unknown	Breast	Pre-planned exercise Post treatment Survival	Individual (8) Comp 1 (8) Intervention 1	Not applicable	75% maximum heart rate Walking Strength/ resistance activity 60 minutes 3 days/week	8 weeks	Heart rate Leg extension strength Physical fitness [6 minute walk distance]	Not significant Not significant p = 0.02
Segal et al., 2001 ⁸⁷	RCT Primary care Home	Breast	Behavioral and pre-planned exercise During treatment Coping	Individual (41) Comp 1 (40) Intervention 1: self-directed exercise (42) Intervention 2: supervised preplanned exercise	Not applicable	50-60% maximum VO2 Walking Duration not reported 5 days/week	26 weeks	Aerobic capacity [modified Canadian Aerobic Fitness Test (mCAFT)]	Not significant

Table F-2. Physical fitness: cardiovascular, strength and flexibility (continued)

First Author/Year	Study Design Intervention Setting	Cancer Diagnoses	Intervention Type Timing PEACE Framework Category	Sampling Individual/Group (n) Per Group	Non Exercise Intervention Elements	PA Intensity PA Mode PA Frequency/ Duration	Length of Intervention	Outcomes Reported	Significant Results
Segal et al., 2003 ⁹¹	RCT Exercise facility	Prostate	Pre-planned exercise During treatment Coping	Individual (73) Comp 1 (82) Intervention 1	Not applicable	60-70% one repetition maximum Strength/ resistance: 9 exercises, 2 sets each, 8-12 repetitions Duration not reported 3 days/week	12 weeks	Muscular fitness [standard load test]	p<.009

Table F-3. Fatigue / tiredness

First Author/Year	Study Design Intervention Setting	Cancer Diagnoses	Intervention Type Timing PEACE Framework Category	Sampling Individual/Group (n) Per Group	Non Exercise Intervention Elements	PA Intensity PA Mode PA Frequency/ Duration	Length of Intervention	Outcomes Reported	Significant Results
Berglund et al., 1993 ⁹²	Non-RCT Exercise facility	Breast Ovarian Testicular	Pre-planned exercise Post treatment Rehabilitation	Individual (30) Comp 1 (30) Intervention 1	Relaxation training Information Coping strategies	Intensity not reported Aerobic activity Strength/ resistance Stretching 60 minutes 1day/week	4 weeks	Tiredness [no validity/ reliability measure scale]	p<.0005 *all results are from a repeated measures ANOVA from 5 time points: baseline, post, 3, 6 & 12 months
Berglund et al., 1994 ⁹³	RCT Unknown	Breast Ovarian Undefined	Pre-planned exercise Post treatment Rehabilitation	Individual (101) Comp 1 (98) Intervention 1	Relaxation Diet Life coping skills	Intensity not reported Aerobic activity Strength training Stretching 60 minutes 1 day/week	4 weeks	Tiredness [no validity/ reliability measure scale]	Not significant *all results are from a repeated measures ANOVA from 5 time points: baseline, post, 3, 6 & 12 months

Table F-3. Fatigue / tiredness (continued)

First Author/Year	Study Design Intervention Setting	Cancer Diagnoses	Intervention Type Timing PEACE Framework Category	Sampling Individual/Group (n) Per Group	Non Exercise Intervention Elements	PA Intensity PA Mode PA Frequency/ Duration	Length of Intervention	Outcomes Reported	Significant Results
Burnham & Wilcox, 2002 ⁸⁶	RCT Exercise facility	Breast Colon	Pre-planned exercise Post treatment Rehabilitation and health promotion	Individual (6) Comp 1 (6) Intervention 1 (6) Intervention 2	Not applicable	Intervention 1: 25-40% heart rate reserve Aerobic activity 14-32 minutes 3 days/week Intervention 2: 40-60% heart rate reserve Aerobic activity 14-32 minutes 3 days/week	10 weeks	Fatigue [Linear Analog Self-Assessment measure]	ES 0.645
Courneya et al., 2003 ⁹⁰ Fairey et al., 2003 ¹⁰⁰	RCT Exercise facility	Breast	Pre-planned exercise Post treatment Rehabilitation and health promotion	Individual (28) Comp 1 (25) Intervention 1	Not applicable	70-75% maximum VO2 Aerobic activity 15-35 minutes 3 days/week	15 weeks	Fatigue [Fatigue Scale of FACT]	ES 0.063
Courneya, et al., 2002 ⁸² Courneya et al., 2003 ⁸³	RCT Home	All cancers possible Breast	Behavioral Post treatment Coping and rehabilitation	Group (11) Comp 1 (11) Intervention 1	Group psychotherapy	65-75% maximum heart rate Aerobic activity 20-30 minutes 3-5 days/week	10 weeks	Fatigue [Fatigue Scale of FACT]	ES 0.031

Table F-3. Fatigue / tiredness (continued)

First Author/Year	Study Design Intervention Setting	Cancer Diagnoses	Intervention Type Timing PEACE Framework Category	Sampling Individual/Group (n) Per Group	Non Exercise Intervention Elements	PA Intensity PA Mode PA Frequency/ Duration	Length of Intervention	Outcomes Reported	Significant Results
Dimeo et al., 1999 ¹⁰⁶	RCT Primary care	Solid tumors or breast carcinoma Metastatic breast carcinoma Seminoma Sarcoma/adenocarcinoma Hodgkin's disease Non-Hodgkin's lymphoma Small cell lung carcinoma	Pre-planned exercise During treatment Coping	Individual (33) Comp 1 (29) Intervention 1	Not applicable	50% heart rate reserve Aerobic activity 15 minutes 7 days/week	Not reported/hospital discharge	Fatigue [Profile of Mood Status measure (POMS)]	Increase in control group p=.02, no change in treatment group
Dimeo et al., 1997 ¹⁰²	Non-RCT Primary care	Breast Non-small cell lung carcinoma Sarcoma Semioma Non-Hodgkin's lymphoma	Pre-planned exercise Post treatment Rehabilitation	Individual (16) Comp 1 (16) Intervention 1	Not applicable	80% maximum heart rate Walking 15-30 minutes 5 days/week	6 weeks	Fatigue [personal interview]	Qualitative report of improvement

Table F-3. Fatigue / tiredness (continued)

First Author/Year	Study Design Intervention Setting	Cancer Diagnoses	Intervention Type Timing PEACE Framework Category	Sampling Individual/Group (n) Per Group	Non Exercise Intervention Elements	PA Intensity PA Mode PA Frequency/ Duration	Length of Intervention	Outcomes Reported	Significant Results
MacVicar et al., 1986 ¹¹²	Non-RCT Unknown	Breast	Pre-planned exercise During treatment Coping	Individual (4) Comp 1 (6) Intervention 1 (6) Intervention 2	Not applicable	60-85% maximum heart rate on pre-test aerobic assessment Aerobic activity 3 days/week	10 weeks	Fatigue [Profile of Mood States (POMS)]	Mean changes reported. Fatigue factors decreased in treatment and control groups.
Mock, et al., 1997 ⁹⁴ Mock et al., 1998 ⁹⁸	Non-RCT Home	Breast	Behavioral During treatment Coping	Individual (24) Comp 1 (22) Intervention 1	Not applicable	Self-paced Walking 20-30 minutes 4-5 days/week	6 weeks or 4-6 chemo-therapy cycles	Fatigue [Piper Fatigue Scale] Fatigue [Symptom Assessment Scales (SAS)]	p<.018 Correlated r=.92
Mock et al., 1994 ⁹⁹	RCT Home	Breast	Behavioral During treatment Coping	Individual (5) Comp 1 (9) Intervention 1	Support group	Self-paced Walking 10-45 minutes 4-5 days/week	4-6 months	Fatigue [Symptom Assessment Scale]	Mid-treatment p<.02
Mock et al. 2001 ⁹⁵ Pickett et al. 2002 ⁹⁶	RCT Home	Breast	Behavioral During treatment Coping	Individual (25) Comp 1 (23) Intervention 1	Not applicable	50-80% maximum heart rate Walking 15-30 minutes 5-6 days/week	6 weeks to 6 months	Fatigue [modified Piper Fatigue Scale (PFS)]	p<.001

