

Paternal Physical Activity: An Important Target to Improve the Health of Fathers and their Children

Abstract: *Although the transition to fatherhood is joyful and fulfilling for many men, becoming a father also exposes men to a series of new challenges and responsibilities that can negatively affect their well-being. As such, effective strategies that foster positive physical and mental health in fathers are required. Given the established links between regular physical activity and optimal health, strategies to reduce the substantial decline in physical activity typically observed during the early fatherhood may be particularly fruitful. In this commentary, we discuss the potential mediating role of physical activity on a series of important outcomes for fathers, including paternal and child health and the quality of the father-child relationship. We also present an argument that high-quality research studies testing physical activity interventions that meaningfully engage fathers are urgently required.*



Keywords: physical activity; fathers; mental health; obesity prevention

The transition to fatherhood is as a transformative process for many men.¹ While joyful and fulfilling in many ways, becoming a father also

introduces a host of new challenges and responsibilities that can negatively affect men's physical, psychological, and social-emotional well-being.² For these reasons, fatherhood is now recognized as an important social determinant of men's health.³

In his review of paternal mental health concerns, Fisher⁴ provides an important and timely synthesis of the existing

men during the transition to fatherhood are clearly required. In this commentary, we will highlight the important contribution that physical activity can make toward this goal. We will also present recent evidence suggesting that paternal physical activity behavior has a critical, but understudied, role in (a) optimizing child health and (b) fostering the father-child relationship.

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literature and a summary of the many research gaps that remain. In addition, the review provides a series of recommendations that will advance the field toward a greater understanding of which mechanisms can best be targeted to promote optimal health in men during this life stage. Importantly, the review discusses how paternal mental health has a flow-on effect on the physical and mental well-being of children.

From the evidence provided, effective strategies that promote mental health in

The Impact of Fatherhood on Physical Activity

Physical activity has a well-established role in promoting mental health and attenuating the effects of mental illness.⁵⁻⁷ Despite this, physical inactivity is common among parents,⁸ who face multiple barriers including new family responsibilities, guilt, lack of social support, work commitments, and scheduling constraints.⁹ Although these barriers affect both mothers and fathers,

DOI: 10.1177/1559827616689544. From the Priority Research Centre for Physical Activity and Nutrition (MDY, PJM) and School of Education, Faculty of Education and Arts (MDY, PJM), University of Newcastle, Callaghan, New South Wales, Australia. Address correspondence to Myles D. Young, PhD, Priority Research Centre in Physical Activity and Nutrition, University of Newcastle, University Drive, New South Wales 2308, Australia; e-mail: myles.young@newcastle.edu.au.

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fathers appear to experience a greater decrease in physical activity, which is likely due to sex differences in pre-child levels of voluntary, leisure-time physical activity.¹⁰ For example, a prospective analysis of 638 young adults over 2 years identified that men who had their first child during the study lost 5 hours of physical activity per week on average.¹¹ This was significantly more than the decrease observed in men without children over the 2 years (–1.5 hours per week). In contrast, the authors did not detect a significant difference in physical activity change between women who did or did not have their first child during the study.

Compared to men without children, recent systematic reviews show that fathers engage in significantly fewer minutes of moderate-to-vigorous physical activity per week, are less likely to meet physical activity guidelines, and are less likely to continue with leisure time sports.^{12,13} These findings are concerning for a number of reasons. First, as physical activity has a powerful protective effect against many physical and mental health conditions,^{5,14,15} the effect of fatherhood on men's mental health may be partially mediated through the negative impact of fatherhood on physical activity. In addition, reduced physical activity levels contribute to the increases in body mass index that are commonly observed in men with young children.¹⁶ Notably, research shows that fathers are more likely than mothers to be overweight or obese,¹⁷ placing them at further risk of additional health concerns.^{18,19}

Fathers Influence Their Children's Health

In addition to affecting men's physical and mental health, physical inactivity in fathers may have flow-on effects for their children's well-being. Within the family, fathers often assume the role of "physical activity" leaders and are generally responsible for engaging children in leisure-time physical activity.²⁰ Paternal parenting styles and behaviors are also independently associated with

obesity-risk in preschoolers, independent of maternal influences,^{21,22} and physical inactivity contributes to increases in paternal weight status, which appears to be a stronger determinant of child obesity-risk than maternal weight. In a longitudinal study of 3285 Australian families, children with an obese father were ~14 times more likely to become obese teenagers, even if the mother was a healthy weight.¹⁷ In contrast, children with an obese mother but a healthy weight father were not at significantly increased risk of becoming obese.

