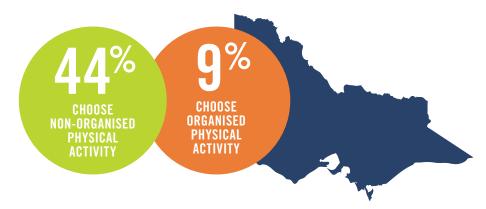
Female participation in sport & physical activity

A SNAPSHOT OF THE EVIDENCE

Females of all ages generally have lower physical activity participation rates than males.¹ Increasing physical activity levels for females is important for health and mental wellbeing.¹

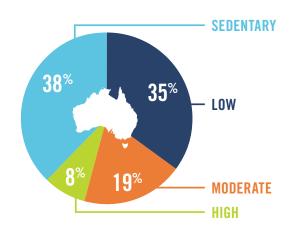
Understanding and addressing the barriers preventing more female participation in physical activity is complex. Evidence shows that gender and the needs of females should be considered when developing specific physical activity opportunities.



TREND: NON-ORGANISED/ORGANISED ACTIVITY LEVELS

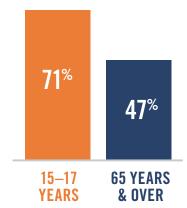
In Victoria, statistics show four times as many females (44%) are choosing to participate in non-organised or more flexible physical activity offerings compared to organised physical activity (9%).³

Female participation through sporting or recreational clubs is lower compared to males.⁴



TREND: ACTIVITY LEVELS

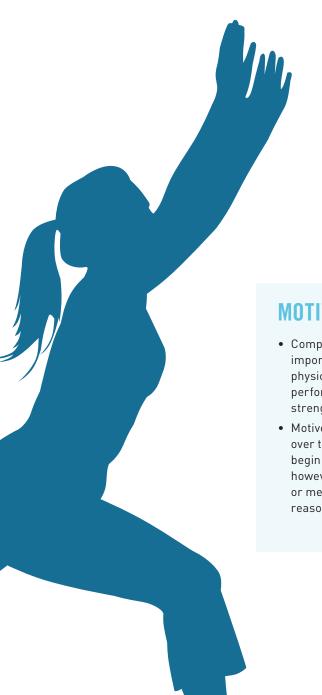
More than two-thirds of adult Australian females were classified as being sedentary or having low levels of exercise.¹



TREND: PARTICIPATION LEVELS

Participation in sport and active recreation by Victorian females declines as females get older.²





HEALTH BENEFITS OF PHYSICAL ACTIVITY FOR WOMEN

Even having a low level of physical activity is better for health than not being active at all.⁵

Participation in sport and physical activity can provide females with the following benefits:

 prevention and management of disease, such as: coronary heart disease, strokes, type 2 diabetes, Alzheimer's Disease and dementia^{6,7,8,9}

- increased health, fitness, body and bone strength^{10,11,12}
- weight loss and prevention of obesity⁷
- reduced risks of mortality⁵
- increased mental health and improved wellbeing¹³
- increase in social connections and enjoyment 14,15.



MOTIVES FOR FEMALES TO GET PHYSICALLY ACTIVE

- Compared to men, women place more importance on the social aspects of physical activity, and are less motivated by performance outcomes, such as building strength¹⁴.
- Motives to participate can change and evolve over time. For example, a woman may begin physical activity for health reasons, however find enjoyment in the social aspect or mental wellbeing and continue for those reasons^{16,17,18,19}.
- Key motivations include maintaining or improving health²⁰, appearance and weight management¹⁶, personal fulfilment¹⁶, wellbeing and improving quality of life¹⁶ and social interactions¹⁴.
- Younger women (18-35) have been found to be more motivated by appearance, weight loss and peer pressure compared to older women²¹, however conversely can be hampered by societal expectations of body image¹³.
- Older women are predominantly motivated by health outcomes²⁰.



PHYSICAL ACTIVITY ACROSS LIFE STAGES

- Addressing the barriers can have a greater influence on females being more active, compared to promoting the benefits of physical activity²².
- Reducing the perception of, or the actual barriers could be necessary to increase participation. The more barriers a

female perceives the less likely she is to engage 22,23,24 .