Table F-3. Fatigue / tiredness (continued)

First Author/Year	Study Design Intervention Setting	Cancer Diagnoses	Intervention Type Timing PEACE Framework Category	Sampling Individual/Group (n) Per Group	Non Exercise Intervention Elements	PA Intensity PA Mode PA Frequency/ Duration	Length of Intervention	Outcomes Reported	Significant Results
Segal et al., 2003 ⁹¹	RCT Exercise facility	Prostate	Pre-planned exercise During treatment Coping	Individual (73) Comp 1 (82) Intervention 1	Not applicable	60-70% one repetition maximum Strength/resistance: 9 exercises, 2 sets each, 8-12 repetitions Duration not reported 3 days/week	12 weeks	Fatigue [Functional Assessment of Cancer Therapy-Fatigue (FACT-F)]	ES 0.130

Table F-4. Body image / dissatisfaction

First Author/Year	Study Design Intervention Setting	Cancer Diagnoses	Intervention Type Timing PEACE Framework Category	Sampling Individual/Group (n) Per Group	Non Exercise Intervention Elements	PA Intensity PA Mode PA Frequency/ Duration	Length of Intervention	Outcomes Reported	Significant Results
Berglund et al., 1993 ⁹²	Non-RCT Exercise facility	Breast Ovarian Testicular	Pre-planned exercise Post treatment Rehabilitation	Individual (30) Comp 1 (30) Intervention 1	Relaxation training Information Coping strategies	Intensity not reported Aerobic activity Strength/ resistance Stretching 60 minutes 1day/week	4 weeks	Body image problems [no validity/ reliability measure scale]	Not significant *all results are from a repeated measures ANOVA from 5 time points: baseline, post, 3, 6 & 12 months
Berglund et al., 1994 ⁹³	RCT Unknown	Breast Ovarian Undefined	Pre-planned exercise Post treatment Rehabilitation	Individual (101) Comp 1 (98) Intervention 1	Relaxation Diet Life coping skills	Intensity not reported Aerobic activity Strength training Stretching 60 minutes 1 day/week	4 weeks	Body image problems [no validity/ reliability measure scale]	Not significant *all results are from a repeated measures ANOVA from 5 time points: baseline, post, 3, 6 & 12 months
Mock, et al., 1997 ⁹⁴ Mock et al., 1998 ⁹⁸	Non-RCT Home	Breast	Behavioral During treatment Coping	Individual (24) Comp 1 (22) Intervention 1	Not applicable	Self-paced Walking 20-30 minutes 4-5 days/week	6 weeks or 4-6 chemo-therapy cycles	Body dissatisfaction [Symptom Assessment Scales (SAS)]	p<.033

Table F-4. Body image / dissatisfaction (continued)

First Author/Year	Study Design Intervention Setting	Cancer Diagnoses	Intervention Type Timing PEACE Framework Category	Sampling Individual/Group (n) Per Group	Non Exercise Intervention Elements	PA Intensity PA Mode PA Frequency/ Duration	Length of Intervention	Outcomes Reported	Significant Results
Mock et al., 1994 ⁹⁹	RCT Home	Breast	Behavioral During treatment Coping	Individual (5) Comp 1 (9) Intervention 1	Support group	Self-paced Walking 10-45 minutes 4-5 days/week	4-6 months	Body image [Body Image Visual Analogue Scale] Body image [physical self subscale of the Tennessee Self-Concept Scale]	ES 0.301 ES 0.318

Table F-5. Quality of life

First Author/Year	Study Design Intervention Setting	Cancer Diagnoses	Intervention Type Timing PEACE Framework Category	Sampling Individual/Group (n) Per Group	Non Exercise Intervention Elements	PA Intensity PA Mode PA Frequency/ Duration	Length of Intervention	Outcomes Reported	Significant Results
Berglund et al., 1993 ⁹²	Non-RCT Exercise facility	Breast Ovarian Testicular	Pre-planned exercise Post treatment Rehabilitation	Individual (30) Comp 1 (30) Intervention 1	Relaxation training Information Coping strategies	Intensity not reported Aerobic activity Strength/ resistance Stretching 60 minutes 1day/week	4 weeks	Physical strength problems [self report] Global health [no validity/ reliability measure scale] QOL [scale no validity/ reliability measure]	p<.0001 p<.01 Not significant *all results are from a repeated measures ANOVA from 5 time points: baseline, post, 3, 6 & 12 months
Berglund et al., 1994 ⁹³	RCT Unknown	Breast Ovarian Undefined	Pre-planned exercise Post treatment Rehabilitation	Individual (101) Comp 1 (98) Intervention 1	Relaxation Diet Life coping skills	Intensity not reported Aerobic activity Strength training Stretching 60 minutes 1 day/week	4 weeks	Physical strength problems [self report] QOL [scale no validity/ reliability measure]	Not significant *all results are from a repeated measures ANOVA from 5 time points: baseline, post, 3, 6 & 12 months

Table F-5. Quality of life (continued)

First Author/Year	Study Design Intervention Setting	Cancer Diagnoses	Intervention Type Timing PEACE Framework Category	Sampling Individual/Group (n) Per Group	Non Exercise Intervention Elements	PA Intensity PA Mode PA Frequency/Duration	Length of Intervention	Outcomes Reported	Significant Results
Burnham & Wilcox, 2002 ⁸⁶	RCT Exercise facility	Breast Colon	Pre-planned exercise Post treatment Rehabilitation and health promotion	Individual (6) Comp 1 (6) Intervention 1 (6) Intervention 2	Not applicable	Intervention 1: 25-40% heart rate reserve Aerobic activity 14-32 minutes 3 days/week Intervention 2: 40-60% heart rate reserve Aerobic activity 14-32 minutes 3 days/week	10 weeks	QOL [QOL Index for Cancer Patients]	ES 1.689

Table F-5. Quality of life (continued)

First Author/Year	Study Design Intervention Setting	Cancer Diagnoses	Intervention Type Timing PEACE Framework Category	Sampling Individual/Group (n) Per Group	Non Exercise Intervention Elements	PA Intensity PA Mode PA Frequency/Duration	Length of Intervention	Outcomes Reported	Significant Results
Courneya et al., 2003 ⁹⁰ Fairey et al., 2003 ¹⁰⁰	RCT Exercise facility	Breast	Pre-planned exercise Post treatment Rehabilitation and health promotion	Individual (28) Comp 1 (25) Intervention 1	Not applicable	70-75% maximum VO2 Aerobic activity 15-35 minutes 3 days/week	15 weeks	General health [Functional Assessment of Cancer Therapy-General (FACT-G scale)] Physical well-being [Functional Assessment of Cancer Therapy-Breast (FACT-B scale)] QOL (overall) [Functional Assessment of Cancer Therapy-Breast (FACT-B scale)] FACT-B Breast cancer subscale	ES 0.183 ES 0.00 ES 0.239 ES 0.338

Table F-5. Quality of life (continued)