Aside from the health benefits, shared physical activity experiences also make an invaluable contribution toward fostering the father-child relationship. Sociological research has described the father-child bond as an "activation relationship" that is developed through co-physical activity and stimulating, vigorous, and unpredictable physical play.^{23,24} In an interesting qualitative study, independent groups of fathers and adult daughters both identified joint participation in sporting activities as the single most important turning point in the development of their relationship during childhood.²⁵ Notably, a positive father-child bond is linked to a diverse array of positive physical, social-emotional, educational, and psychological outcomes for children.²⁶ As such, increasing paternal physical activity levels has great potential for optimizing children's well-being across multiple domains.

Physical Activity Interventions Targeting Fathers

Although fatherhood presents men with a series of barriers to physical activity, the transition to fatherhood may actually be an opportune time to target fathers in behavioral interventions. Indeed, new fathers who successfully maintain pre-child physical activity levels are motivated by several parent-specific facilitators including enjoyment from time spent being active with children (co-physical activity), the importance of becoming a physically active role model, and the perceived benefits of physical

activity for the health of their family.⁹ As such, capitalizing on these newfound motivations may be a fruitful strategy to engage fathers in programs that can offset the substantive decline in physical activity typically observed during early fatherhood.^{27,28}

Despite this, very few physical activity interventions have engaged fathers.^{29,30} Moreover, men are generally underrepresented in interventions from many health behavior fields including physical activity,^{29,31} nutrition,³² and weight management.^{33,34} While fathers play a critical role in shaping their children's health and well-being, most child health behavior studies have predominantly targeted mothers. In a systematic review of 213 randomized controlled trials that targeted children's physical activity, healthy eating, or sedentary behavior, only 2 (1%) studies reported the use of specific strategies to engage fathers.³⁰ Where data were available, fathers were underrepresented in all studies regardless of the target behavior, child age group, program setting, or mode of delivery. In studies where parent participation was limited to one per family, fathers represented only 6% of parents. Despite this, only 4 studies (2%) acknowledged that a lack of fathers was a potential limitation.³⁰ This presents a strong rationale to target and meaningfully involve fathers in future research.

Evidence suggests that participants are more likely to engage with behavior change interventions that are socioculturally targeted to suit their unique preferences and values.²⁸ However, many men and fathers believe that personal or family-based physical activity programs are pitched toward females and mothers.^{30,35} Of note, the only physical activity intervention that has specifically targeted fathers to date is the *Healthy Dads, Healthy Kids* program, which was conducted by our research group.^{36,37} During the program, fathers with children aged 5 to 12 years were recruited and educated about the important contribution they can make to their children's health. The fathers are


also given the knowledge, skills, and motivation to role model positive health behaviors for their family. Recognizing the core role of physical activity as a father-child engagement mechanism, the program includes weekly physical activity sessions where fathers and their children participate in rough and tumble play, fundamental movement skill development, and fitness-based games. Co-physical activity is also emphasized through a series of fun home-based tasks and challenges.

At posttest in both pilot- and community-level randomized controlled trials of the *Healthy Dads, Healthy Kids* program, significant intervention effects were observed for objectively measured physical activity and a range of other health outcomes including weight status and dietary variables in both fathers and children.^{36,37} In both trials, all recruitment targets were met and program attendance, retention, and satisfaction metrics were high, providing evidence of the potential for socioculturally targeted interventions to engage fathers in health research and meaningfully improve family health outcomes.

Summary

The transition to fatherhood may be a time of considerable emotional upheaval for men. As such, effective strategies are needed to support them during this life stage. Fisher's review of paternal mental health concerns provides a much needed summary of the evidence to date and an important reminder of the work that is left to do.⁴ Given the important role that physical activity plays in (a) maintaining optimal physical and mental health in fathers, (b) fostering positive father-child bonding, and (c) shaping child health and well-being, research studies that meaningfully engage fathers in personal and family-based physical activity interventions are urgently required.

Declaration of Conflicting Interests

The author(s) declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article. 

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