

Author Year; Country Score Research Design Total Sample Size	Methods	Outcome
Arbour et al. 2009 Canada Observational N=50	<p>Population: Mean age: 43.5±12.7 yrs; Gender: 35 males, 15 females; Mean time post-injury: 13.8±10.4 yrs; Severity of injury: complete (15), incomplete (35); Wheelchair users: 52% manual</p> <p>Treatment: Questionnaire</p> <p>Outcome Measures: Perceived proximity to a fitness center compared to time spent participating in leisure time physical activity</p>	<p>1. There was no significant association between leisure time physical activity and perceived proximity to a fitness center (p<0.1).</p>
Kehn & Kroll 2009 USA Downs & Black score=16 Observational (Mixed Methods) N=26	<p>Population: Mean age (range): 23-74 yrs; Gender: 16 males, 10 females; Level of injury: Tetraplegia (14), Paraplegia (9); Severity of injury: complete (11), incomplete (9); Time post-injury (range): 1-32 yrs</p> <p>Treatment: Semi-structured interview guide was developed to explore core areas such as experiences with exercise before and after injury, logistics of current exercise regimen, barriers and facilitators of exercise, perceived benefits of exercise, perceived impact of exercise on secondary conditions. Each interview lasted between 20 and 30 min. Analysis was conducted on patients who were exercisers vs. non-exercisers.</p> <p>Outcome Measures: Patients' experiences with exercise pre/post injury, barriers and facilitators to being active and perceived health impact measured after phone interview.</p>	<ol style="list-style-type: none"> 1. Non-exercisers had a significantly longer duration of injury (p<0.05). Other demographic and injury characteristics were not significantly different between exercisers and non-exercisers. 2. Similar barriers for both groups were reported. 3. Non-exercisers reported low return on physical investment, lack of facilities, equipment cost, fear of injury and lack of personal assistance as barriers to exercise. 4. Facilitators reported by exercisers included motivation, availability of accessible facilities and personal assistants, weight management and fear of health complications.
Kerstin et al. 2006 Sweden Qualitative – Multiple Case Studies N=16	<p>Population: Mean age: 36.0±10.6 yrs (range 21-61); Gender: 12 males, 4 females; Mean time post-injury: 8.6±9.8 yrs (range 2-41); Severity of injury: tetraplegia (8), paraplegia (8)</p> <p>Treatment: In-person and telephone semi-structured interviews</p> <p>Outcome Measures: Major themes relating to the factors that promote participation in physical activity</p>	<ol style="list-style-type: none"> 1. Cognitive and behavioural strategies: <ul style="list-style-type: none"> • role models • creating routines and goals • recalling previous experiences and acquiring new knowledge • accepting assistance 2. Environmental solutions: <ul style="list-style-type: none"> • accessibility • social support • equipment and funding 3. Motivation: <ul style="list-style-type: none"> • gaining and maintaining independence • improving physical appearance • becoming a role model • being competitive • establishing a self-image as physically active • becoming part of a social network 4. New frames of reference: <ul style="list-style-type: none"> • learning to live with narrower physical margins
Scelza et al. 2005 USA Downs & Black score=14	<p>Population: Mean age: 44.1 yrs; Gender: 50 males, 22 females; Severity of injury: paraplegia - complete (36%), incomplete (11%); tetraplegia - complete (19%),</p>	<p>1. 73.6% wanted to be engaged in an exercise program and 79.2% thought it would be helpful. Despite this, only</p>