First Author/Year	Study Design Intervention Setting	Cancer Diagnoses	Intervention Type Timing PEACE Framework Category	Sampling Individual/Group (n) Per Group	Non Exercise Intervention Elements	PA Intensity PA Mode PA Frequency/ Duration	Length of Intervention	Outcomes Reported	Significant Results
Courneya et al., 2002 ⁸² Courneya et al., 2003 ⁸³	RCT Home	All cancers possible Breast	Behavioral Post treatment Coping and rehabilitation	Group (11) Comp 1 (11) Intervention 1	Group psychotherapy	65-75% maximum heart rate Aerobic activity 20-30 minutes 3-5 days/ week	10 weeks	Physical well-being [Functional Assessment of Cancer Therapy-General (FACT-G scale)] Functional well-being [Functional Assessment of Cancer Therapy-General (FACT-G scale)]	ES 0.02 ES 0.049
McKenzie et al., 2003 ¹⁰⁷	RCT Exercise facility	Breast	Pre-planned exercise Post treatment Rehabilitation and health promotion	Individual (7) Comp 1 (7) Intervention 1	Not applicable	Intensity not reported Aerobic activity Strength/ resistance Stretching 30-60 minutes 3 days/week	8 weeks	General health QOL [SF-36] Physical functioning QOL [SF-36]	p<.048 p<0.05
Mock et al., 1994 ⁹⁹	RCT Home	Breast	Behavioral During treatment Coping	Individual (5) Comp 1 (9) Intervention 1	Support Group	Self-paced Walking 10-45 minutes 4-5 days/week	4-6 months	Physical functioning (daily activities) [Karnofsky Performance Status Scale (KPS)]	ES 1.155

Table F-5. Quality of life (continued)

First Author/Year	Study Design Intervention Setting	Cancer Diagnoses	Intervention Type Timing PEACE Framework Category	Sampling Individual/Group (n) Per Group	Non Exercise Intervention Elements	PA Intensity PA Mode PA Frequency/Duration	Length of Intervention	Outcomes Reported	Significant Results
Mock et al., 2001 ⁹⁵ Pickett et al., 2002 ⁹⁶	RCT Home	Breast	Behavioral During treatment Coping	Individual (25) Comp 1 (23) Intervention 1	Not applicable	50-80% maximum heart rate Walking 15-30 minutes 5-6 days/week	6 weeks to 6 months	QOL emotional [MOS SF-36] QOL social [MOS SF-36] QOL physical [MOS-SF 36 subscale]	Not significant Not significant p<.00
Segal et al., 2001 ⁸⁷	RCT Primary care Home	Breast	Behavioral and pre-planned exercise During treatment Coping	Individual (41) Comp 1 (40) Intervention 1: self-directed exercise (42) Intervention 2: supervised preplanned exercise	Not applicable	50-60% maximum VO2 Walking Duration not reported 5 days/week	26 weeks	General health QOL [SF-36] Physical functioning [SF-36] QOL [Functional Assessment of Cancer Therapy-Breast (FACT-B scale)] QOL [Functional Assessment of Cancer Therapy-(FACT-G scale)]	p=.04 p<0.04 Not significant Not significant

Table F-5. Quality of life (continued)

First Author/Year	Study Design Intervention Setting	Cancer Diagnoses	Intervention Type Timing PEACE Framework Category	Sampling Individual/Group (n) Per Group	Non Exercise Intervention Elements	PA Intensity PA Mode PA Frequency/ Duration	Length of Intervention	Outcomes Reported	Significant Results
Segal et al., 2003 ³¹	RCT Exercise facility	Prostate	Pre-planned Exercise During treatment Coping	Individual (73) Comp 1 (82) Intervention 1	Not applicable	60-70% one repetition maximum Strength/ resistance: 9 exercises, 2 sets each, 8-12 repetitions Duration not reported 3 days/week	12 weeks	QOL health-related [Functional Assessment of Cancer Therapy-Prostate (FACT-P)]	ES 0.168

Table F-6. Confusion

First Author/Year	Study Design Intervention Setting	Cancer Diagnoses	Intervention Type Timing PEACE Framework Category	Sampling Individual/Group (n) Per Group	Non Exercise Intervention Elements	PA Intensity PA Mode PA Frequency/ Duration	Length of Intervention	Outcomes Reported	Significant Results
Burnham & Wilcox, 2002 ⁸⁶	RCT Exercise facility	Breast Colon	Pre-planned exercise Post treatment Rehabilitation and health promotion	Individual (6) Comp 1 (6) Intervention 1 (6) Intervention 2	Not applicable	Intervention 1: 25-40% heart rate reserve Aerobic activity 14-32 minutes 3 days/week Intervention 2: 40-60% heart rate reserve Aerobic activity 14-32 minutes 3 days/week	10 weeks	Confusion [Linear Analog Self-Assessment measure]	ES 0.402
MacVicar et al., 1986 ¹¹²	Non-RCT Unknown	Breast	Pre-planned exercise During treatment Coping	Individual (4) Comp 1 (6) Intervention 1 (6) Intervention 2	Not applicable	60-85% maximum heart rate on pre-test aerobic assessment Aerobic activity 3 days/week	10 weeks	Confusion/bewilderment [Profile of Mood States POMS]	Mean changes reported. Confusion factors decreased.

Table F-7. Difficulty sleeping

First Author/Year	Study Design Intervention Setting	Cancer Diagnoses	Intervention Type Timing PEACE Framework Category	Sampling Individual/Group (n) Per Group	Non Exercise Intervention Elements	PA Intensity PA Mode PA Frequency/Duration	Length of Intervention	Outcomes Reported	Significant Results
Mock, et al., 1997 ⁹⁴ Mock et al., 1998 ⁹⁸	Non-RCT Home	Breast	Behavioral During treatment Coping	Individual (24) Comp 1 (22) Intervention 1	Not applicable	Self-paced Walking 20-30 minutes 4-5 days/week	6 weeks or 4-6 chemotherapy cycles	Difficulty sleeping [Symptom Assessment Scales (SAS)]	p<.027
Mock et al., 1994 ⁹⁹	RCT Home	Breast	Behavioral During treatment Coping	Individual (5) Comp 1 (9) Intervention 1	Support group	Self-paced Walking 10-45 minutes 4-5 days/week	4-6 months	Difficulty sleeping [Symptom Assessment Scale]	p<.04

Table F-8. Self-esteem

First Author/Year	Study Design Intervention Setting	Cancer Diagnoses	Intervention Type Timing PEACE Framework Category	Sampling Individual/Group (n) Per Group	Non Exercise Intervention Elements	PA Intensity PA Mode PA Frequency/ Duration	Length of Intervention	Outcomes Reported	Significant Results
Courneya et al., 2003 ⁹⁰ Fairey et al., 2003 ¹⁰⁰	RCT Exercise Facility	Breast	Pre-planned exercise Post treatment Rehabilitation and health promotion	Individual (28) Comp 1 (25) Intervention 1	Not applicable	70-75% maximum VO2 Aerobic activity 15-35 minutes 3 days/week	15 weeks	Self-esteem [Rosenberg Self-Esteem Scale]	ES 0.044
Mock et al., 1994 ⁹⁹	RCT Home	Breast	Behavioral During treatment Coping	Individual (5) Comp 1 (9) Intervention 1	Support group	Self-paced Walking 10-45 minutes 4-5 days/week	4-6 months	Self-esteem/ concept [Tennessee self-concept scale]	ES 0.154
Segar et al., 1998 ⁸⁴	RCT Home Exercise facility	Breast	Pre-planned exercise Post treatment Rehabilitation and health promotion	Individual (10) Comp 1 (10) Intervention 1 (10) Intervention 2: exercise and behavior modification	Behavior modification	≥60% maximum heart rate Aerobic activity 30 minutes 4 days/week	10 weeks	Self-esteem [Rosenberg Self-Esteem Inventory (RSE)]	Not significant