• Not all females are the same and some may experience different barriers and challenges to others. Certain barriers can affect a female more at different life stages 13,24,25,26.

See page 3 for more details



PHYSICAL ACTIVITY ACROSS LIFE STAGES

Influencers on physical activity

- Parents' physical activity levels^{27,28}
- Parental support (transport, cost and organisation)^{28,29}
- Parental encouragement^{28,30}
- Life stages and lifestyle (education, work, home life, family)¹³
- Inflexible opportunities for physical activity¹³
- Societal pressures and guilt (prioritising physical activity in their lives)¹³
- Family priorities rather than self as a priority^{32,33,13}
- Physical activity less of a priority, guilt laden and seen as a luxury (cost, time)^{32,33}
- Level of partner, family and social support^{23,25,33}

- Fewer 'perceived' barriers (than other age groups)²⁰
- Illness and injury²⁰
- Lack of information or opportunity²⁰
- Long-term patterns of being sedentary²⁰
- Cultural background, beliefs around gender and sport or value of physical activity^{40,41}
- Confidence, knowledge and perception of ability^{42,43,44,25,20,40,17}
- Perceptions of safety40,47,48
- Availability of facilities⁴⁰
- Previous physical activity experience⁴⁰

LIFE STAGE

RR

GIRLS & ADOLESCENTS 0-18 YEARS

- Promote parental involvement^{27,31,28,30}
- Consider logistics, parental support and involvement^{27,31,28,29,30}
- Provide noncompetitive options³¹
- Make it fun and social³¹
- Provide goal setting and self-monitoring options³¹



WOMEN 18-55 YEARS

- Provide flexible physical activity options in terms of schedule, cost and location^{14,24,13}
- Promote benefits of short duration physical activity that is suitable to fit into lifestyle (e.g. at work)^{14,24,13}
- Consider social, group and peer support^{14,24}
- Make it enjoyable^{14,24}
- Provide opportunities for involvement in program creation (creates a sense of ownership and meets needs)^{14,24}



MOTHERS

- Consider preference to unstructured over structured 33,34
- Consider flexibility^{33,34} by providing child care^{33,40} and variable payment options³⁵
- Provide group activities that includes their children and provide social benefits^{33,23,25}
- Provide individual tailored approaches (diaries, pedometers)^{33,35}
- Provide education and engagement for the broader family in activities and^{14,37,33} communication^{23,25,33}
- Communicate by text message and email^{33,35,36}



OLDER WOMEN 55+ YEARS

- Promote relevant, timely, specific information with consideration to overcoming health concerns^{20,24,38,39}
- Highlight the social focus^{20,24,38,39}
- Consider preference for scheduled routine^{20,24,38,39}



FEMALES OF ALL AGES

- Create partnerships and consultation with cultural and community groups 40,45,46
- Use word of mouth or face-to-face communication 14,37,53
- Foster social group and family support⁴⁰ and engage them in participation^{14,37}
- Encourage family and friends to engage other females^{14,37}
- Consider welcoming and inclusive approaches 40,45,46, environments 14,47,48 and attire 40,45,46
- Use diverse images 40,45,46,49
- Ensure a female can see herself participating⁵⁰
- Focus on skill and confidence building^{14,49,40}, reward and motivational approaches^{14,49,23} and goals^{51,52}

Keys to engagement in physical activity

Acknowledgment: VicHealth acknowledges the Centre for Sport and Social Impact at La Trobe University, specifically Professor Russell Hoye, Dr Erica Randle, Dr Matthew Nicholson and Pam Kappelides.