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Observational N=72	incomplete (17%), ambulatory (17%); Mean time post-injury= 13.1 yrs Treatment: Cross-sectional survey Outcome Measures: The Barriers of Physical Exercise and Disability survey; The Perceived Stress Scale.	45.8% were currently participating in an exercise program. 2. Perceived Barriers: <ul style="list-style-type: none"> • 37.5% health problems that caused a cessation in exercise (pain & fractures) • 22.2% injured during exercise (sprains & pulled muscles) • 31.9% facilities (discomfort, lack of accessibility & privacy) 3. Exercise Concerns <ul style="list-style-type: none"> • 54.2% lack of motivation • 41.7% lack of energy • 40.3% program cost • 36.1% lack of local exercise program knowledge • 33.3% lack of interest • 31.9% lack of time 4. ↓ concerns in exercisers versus non-exercisers (p=0.016). 5. Concerns - Tetraplegia ↑ than paraplegia: <ul style="list-style-type: none"> • health issues cause a cessation in exercise (p=0.043) • difficulty to engage in exercise (p=0.024) • health issue concerns prevented exercise (p=0.035) 6. ↑ levels of perceived stress were related to ↑ concerns (p=0.036).
Levins et al. 2004 USA Qualitative – Ethnography N=8	Population: Mean age: 42 yrs; Gender: 5 males, 3 females; Level of injury: T1-low thoracic levels; Mean time post-injury: 25.6 yrs; Treatment: Semi-structured interviews Outcome Measures: Major themes relating to barriers and facilitators to participation in physical activity	1. Individual influences: <ul style="list-style-type: none"> • loss of an able identity • redefining self; turning points 2. Societal influences: <ul style="list-style-type: none"> • environmental and attitudinal barriers • material environment (structural, financial) • societal attitudes
Martin et al. 2002 Canada Downs & Black score=11 Observational N=15	Population: Group 1 (N=4); Mean age: 40 yrs (males), 19 yrs (females)-; Gender: 3 males, 1 female; Group 2 (N=6); Mean age: 38.5 yrs (males), 44 yrs (females); Gender: 4 males, 2 females; Group 3 (N=5); Mean age: 49.5 yrs (males), unknown (female); Gender: 4 males, 1 female. Treatment: Groups 1 & 2 were involved in an ongoing exercise program study. Group 3 was not in the study, but activity levels ranged from sedentary to regular. Each group engaged in a 1 hr focus session (open dialogue & discussion). Outcome Measures: Responses to open ended questions concerning exercise barriers, benefits and suggestions.	1. Barriers <ul style="list-style-type: none"> • Accessibility – accessibility & affordability of program, transportation to program • Pain – soreness & stiffness • Psychological – depression, lack of confidence, worries & disappointment in abilities • Lack of information – failure of doctor to suggest exercise 2. Benefits <ul style="list-style-type: none"> • Physical gains - ↑ muscle strength, ↑ ease of wheeling & ADLs. • Sense of well being - ↑ confidence and energy level 3. Facilitators <ul style="list-style-type: none"> • ↑ accessibility • Personal trainers

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		<ul style="list-style-type: none"> • Social support <p>4. Recommendations</p> <ul style="list-style-type: none"> • Self-monitoring – daily log, fitness testing • S.M.A.R.T. objectives (Griffin, 1998) – specific, measurable, accomplishment-oriented, realistic, time-bound • Safe, supervised & supportive environment • ↓ pain - stretching • ↓ transportation issues • Promote program
<p>Vissers et al. 2008 Netherlands Downs & Black score=11 Observational N=32</p>	<p>Population: Mean age: 45 yrs; Gender: 24 males, 8 females, Severity of injury: tetraplegia (12), paraplegia (20); Mean time post-injury: 103.5 mo; Years post-discharge 82.6 mo</p> <p>Treatment: Semi-structured interview.</p> <p>Outcome Measures: Response to retrospective & cross-sectional questions. 10 topic areas: subject & lesion characteristics, daily physical activity, attitude towards an active lifestyle, social activities, health, quality of life, coping, care requirements, other factors.</p>	<p>1. Most important barriers:</p> <ul style="list-style-type: none"> • In current situation: store & building accessibility, physical & mental health issues. • After discharge: emotional distress, self-care difficulty & mental health problems. • ↑ importance of barriers after discharge vs. current situation. <p>2. Most important facilitators:</p> <ul style="list-style-type: none"> • In current situation: daily physical activity preparation, physical activity stimulation & social activity preparation, in rehab centre. • After discharge: social support (family, friends, society).