Table F-9. Psychosocial outcomes

First Author/Year	Study Design Intervention Setting	Cancer Diagnoses	Intervention Type Timing PEACE Framework Category	Sampling Individual/Group (n) Per Group	Non Exercise Intervention Elements	PA Intensity PA Mode PA Frequency/ Duration	Length of Intervention	Outcomes Reported	Significant Results
Berglund et al., 1993 ⁹²	Non-RCT Exercise Facility	Breast Ovarian Testicular	Pre-planned exercise Post treatment Rehabilitation	Individual (30) Comp 1 (30) Intervention 1	Relaxation training Information Coping strategies	Intensity not reported Aerobic activity Strength/ resistance Stretching 60 minutes 1day/week	4 weeks	Activities in community [measure not reported] Activities in the home [measure not reported] Change of lifestyle [measure not reported] Participation in patient organization [measure not reported] Satisfaction about information given [6-item scale] Sick leave [actual count of participants] Work status [actual count of participants]	p<.05 Not significant p<.005 p<.05 p<.0001 Not significant Not significant *all results are from a repeated measures ANOVA from 5 time points: baseline, post, 3, 6 & 12 months

Table F-9. Psychosocial outcomes (continued)

First Author/Year	Study Design Intervention Setting	Cancer Diagnoses	Intervention Type Timing PEACE Framework Category	Sampling Individual/Group (n) Per Group	Non Exercise Intervention Elements	PA Intensity PA Mode PA Frequency/ Duration	Length of Intervention	Outcomes Reported	Significant Results
Berglund et al., 1994 ⁹³	RCT Unknown	Breast Ovarian Undefined	Pre-planned exercise Post treatment Rehabilitation	Individual (101) Comp 1 (98) Intervention 1	Relaxation Diet Life coping skills	Intensity not reported Aerobic activity Strength training Stretching 60 minutes 1 day/week	4 weeks	Cognitive functioning [physical symptoms related to breast cancer scale] Communication with staff [scale] Information problems [satisfaction (6-item scale)] Problems with activities at home [scale] Problems with activities in community Sick leave [actual count of participants] Work status [actual count of participants]	Not significant Not significant p<00001 Not significant Not significant Not significant Not significant *all results are from a repeated measures ANOVA from 5 time points: baseline, post, 3, 6 & 12 months

Table F-9. Psychosocial outcomes (continued)

First Author/Year	Study Design Intervention Setting	Cancer Diagnoses	Intervention Type Timing PEACE Framework Category	Sampling Individual/Group (n) Per Group	Non Exercise Intervention Elements	PA Intensity PA Mode PA Frequency/ Duration	Length of Intervention	Outcomes Reported	Significant Results
Courneya et al., 2003 ⁹⁰ Fairey et al., 2003 ¹⁰⁰	RCT Exercise facility	Breast	Pre-planned exercise Post treatment Rehabilitation and health promotion	Individual (28) Comp 1 (25) Intervention 1	Not applicable	70-75% maximum VO2 Aerobic activity 15-35 minutes 3 days/week	15 weeks	Happiness [Happiness Measure] Social/family well-being [Functional Assessment of Cancer Therapy – Breast (FACT-B scale)]	ES 0.302 ES 0.113
Courneya et al., 2002 ⁸² Courneya et al., 2003 ⁸³	RCT Home	All cancers possible Breast	Behavioral Post treatment Coping and rehabilitation	Group (11) Comp 1 (11) Intervention 1	Group psychotherapy	65-75% maximum heart rate Aerobic activity 20-30 minutes 3-5 days/ week	10 weeks	Satisfaction with life [Satisfaction with Life Scale] Social/family well-being [Functional Assessment of Cancer Therapy- (FACT-G scale)] Spiritual well-being [Functional Assessment of Cancer Therapy- (FACT-G scale)]	ES 0.028 ES 0.005 ES 0.00

Table F-9. Psychosocial outcomes (continued)

First Author/Year	Study Design Intervention Setting	Cancer Diagnoses	Intervention Type Timing PEACE Framework Category	Sampling Individual/Group (n) Per Group	Non Exercise Intervention Elements	PA Intensity PA Mode PA Frequency/Duration	Length of Intervention	Outcomes Reported	Significant Results
Segal et al., 2001 ⁸⁷	RCT Primary care Home	Breast	Behavioral and pre-planned exercise During treatment Coping	Individual (41) Comp 1 (40) Intervention 1: self-directed exercise (42) Intervention 2: supervised preplanned exercise	Not applicable	50-60% maximum VO2 Walking Duration not reported 5 days/week	26 weeks	Role limitations, emotional [SF-36] Role limitations, physical [SF-36] Social Functioning [SF-36]	Not significant Not significant Not significant
Wall, 2000 ²¹³	RCT	Lung	Pre-planned exercise Pre treatment Buffering	Individual (51) Comp 1 (53) Intervention 1	Not applicable	Low intensity Aerobic activity Strength/resistance Duration not reported 7 days/week	7-10 days	Hope [Herth Hope Index HHI] Power (personal not PA related) [PKPCT - semantic differential test]	ES 0.280 ES 0.612

Table F-10. Physiological outcomes

First Author/Year	Study Design Intervention Setting	Cancer Diagnoses	Intervention Type Timing PEACE Framework Category	Sampling Individual/Group (n) Per Group	Non Exercise Intervention Elements	PA Intensity PA Mode PA Frequency/ Duration	Length of Intervention	Outcomes Reported	Significant Results
Courneya et al., 2003 ⁹⁰ Fairey et al., 2003 ¹⁰⁰	RCT Exercise facility	Breast	Pre-planned exercise Post treatment Rehabilitation and health promotion	Individual (28) Comp 1 (25) Intervention 1	Not applicable	70-75% maximum VO2 Aerobic activity 15-35 minutes 3 days/week	15 weeks	Insulin (pmol/liter)	ES -0.300
								Glucose (mmol/liter)	ES -0.301
								Insulin resistance index	ES -0.324
								IGF-I (ng/ml)	ES 0.414
								IGF-II (ng/ml)	ES -0.475
								IGFBP-1 (ng/ml)	ES 0.025
								IGFBP-3 (ng/ml)	ES 0.425
IGF-I:IGFBP-3 molar ratio	ES 0.657								
Cunningham et al., 1986 ⁸⁵	RCT Primary care	Acute leukemia	Pre-planned exercise During treatment Coping	Individual (10) Comp 1 (10) Intervention 1 (10) Intervention 2	Not applicable	Intervention 1: Intensity not reported Calisthenics 30 minutes 3 days/week Intervention 2: Intensity not reported Calisthenics 30 minutes 5 days/week	35 days	Changes in 3-methylhistidine as a percent of admit measure	Not significant
								Changes in excretion of creatinine as a percent of admit measures	p<.05
								Weekly nitrogen balance (G)	Not significant
								Weekly temperature	Not significant

Table F-10. Physiological outcomes (continued)

First Author/Year	Study Design Intervention Setting	Cancer Diagnoses	Intervention Type Timing PEACE Framework Category	Sampling Individual/Group (n) Per Group	Non Exercise Intervention Elements	PA Intensity PA Mode PA Frequency/ Duration	Length of Intervention	Outcomes Reported	Significant Results
Dimeo et al., 1997 ¹⁰¹	RCT Primary care	Breast Germ cell Sarcoma Lung Adenosarcinoma Neuroblastoma	Pre-Planned Exercise During treatment Coping	Individual (37) Comp 1 (33) Intervention 1	Not applicable	50% heart rate reserve Aerobic activity 15 minutes 7 days/week	Not clear/ day of hospital discharge	Blood transfusions (U) Hematocrit Hemoglobin In-hospital days Loss of physical performance during hospitalization Platelets transfusions (U)	ES 0.00 ES 0.00 ES 0.198 ES 0.528 ES 0.494 ES 0.430
Dimeo et al., 1997 ¹⁰²	Non-RCT Primary care	Breast Non-small cell lung carcinoma Sarcoma Semioma Non-Hodgkin's lymphoma	Pre-planned exercise Post treatment Rehabilitation	Individual (16) Comp 1 (16) Intervention 1	Not applicable	80% maximum heart rate Walking 15-30 minutes 5 days/week	6 weeks	Cardiac function and dimensions ECG function Hemoglobin	Not significant Not significant ES 0.822