FEMALE PARTICIPATION IN SPORT & PHYSICAL ACTIVITY - REFERENCES

- Australian Bureau of Statistics 2012, Australian Health Survey: first results, 2011–12, cat no. 4364.0.55.001, Australian Bureau of Statistics, Canberra.
- 2. Australian Bureau of Statistics 2013, *Participation in sport and physical recreation: 2011–12 Report*, cat. no. 4177.0, Australian Sports Commission, Canberra.
- 3. Australian Sports Commission 2010, *Participation in Exercise*, *Recreation and Sport Survey: 2010 Annual Report*, Australian Sports Commission, Canberra.
- 4. Eime, RM, Sawyer N, Harvey JT, Casey MM, Westerbeek H & Payne WR 2014, 'Integrating public health and sport management: sport participation trends 2001–2010', Sport Management Review, viewed 29 September 2014, http://dx.doi.org/10.1016/j.smr.2014.05.004>.
- 5. Brown WJ, McLaughlin D, Leung J, McCaul KA, Flicker L, Almeida OP, Hankey GJ, Lopez D & Dobson AJ 2012, 'Physical activity and all-cause mortality in older women and men', *British Journal of Sports Medicine*, vol. 46, iss. 9, pp. 664-668.
- 6. Panagiotakos DB, Polystipioti A & Polychronopoulos E 2007, 'Prevalence of type 2 diabetes and physical activity status in elderly men and women from Cyprus (the MEDIS Study)', Asia-Pacific Journal of Public Health, vol. 19, no. 3, pp. 22–28.
- 7. Reiner M, Niermann C, Jekauc D & Wolf A 2013, 'Long-term health benefits of physical activity a systematic review of longitudinal studies', *BMC Public Health*, vol. 13, pp. 813-822.
- 8. Taber DR, Pratt C, Charneco EY, Dowda M, Phillips JA & Going SB 2014, 'Participation in vigorous sports, not moderate sports, is positively associated with cardiorespiratory fitness among adolescent girls', *Journal of Physical Activity and Health*, vol. 11, pp. 569-603.
- Trilk JL, Singhai A, Bigelman KA & Cureton KJ 2010, 'Effect of sprint interval training on circulatory function during exercise in sedentary, overweight/obese women', European Journal of Applied Physiology, vol. 111, pp. 1591-1597.
- 10. Greene DA, Naughton GA, Briody JN, Kemp A, Woodhead H & Corrigan L 2005, 'Bone strength index in adolescent girls: does physical activity make a difference?', *British Journal of Sports Medicine*, vol. 39, pp. 622-627.

- 11. Moghadasi M & Siavashour S 2013, 'The effect of 12 weeks of resistance training on hormones of bone formation in young sedentary women', *European Journal of Applied Physiology*, vol. 113, pp. 25-32.
- Stenevi-Lundgren S, Daly RM, Linden C, Gardsell P & Karlsson MK 2008, 'Effects of a daily school based physical activity intervention program on muscle development in prepubertal girls', European Journal of Applied Physiology, vol. 105, pp. 533-541.
- 13. Milne M, Divine A, Hall C, Gregg M & Hardy J 2014, 'Non-participation: how age influences inactive women's views of exercise', *Journal of Applied Biobehavioral Research*, vol. 19, iss. 3, pp. 171-191.
- 14. Hanlon C, Morris T & Nabbs S 2010, 'Establishing a successful physical activity program to recruit and retain women', *Sport Management Review*, vol. 13, pp. 269-282.
- 15. Watson N, Milat AJ, Thomas M & Currie J 2005, 'The feasibility and effectiveness of pram walking groups for postpartum women in western Sydney', *Health Promotion Journal of Australia*, vol. 16, no. 2, pp. 93-99.
- 16. Codina N, Pestana J & Armadans I 2012, 'Physical activity (PA) among middle-aged women: initial and current influences and patterns of participation', *Journal of Women & Aging*, vol. 25, iss. 3, pp. 260-272.
- 17. Leone LA & Ward DS 2013, 'A mixed methods comparison of perceived benefits and barriers to exercise between obese and non-obese women', *Journal of Physical Activity & Health*, vol. 10, pp. 461-469.
- 18. O'Dougherty M, Kurzer MS & Schmitz KH 2010, 'Shifting motivations: young women's reflections on physical activity over time and across contexts', *Health Education and Behavior*, vol. 37, pp. 547-567.
- 19. Wilcox S, Castro CM & King AC 2006, 'Outcome expectations and physical activity participation in two samples of older women', *Journal of Health Psychology*, vol. 11, no. 1, pp. 65-77.
- 20. Newson RS & Kemps EB 2007, 'Factors that promote and prevent engagement of older adults', *Journal of Aging and Health*, vol. 19, no. 3, pp. 470-481.