Table F-10. Physiological outcomes (continued)

First Author/Year	Study Design Intervention Setting	Cancer Diagnoses	Intervention Type Timing PEACE Framework Category	Sampling Individual/Group (n) Per Group	Non Exercise Intervention Elements	PA Intensity PA Mode PA Frequency/ Duration	Length of Intervention	Outcomes Reported	Significant Results
Segal et al., 2003 ⁹¹	RCT Exercise facility	Prostate	Pre-planned exercise During treatment Coping	Individual (73) Comp 1 (82) Intervention 1	Not applicable	60-70% one repetition maximum Strength/resistance: 9 exercises, 2 sets each, 8-12 repetitions Duration not reported 3 days/week	12 weeks	PSA levels Testosterone	Not significant Not significant

Table F-11. Body size

First Author/Year	Study Design Intervention Setting	Cancer Diagnoses	Intervention Type Timing PEACE Framework Category	Sampling Individual/Group (n) Per Group	Non Exercise Intervention Elements	PA Intensity PA Mode PA Frequency/ Duration	Length of Intervention	Goal of body size change Outcomes Reported	Significant Results
Burnham & Wilcox, 2002 ⁸⁶	RCT Exercise facility	Breast Colon	Pre-planned exercise Post treatment Rehabilitation and health promotion	Individual (6) Comp 1 (6) Intervention 1 (6) Intervention 2	Not applicable	Intervention 1: 25-40% heart rate reserve Aerobic activity 14-32 minutes 3 days/week Intervention 2: 40-60% heart rate reserve Aerobic activity 14-32 minutes 3 days/week	10 weeks	<i>Decrease body weight/fat:</i> Body fat percent Body weight	ES -0.153 ES 0.636
Courneya et al., 2003 ⁹⁰ Fairey et al., 2003 ¹⁰⁰	RCT Exercise facility	Breast	Pre-planned exercise Post treatment Rehabilitation and health promotion	Individual (28) Comp 1 (25) Intervention 1	Not applicable	70-75% maximum VO2 Aerobic activity 15-35 minutes 3 days/week	15 weeks	<i>Decrease body weight/fat:</i> Body Mass Index Body weight Sum of skinfolds	ES 0.103 ES 0.015 ES 0.115
Courneya et al., 2002 ⁸² Courneya et al., 2003 ⁸³	RCT Home	All cancers possible Breast	Behavioral Post treatment Coping and rehabilitation	Group (11) Comp 1 (11) Intervention 1	Group psychotherapy	65-75% maximum heart rate Aerobic activity 20-30 minutes 3-5 days/ week	10 weeks	<i>Decrease body weight/fat:</i> Body fat composition [calipers]	ES 0.101

Table F-11. Body size (continued)

First Author/Year	Study Design Intervention Setting	Cancer Diagnoses	Intervention Type Timing PEACE Framework Category	Sampling Individual/Group (n) Per Group	Non Exercise Intervention Elements	PA Intensity PA Mode PA Frequency/ Duration	Length of Intervention	Goal of body size change Outcomes Reported	Significant Results
Djuric et al., 2002 ⁸¹	RCT Community	Breast	Behavioral Post treatment Behavioral and health promotion	Individual (13) Comp 1 (10) Intervention 1: Weight Watchers exercise points system (13) Intervention 2: individualized (11) Intervention 3: intervention 1 plus intervention 2	Diet	Moderate intensity PA mode not reported 30-45 minutes 5-7 days/week	12 weeks	<i>Decrease body weight/fat:</i> Body weight change [beam scale] Body weight loss percent achieving 10% [beam scale]	 p<.05 p<.016
Segal et al., 2001 ⁸⁷	RCT Primary care Home	Breast	Behavioral and pre-planned exercise During treatment Coping	Individual (41) Comp 1 (40) Intervention 1: self-directed exercise (42) Intervention 2: supervised preplanned exercise	Not applicable	50-60% maximum VO2 Walking Duration not reported 5 days/week	26 weeks	<i>Decrease body weight/fat:</i> Body weight	Not significant

Table F-11. Body size (continued)

First Author/Year	Study Design Intervention Setting	Cancer Diagnoses	Intervention Type Timing PEACE Framework Category	Sampling Individual/Group (n) Per Group	Non Exercise Intervention Elements	PA Intensity PA Mode PA Frequency/ Duration	Length of Intervention	Goal of body size change Outcomes Reported	Significant Results
Winningham et al., 1988 ⁸⁹	RCT Unknown	Breast	Pre-planned exercise During treatment Coping	Individual (12) Comp 1 (14) Intervention 1 (16) Intervention 2	Not applicable	Intervention 1: Intensity not reported Stretching Duration not reported 3 days/week Intervention 2: 60-85% maximum heart rate Aerobic activity 20-30 minutes 3 days/week	10 weeks	<i>Decrease body weight/fat:</i> Percent body fat Body weight Lean body weight Subcutaneous body fat distribution Sum of skinfolds ≤45 years >45 years	p<.033 Not significant Not significant p<.008 p<.0009 Not significant
Winningham et al., 1989 ¹⁰⁸									
Cunningham et al., 1986 ⁸⁵	RCT Primary care	Acute leukemia	Pre-planned exercise During treatment Coping	Individual (10) Comp 1 (10) Intervention 1 (10) Intervention 2	Not applicable	Intervention 1: Intensity not reported Calisthenics 30 minutes 3 days/week Intervention 2: Intensity not reported Calisthenics 30 minutes 5 days/week	35 days	<i>Increase or maintain muscle mass</i> Body weight [percent of admission measures] Arm fat area [percent of admission measures] Arm muscle area [percent of admission measures]	Not significant Not significant Not significant

Table F-11. Body size (continued)

First Author/Year	Study Design Intervention Setting	Cancer Diagnoses	Intervention Type Timing PEACE Framework Category	Sampling Individual/Group (n) Per Group	Non Exercise Intervention Elements	PA Intensity PA Mode PA Frequency/ Duration	Length of Intervention	Goal of body size change Outcomes Reported	Significant Results
Dimeo et al., 1997 ¹⁰²	Non-RCT Primary care	Breast Non-small cell lung carcinoma Sarcoma Semioma Non-Hodgkin's lymphoma	Pre-planned exercise Post treatment Rehabilitation	Individual (16) Comp 1 (16) Intervention 1	Not applicable	80% maximum heart rate Walking 15-30 minutes 5 days/week	6 weeks	Avoid muscle loss Body Mass Index	Not significant
McKenzie et al., 2003 ¹⁰⁷	RCT Exercise facility	Breast	Pre-planned exercise Post treatment Rehabilitation and health promotion	Individual (7) Comp 1 (7) Intervention 1	Not applicable	PA intensity not reported Aerobic activity Strength/resistance Stretching 30-60 minutes 3 days/week	8 weeks	Avoid increases in arm volume Arm volume by circumference Arm volume by water displacement	ES 1.642 ES 1.262
Segal et al., 2003 ⁹¹	RCT Exercise facility	Prostate	Pre-planned exercise During treatment Coping	Individual (73) Comp 1 (82) Intervention 1	Not applicable	60-70% one repetition maximum Strength/resistance: 9 exercises, 2 sets each, 8-12 repetitions Duration not reported 3 days/week	12 weeks	Avoid muscle mass loss BMI Body weight Skinfolds Waist circumference	Not significant Not significant Not significant Not significant

Table F-12. Pain

First Author/Year	Study Design Intervention Setting	Cancer Diagnoses	Intervention Type Timing PEACE Framework Category	Sampling Individual/Group (n) Per Group	Non Exercise Intervention Elements	PA Intensity PA Mode PA Frequency/ Duration	Length of Intervention	Outcomes Reported	Significant Results
Berglund et al., 1993 ⁹²	Non-RCT Exercise facility	Breast Ovarian Testicular	Pre-planned exercise Post treatment Rehabilitation	Individual (30) Comp 1 (30) Intervention 1	Relaxation training Information Coping strategies	Intensity not reported Aerobic activity Strength/resistance Stretching 60 minutes 1day/week	4 weeks	Pain [no validity/reliability measure scale]	Not significant *all results are from a repeated measures ANOVA from 5 time points: baseline, post, 3, 6 & 12 months
Berglund et al., 1994 ⁹³	RCT Unknown	Breast Ovarian Undefined	Pre-planned exercise Post treatment Rehabilitation	Individual (101) Comp 1 (98) Intervention 1	Relaxation Diet Life coping skills	Intensity not reported Aerobic activity Strength training Stretching 60 minutes 1 day/week	4 weeks	Pain [no validity/reliability measure scale]	p<.0001 *all results are from a repeated measures ANOVA from 5 time points: baseline, post, 3,6 & 12 months
Segal et al., 2001 ⁸⁷	RCT Primary care Home	Breast	Behavioral and pre-planned exercise During treatment Coping	Individual (41) Comp 1 (40) Intervention 1: self-directed exercise (42) Intervention 2: supervised preplanned exercise	Not applicable	50-60% maximum VO2 Walking Duration not reported 5 days/week	26 weeks	Bodily pain [SF-36]	Not significant

Table F-13. Vigor / vitality

First Author/Year	Study Design Intervention Setting	Cancer Diagnoses	Intervention Type Timing PEACE Framework Category	Sampling Individual/Group (n) Per Group	Non Exercise Intervention Elements	PA Intensity PA Mode PA Frequency/ Duration	Length of Intervention	Outcomes Reported	Significant Results
Burnham & Wilcox, 2002 ⁸⁶	RCT Exercise facility	Breast Colon	Pre-planned exercise Post treatment Rehabilitation and health promotion	Individual (6) Comp 1 (6) Intervention 1 (6) Intervention 2	Not applicable	Intervention 1: 25-40% heart rate reserve Aerobic activity 14-32 minutes 3 days/week Intervention 2: 40-60% heart rate reserve Aerobic activity 14-32 minutes 3 days/week	10 weeks	Personal energy [Linear Analog Self-Assessment measure]	ES 1.265
Dimeo et al., 1999 ¹⁰⁶	RCT Primary care	Solid tumors or breast carcinoma Metastatic breast carcinoma Seminoma Sarcoma/ adenocarcinoma Hodgkin's disease Non-Hodgkin's lymphoma Small cell lung carcinoma	Pre-planned exercise During treatment Coping	Individual (33) Comp 1 (29) Intervention 1	Not applicable	50% heart rate reserve Aerobic activity 15 minutes 7 days/week	Not reported/ hospital discharge	Vigor [Profile of Mood Status measure (POMS)]	ES 0.434

Table F-13. Vigor / vitality (continued)

First Author/Year	Study Design Intervention Setting	Cancer Diagnoses	Intervention Type Timing PEACE Framework Category	Sampling Individual/Group (n) Per Group	Non Exercise Intervention Elements	PA Intensity PA Mode PA Frequency/ Duration	Length of Intervention	Outcomes Reported	Significant Results
MacVicar et al., 1986 ¹¹²	Non-RCT Unknown	Breast	Pre-planned exercise During treatment Coping	Individual (4) Comp 1 (6) Intervention 1 (6) Intervention 2	Not applicable	60-85% maximum heart rate on pre-test aerobic assessment Aerobic activity 3 days/week	10 weeks	Vigor/activity [Profile of Mood States (POMS)]	Mean changes reported. Vigor increased in treatment group.
McKenzie et al., 2003 ¹⁰⁷	RCT Exercise facility	Breast	Pre-planned exercise Post treatment Rehabilitation and health promotion	Individual (7) Comp 1 (7) Intervention 1	Not applicable	PA Intensity not reported Aerobic activity Strength/resistance Stretching 30-60 minutes 3 days/week	8 weeks	Vitality QOL [SF-36]	p<.023
Mock et al., 2001 ⁹⁵ Pickett et al., 2002 ⁹⁶	RCT Home	Breast	Behavioral During treatment Coping	Individual (25) Comp 1 (23) Intervention 1	Not applicable	50-80% maximum heart rate Walking 15-30 minutes 5-6 days/week	6 weeks to 6 months	Vigor [Profile of Moods States (POMS)]	p<.00
Segal et al., 2001 ⁸⁷	RCT Primary care Home	Breast	Behavioral and pre-planned exercise During treatment Coping	Individual (41) Comp 1 (40) Intervention 1: self-directed exercise (42) Intervention 2: supervised preplanned exercise	Not applicable	50-60% maximum VO2 Walking Duration not reported 5 days/week	26 weeks	Vitality QOL [SF-36]	Not significant

Table F-14. Symptoms / side effects

First Author/Year	Study Design Intervention Setting	Cancer Diagnoses	Intervention Type Timing PEACE Framework Category	Sampling Individual/Group (n) Per Group	Non Exercise Intervention Elements	PA Intensity PA Mode PA Frequency/ Duration	Length of Intervention	Outcomes Reported	Significant Results
Berglund et al., 1994 ⁹³	RCT Unknown	Breast Ovarian Undefined	Pre-planned exercise Post treatment Rehabilitation	Individual (101) Comp 1 (98) Intervention 1	Relaxation Diet Life coping skills	Intensity not reported Aerobic activity Strength training Stretching 60 minutes 1 day/week	4 weeks	Aversions [physical symptoms related to breast cancer scale] Mixed symptoms A [physical symptoms related to breast cancer scale] Mixed symptoms B [physical symptoms related to breast cancer scale] Mucous membrane disturbances frequent [physical symptoms related to breast cancer scale] Sexual problems frequency [physical symptoms related to breast cancer scale] Surgery effects [physical symptoms related to breast cancer scale]	Not significant Not significant Not significant Not significant Not significant Not significant *all results are from a repeated measures ANOVA from 5 time points: baseline, post, 3, 6 & 12 months

Table F-14. Symptoms / side effects (continued)

First Author/Year	Study Design Intervention Setting	Cancer Diagnoses	Intervention Type Timing PEACE Framework Category	Sampling Individual/Group (n) Per Group	Non Exercise Intervention Elements	PA Intensity PA Mode PA Frequency/ Duration	Length of Intervention	Outcomes Reported	Significant Results
Dimeo et al., 1999 ¹⁰⁶	RCT Primary Care	Solid tumors or breast carcinoma Metastatic breast carcinoma Seminoma Sarcoma/ adenocarcinoma Hodgkin's disease Non-Hodgkin's lymphoma Small cell lung carcinoma	Pre-planned exercise During treatment Coping	Individual (33) Comp 1 (29) Intervention 1	Not applicable	50% heart rate reserve Aerobic activity 15 minutes 7 days/week	Not reported/ hospital discharge	Somatization [Symptom Check List SCL-90-R]	ES 0.547
Dimeo et al., 1997 ¹⁰¹	RCT Primary Care	Breast Germ cell Sarcoma Lung Adenocarcinoma Neuroblastoma	Pre-planned exercise During treatment Coping	Individual (37) Comp 1 (33) Intervention 1	Not applicable	50% heart rate reserve Aerobic activity 15 minutes 7 days/week	Not clear/ day of hospital discharge	Severity of diarrhea [toxicity of high dose chemotherapy (HDC)] Severity of infection [toxicity of HDC] Severity of mucositis [toxicity of HDC] Severity of pain [toxicity of HDC]	ES 0.507 ES 0.225 ES -0.130 ES 0.849
Mock et al., 1994 ⁹⁹	RCT Home	Breast	Behavioral During treatment Coping	Individual (5) Comp 1 (9) Intervention 1	Support group	Self-paced Walking 10-45 minutes 4-5 days/week	4-6 months	Nausea [Symptom Assessment Scale] Vomiting [Symptom Assessment Scale]	Not significant Not significant