- 21. Bulley C, Donaghy M, Payne A & Mutrie N 2009, 'Personal meanings, values and feelings relating to physical activity and exercise participation in female undergraduates: a qualitative exploration', *Journal of Health Psychology*, vol. 14, no. 6, pp. 751-760.
- 22. Adams M & McCrone S 2011, 'Predictors of exercise in midline and older women based on the health promotion model', *Women in Sport and Physical Activity Journal*, vol. 20, iss. 2, pp. 65-75.
- 23. Cannioto RA 2010, 'Physical activity barriers, behaviours, and beliefs of overweight and obese working women: a preliminary analysis, *Women in Sport and Physical Activity Journal*, vol. 19, no. 1, pp. 70-85.
- 24. Kowal J & Fortier MS 2007, 'Physical activity behavior change in middle-aged and older women: the role of barriers and of environmental characteristics, *Journal of Behavioral Medicine* vol. 30, iss. 3, pp. 233-242.
- 25. Jones C, Jancey J, Howat P, Dhaliwal S, Burns S, McManus A, Hills AP & Anderson A 2013, 'Utility of stages of change construct in the planning of physical activity interventions among playgroup mothers', *BMC Research Notes*, vol. 6, pp. 300-308.
- 26. Standiford A 2013, 'The secret struggle of the active girl: a qualitative synthesis of interpersonal factors that influence physical activity in adolescent girls, *Health Care for Women International*, vol. 34, iss. 10, pp. 860-877.
- 27. Dollman J 2010, 'Changing associations of Australian parents' physical activity with their children's sport participation: 1985 to 2004', *Australia and New Zealand Journal of Public Health*, vol. 34, no. 6, pp. 578-582.
- 28. Sebire SJ, Haase AM, Montgomery AA, McNeill J & Jago R 2012, 'Associations between physical activity parenting practices and adolescent girls' self-perceptions and physical activity intentions', *Journal of Physical Activity and Health*, vol. 11, pp. 737-740.
- 29. Hardy LL, Kelly B, Chapman K, King L & Farrell L 2010, 'Parental perceptions of barriers to children's participation in organised sport in Australia', *Journal of Paediatrics and Child Health*, vol. 46, pp. 197-203.

- 30. Wilson AN & Dollman J 2009, 'Social influences on physical activity in Anglo-Australian and Vietnamese-Australian adolescent females in a single sex school', *Journal of Science and Medicine in Sport*, vol. 12, pp. 119-122.
- 31. Salmon J, Timperio A, Telford A, Carver A & Crawford D 2005, 'Association of family environment with children's television viewing and with low level of physical activity, *Obesity Research*, vol. 13, no. 11, pp. 1939-1951.
- 32. Caperchione CM, Kolt GS, Tennent R & Mummery WK 2011, 'Physical activity behaviours of culturally and linguistically diverse (CALD) women living in Australia: a qualitative study of socio-cultural influences', *BMC Public Health*, vol. 11, art. no. 26.
- 33. Jones C, Burns S, Howat P, Jancey J, McManus A & Carter O 2010, 'Playgroups as a setting for nutrition and physical interventions for mothers with young children: exploratory qualitative findings', *Health Promotion Journal of Australia*, vol. 21, pp. 92-98.
- 34. Borodulin K, Evenson KR & Herring AH 2009, 'Physical activity patterns during pregnancy through postpartum', *BMC Women's Health*, vol. 9, art. no. 32, pp. 1–7.
- 35. Monteiro SMDR, Jancey J, Dhaliwal SS, Howat PA, Burns S, Hills AP & Anderson AS 2014, 'Results of a randomized controlled trial to promote physical activity behaviours in mothers with young children', *Preventative Medicine*, vol. 59, pp. 12-18.
- 36. Reinhardt JA, van der Ploeg HP, Grzegrzulka R & Timperley JG 2012, 'Implementing lifestyle change though phonebased motivational interviewing in rural-based women with previous gestational diabetes mellitus', *Health Promotion Journal of Australia*, vol. 23, no. 1, pp. 5-9.
- 37. Murray D & Howat G 2009, 'The 'enrichment hypothesis' as an explanation of women's participation in rugby', *Annals of Leisure Research*, vol. 12, iss. 1, pp. 65-82.