Table F-14. Symptoms / side effects (continued)

First Author/Year	Study Design Intervention Setting	Cancer Diagnoses	Intervention Type Timing PEACE Framework Category	Sampling Individual/Group (n) Per Group	Non Exercise Intervention Elements	PA Intensity PA Mode PA Frequency/ Duration	Length of Intervention	Outcomes Reported	Significant Results
Winningham et al., 1988 ⁸⁹	RCT Unknown	Breast	Pre-planned exercise	Individual (12) Comp 1	Not applicable	Intervention 1: Intensity not reported	10 weeks	Nausea [Symptom Checklist 90-Revised SCL-90-R]	p<.032
Winningham et al., 1989 ¹⁰⁸			During treatment Coping	(14) Intervention 1 (16) Intervention 2		Stretching Duration not reported 3 days/week Intervention 2: 60-85% maximum heart rate Aerobic activity 20-30 minutes 3 days/week		Somatization [Symptom Checklist 90-Revised SCL-90-R]	p<.04

Table F-15. Immune parameters

First Author/Year	Study Design Intervention Setting	Cancer Diagnoses	Intervention Type Timing PEACE Framework Category	Sampling Individual/Group (n) Per Group	Non Exercise Intervention Elements	PA Intensity PA Mode PA Frequency/ Duration	Length of Intervention	Outcomes Reported	Significant Results
Dimeo et al., 1997 ¹⁰¹	RCT Primary care	Breast	Pre-planned exercise	Individual (37) Comp 1	Not applicable	50% heart rate reserve	Not clear/day of hospital discharge	Duration of neutropenia (days)	ES 0.643
		Sarcoma Lung Adenosar-cinoma Neuroblastoma	During treatment Coping	(33) Intervention 1		Aerobic activity 15 minutes 7 days/week		Duration of thrombopenia (days)	ES 0.442
Hayes et al., 2003 ¹⁰⁴	Non-RCT Primary care	Acute myeloid leukemia	Pre-planned exercise	Individual (6) Comp 1	Not applicable	Intervention 1: 70-90% maximum heart rate HR	3 months	CD3+ (helper/ suppressor T-cell)	Not significant
		Breast	During treatment	(6) Intervention 1		Aerobic activity Strength		CD4+ (helper T-cells)	Not significant
		Multiple myeloma	Rehabilitation			20-40 minutes 3 days/week		CD8+ (suppressor T-cell)	Not significant
		Non-Hodgkin's lymphoma				Comparison 1: Intensity not reported		Lymphocytes	Not significant
		Lymphoblastic lymphoma/ leukemia				Stretching		Ratio CD4+/CD8+	Not significant
		Rhabdomyo-sarcoma				20-40 minutes 3 days/week		T cell function adjusted for CD3+	Not significant
					Total t-cell function	Not significant			
					White blood cells	Not significant			

Table F-15. Immune parameters (continued)

First Author/Year	Study Design Intervention Setting	Cancer Diagnoses	Intervention Type Timing PEACE Framework Category	Sampling Individual/Group (n) Per Group	Non Exercise Intervention Elements	PA Intensity PA Mode PA Frequency/ Duration	Length of Intervention	Outcomes Reported	Significant Results
Na, 2000 ¹⁰⁵	RCT Primary care	Stomach	Pre-planned exercise During treatment Rehabilitation	Individual (18) Comp (17) Intervention	Not applicable	Intensity not reported Aerobic activity 60-90 minutes 4-5 days/ week	2 weeks	Natural killer cell cytotoxic activity	p<.05
Nieman et al., 1995 ¹⁰³	RCT Unknown	Breast	Pre-planned exercise Post treatment Survival	Individual (8) Comp 1 (8) Intervention 1	Not applicable	75% maximum heart rate Aerobic activity Strength/ resistance 60 minutes 3 days/week	8 weeks	E: T20: 1 (mononuclear cells to cancer cell ratio NKCA percent lysis) E: T40:1 (mononuclear cells to cancer cell ratio NKCA percent lysis) Lymphocytes Neutrophils Natural killer cells T cells Total leukocytes	ES 1.047 ES 0.636 ES -0.799 ES -0.580 ES -0.417 ES -0.765 ES -0.705

Table F-16. Mental / emotional / psychological well-being

First Author/Year	Study Design Intervention Setting	Cancer Diagnoses	Intervention Type Timing PEACE Framework Category	Sampling Individual/Group (n) Per Group	Non Exercise Intervention Elements	PA Intensity PA Mode PA Frequency/ Duration	Length of Intervention	Outcomes Reported	Significant Results
Berglund et al., 1993 ⁹²	Non-RCT Exercise facility	Breast Ovarian Testicular	Pre-planned exercise Post treatment Rehabilitation	Individual (30) Comp 1 (30) Intervention 1	Relaxation training Information Coping strategies	Intensity not reported Aerobic activity Strength/ resistance Stretching 60 minutes 1day/week	4 weeks	Depressive symptoms [modified HAD-scale no validity/ reliability measure] Anxiety Symptoms [modified HAD-scale no validity/ reliability measure]	p<.01 p<.01 *all results are from a repeated measures ANOVA from 5 time points: baseline, post, 3, 6 & 12 months

Table F-16. Mental / emotional / psychological well-being (continued)

First Author/Year	Study Design Intervention Setting	Cancer Diagnoses	Intervention Type Timing PEACE Framework Category	Sampling Individual/Group (n) Per Group	Non Exercise Intervention Elements	PA Intensity PA Mode PA Frequency/ Duration	Length of Intervention	Outcomes Reported	Significant Results
Berglund et al., 1994 ⁹³	RCT Unknown	Breast Ovarian Undefined	Pre-planned exercise Post treatment Rehabilitation	Individual (101) Comp 1 (98) Intervention 1	Relaxation Diet Life coping skills	Intensity not reported Aerobic activity Strength training Stretching 60 minutes 1 day/week	4 weeks	Avoidance Fatalistic Fighting spirit Hopeless *all used mental adjustment to cancer scale Anxiety scale [modified HAD-scale] Anxious preoccupation [mental adjustment to cancer scale] Worry [physical symptoms related to breast cancer scale] Depression [Modified HAD-scale]	Not significant Not significant Not significant Not significant Not significant Not significant Not significant Not significant *all results are from a repeated measures ANOVA from 5 time points: baseline, post, 3, 6 & 12 months

Table F-16. Mental / emotional / psychological well-being (continued)

First Author/Year	Study Design Intervention Setting	Cancer Diagnoses	Intervention Type Timing PEACE Framework Category	Sampling Individual/Group (n) Per Group	Non Exercise Intervention Elements	PA Intensity PA Mode PA Frequency/ Duration	Length of Intervention	Outcomes Reported	Significant Results
Burnham & Wilcox, 2002 ⁸⁶	RCT Exercise facility	Breast	Pre-planned exercise	Individual	Not applicable	Intervention 1: 25-40% heart rate reserve	10 weeks	Depression [Linear Analog Self-Assessment measure]	ES 1.279
		Colon	Post treatment Rehabilitation and health promotion	(6) Comp 1 (6) Intervention 1 (6) Intervention 2	Aerobic activity 14-32 minutes 3 days/week	Anxiety [Linear Analog Self-Assessment measure]		ES 0.901	
					Intervention 2: 40-60% heart rate reserve	Anger [Linear Analog Self-Assessment measure]		ES -0.114	
Courneya et al., 2002 ⁸²	RCT Home	All cancers possible	Behavioral Post treatment	Group (11) Comp 1	Group psychotherapy	65-75% maximum heart rate	10 weeks	Depression [CES-D scale]	ES 0.005
Courneya et al., 2003 ⁸³		Breast	Coping and rehabilitation	(11) Intervention 1		Aerobic activity 20-30 minutes 3-5 days/ week		Anxiety [State-Trait Anxiety Inventory]	ES 0.000
								Emotional well-being [Functional Assessment of Cancer Therapy-General (FACT-G Scale)]	ES 0.000