- Resnick B, Orwig D, Wehren L, Zoimmerman S, Simpson M & Magaziner J 2005, 'The exercise plus program for older women post hip fracture: participant perspectives', *The Gerontologist*, vol. 45, no. 4, pp. 539-544.
- 39. Theriault DS, Shores KA, West ST & Naar JJ 2010, 'The association of location and social context with physical activity enjoyment in a population of able bodied rural aging women', *Annals of Leisure Research*, vol. 13, iss. 1-2, pp. 4-26.
- 40. O'Driscoll T, Banting LK, Borkoles E, Eime R & Polman R 2014, 'A systematic literature review of sport and physical activity participation in culturally and linguistically diverse (CALD) migrant populations', *Journal of Immigrant Minority Health*, vol. 16, pp. 515-530.
- 41. Spaaij R 2013, 'Cultural diversity in community sport: an ethnographic inquiry of Somali Australians' experiences', *Sport Management Review*, vol. 16, pp. 29-40.
- 42. David P, Pennell ML, Foraker RE, Katz ML, Buckworth J, Paskett ED 2014, 'How are previous physical activity and self-efficacy related to future physical activity and self-efficacy?, *Health Education and Behaviour*, August 25, pp. 1-4.
- 43. Azar D, Ball K, Salmon J & Cleland VJ 2010, 'Physical activity correlates in young women with depressive symptoms: a qualitative study', *International Journal of Behavioural Nutrition and Physical Activity*, vol. 7, no. 3.
- 44. Cleland V, Granados A, Crawford D, Winzenberg T & Ball K 2013, 'Effectiveness of interventions to promote physical activity among socioeconomically disadvantaged women: a systematic review and meta-analysis', *Obesity reviews*, vol. 14, iss. 3, pp. 197-212.
- 45. Maxwell H, Foley C, Taylor T & Burton C 2013, 'Social inclusion in community sport: a case study of Muslim women in Australia', *Journal of Sport Management*, vol. 27, pp. 467-481.

- 46. Sawrikar P & Muir K 2010, 'The myth of a 'fair go': barriers to sport and recreational participation among Indian and other ethnic minority women in Australia', *Sport Management Review*, vol. 13, pp. 355-367.
- 47. Garrard J, Rose G & Lo SK 2008, 'Promoting transportation cycling for women: the role of bicycle infrastructure', *Preventative Medicine*, vol. 46, pp. 55–59.
- 48. Van Dyck D, Cerin E, Conway TL, De Bourdeaudhuij I, Owen N, Kerr J, Cardon G, Frank LD, Saelens BE & Sallis JF 2012, 'Perceived neighbourhood environmental attributes associated with adults' transport-related walking and cycling: findings from the USA, Australia, and Belgium', International Journal of Behavioural Nutrition and Physical Activity, vol. 9, no. 70, pp. 1-14.
- 49. Maxwell H & Taylor T 2010, 'A culture of trust: engaging Muslim women in community sport organizations', *European Sport Management Quarterly*, vol. 10, :no. 4, pp. 465-483.
- 50. Hays LM, Damush TM & Clark DO 2005, 'Relationships between exercise self-definitions and exercise participation among urban women in primary care', *Journal of Cardiovascular Nursing*, vol. 20, no. 1, pp. 9-17.
- 51. Bravata DM, Smith-Spangler C, Sundaram V, Geinger AL, Lin N, Lewis R, Stave CD, Olkin I & Sirard JR 2007, 'Using pedometers to increase physical activity and improve health: a systematic review', *Journal of the American Medical Association*, vol. 298, no. 19, pp. 2296-2304.
- 52. Pal S, Cheng C, Egger G, Binns C & Donovan R 2009, 'Using pedometers to increase physical activity in overweight and obese women: pilot study', *BMC Public Health*, vol. 9, art. no. 309, pp. 1-9.
- 53. Bock C, Jarczok MN & Litaker D 2014, 'Community-based effort to promote physical activity: a systematic review of interventions considering mode of delivery, study quality and population subgroups', *Journal of Science and Medicine in Sport*, vol. 17, pp. 276-282.