Table F-16. Mental / emotional / psychological well-being (continued)

First Author/Year	Study Design Intervention Setting	Cancer Diagnoses	Intervention Type Timing PEACE Framework Category	Sampling Individual/Group (n) Per Group	Non Exercise Intervention Elements	PA Intensity PA Mode PA Frequency/ Duration	Length of Intervention	Outcomes Reported	Significant Results
Courneya et al., 2003 ⁹⁰	RCT	Breast	Pre-planned exercise	Individual (28) Comp 1	Not applicable	70-75% maximum VO2	15 weeks	Emotional well-being [Functional Assessment of Cancer Therapy-Breast (FACT-B scale)]	ES 0.375
Fairey et al., 2003 ¹⁰⁰	Exercise facility		Post treatment Rehabilitation and health promotion	(25) Intervention 1		Aerobic activity 15-35 minutes 3 days/week		Trial Outcome Index (TOI) score [well-being with breast cancer subscale]	ES 0.200

Table F-16. Mental / emotional / psychological well-being (continued)

First Author/Year	Study Design Intervention Setting	Cancer Diagnoses	Intervention Type Timing PEACE Framework Category	Sampling Individual/Group (n) Per Group	Non Exercise Intervention Elements	PA Intensity PA Mode PA Frequency/ Duration	Length of Intervention	Outcomes Reported	Significant Results	
Dimeo et al., 1999 ¹⁰⁶	RCT Primary Care	Solid tumors or breast carcinoma	Pre-planned exercise	Individual (33) Comp 1	Not applicable	50% heart rate reserve	Not reported/ hospital discharge	Global psychologic distress [Symptom Check List SCL-90-R]	ES 0.253	
		Metastatic breast carcinoma	During treatment	(29) Intervention 1		Aerobic activity				
		Seminoma	Coping			15 minutes 7 days/week			Anxiety [Symptom Check List SCL-90-R]	ES 0.278
		Sarcoma/ adenocarcinoma							Phobic anxiety [Symptom Check List SCL-90-R]	ES 0.154
		Hodgkin's disease							Depression [Profile of Mood States POMS]	ES 0.079
		Non-Hodgkin's lymphoma							Depression [Symptom Check List SCL-90-R]	ES 0.263
		Small cell lung carcinoma							Anger/hostility [Profile of Mood States POMS]	ES 0.063
									Hostility [Symptom Check List SCL-90-R]	ES 0.266

Table F-16. Mental / emotional / psychological well-being (continued)

First Author/Year	Study Design Intervention Setting	Cancer Diagnoses	Intervention Type Timing PEACE Framework Category	Sampling Individual/Group (n) Per Group	Non Exercise Intervention Elements	PA Intensity PA Mode PA Frequency/ Duration	Length of Intervention	Outcomes Reported	Significant Results
MacVicar et al., 1986 ¹¹²	Non-RCT Unknown	Breast	Pre-planned exercise During treatment Coping	Individual (4) Comp 1 (6) Intervention 1 (6) Intervention 2	Not applicable	60-85% maximum heart rate on pre-test aerobic assessment Aerobic activity 3 days/week	10 weeks	Total Mood Disturbance [Profile of Mood States (POMS)] Tension/anxiety [Profile of Mood States (POMS)] Depression [Profile of Mood States (POMS)] Anger/hostility [Profile of Mood States (POMS)]	Mean changes reported. Total mood disturbance, tension/ anxiety, depression, and anger/ hostility all decreased in treatment group.
McKenzie et al., 2003 ¹⁰⁷	RCT Exercise facility	Breast	Pre-planned exercise Post treatment Rehabilitation and health promotion	Individual (7) Comp 1 (7) Intervention 1	Not applicable	PA Intensity not reported Aerobic activity Strength/ resistance Stretching 30-60 minutes 3 days/week	8 weeks	Mental health QOL [SF-36]	p<.019

Table F-16. Mental / emotional / psychological well-being (continued)

First Author/Year	Study Design Intervention Setting	Cancer Diagnoses	Intervention Type Timing PEACE Framework Category	Sampling Individual/Group (n) Per Group	Non Exercise Intervention Elements	PA Intensity PA Mode PA Frequency/ Duration	Length of Intervention	Outcomes Reported	Significant Results
Mock et al., 1994 ⁹⁹	RCT Home	Breast	Behavioral During treatment Coping	Individual (5) Comp 1 (9) Intervention 1	Support group	Self-paced Walking 10-45 minutes 4-5 days/week	4-6 months	Depression [Symptom Assessment Scale] Impact of medical illness on subject [Psychosocial Adjustment to Illness Scale] Psychologic distress [Brief Symptom Inventory] Anxiety [Symptom Assessment Scale]	p=.01 ES 0.413 ES 0.896 Not significant
Mock, et al., 1997 ⁹⁴ Mock et al., 1998 ⁹⁸	Non-RCT Home	Breast	Behavioral During treatment Coping	Individual (24) Comp 1 (22) Intervention 1	Not applicable	Self-paced Walking 20-30 minutes 4-5 days/week	6 weeks or 4-6 chemo-therapy cycles	Depression [Symptom Assessment Scales (SAS)] Anxiety [Symptom Assessment Scales (SAS)]	p<.104 p<.029

Table F-16. Mental / emotional / psychological well-being (continued)

First Author/Year	Study Design Intervention Setting	Cancer Diagnoses	Intervention Type Timing PEACE Framework Category	Sampling Individual/Group (n) Per Group	Non Exercise Intervention Elements	PA Intensity PA Mode PA Frequency/ Duration	Length of Intervention	Outcomes Reported	Significant Results
Mock et al., 2001 ⁹⁵ Pickett et al., 2002 ⁹⁶	RCT Home	Breast	Behavioral During treatment Coping	Individual (25) Comp 1 (23) Intervention 1	Not applicable	50-80% maximum heart rate Walking 15-30 minutes 5-6 days/week	6 weeks to 6 months	Depression [Profile of Mood States (POMS)] Total Mood Disturbance [Profile of Moods States (POMS)] Anxiety [Profile of Mood States (POMS)]	p<.001 p<.001 p<.001
336 Segal et al., 2001 ⁸⁷	RCT Primary care Home	Breast	Behavioral and pre-planned exercise During treatment Coping	Individual (41) Comp 1 (40) Intervention 1: self-directed exercise (42) Intervention 2: supervised preplanned exercise	Not applicable	50-60% maximum VO2 Walking Duration not reported 5 days/week	26 weeks	Mental health [SF-36]	Not significant
Segar et al., 1998 ⁸⁴	RCT Home Exercise facility	Breast	Pre-planned exercise Post treatment Rehabilitation and health promotion	Individual (10) Comp 1 (10) Intervention 1 (10) Intervention 2: exercise and behavior modification	Behavior modification	≥60% maximum heart rate Aerobic activity 30 minutes 4 days/week	10 weeks	Depression [Beck Depression Inventory (BDI)] Anxiety [Strait Anxiety Inventory (STAI)]	p<.05 p<.04