

## Adherence and physical activity

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Exercise training is an integral component in the management of many chronic, lifestyle - related diseases. Therapeutic exercise training is an accepted adjunct to medical therapy for two of the four leading causes of death - cardiovascular disease and chronic obstructive pulmonary disease (COPD) - and is considered one of the three cornerstones of treatment for diabetes mellitus. For each of these chronic conditions, the scientific literature clearly demonstrates that exercise is both beneficial and safe when applicable guidelines are followed.<sup>1-4</sup> There is also abundant evidence supporting the health benefits of physical activity, including reduced risk for stroke, some cancers, osteoporosis, hypertension, high cholesterol, obesity, osteoarthritis, and all-cause mortality.<sup>5</sup> Physical activity is also associated with improved psychological health and functional status,<sup>3</sup> as well as reduced health - care expenditures.<sup>6</sup>

However, data show that a large proportion of adults do not meet physical activity recommendations, and this is a significant public health problem.<sup>7</sup> These data also likely underestimate the problem of non-adherence, as adults tend to overreport physical activity levels in comparison to objective measures.<sup>8,9</sup> Research suggests that inadequate adherence to exercise during the intervention period might attenuate the effectiveness of intervention.<sup>10,11</sup> There are many categories of factors related to non-adherence to physical activity, e.g. demographic, health-related and biological, cognitive and psychological, behavioral, program-related and environmental.<sup>12,13</sup>

Social factors that have been studied as correlates of physical activity include exercise group cohesion, physician influence, and social support. Group cohesion has shown a modest positive correlation with adherence in some studies.<sup>14</sup> However, physician influence and social supportive environment have been stronger and more consistent correlates of physical activity level and adherence.<sup>14</sup> Physician advice to exercise has been reported as a correlate of physical activity among the general adult population.<sup>15</sup> Social support has been significantly associated with physical activity in cross-sectional and prospective studies, both in community samples and within organized exercise groups.<sup>16</sup> While both family and friend support for physical activity appear to be influential,<sup>14</sup> the role of the

spouse seems to be particularly important.<sup>16</sup>

Communication between the patient and the clinician is considered to be central to establishing effective patient rapport.<sup>17</sup> Pizzari *et al.*<sup>18</sup> have indicated that patients who had a positive relationship with their physiotherapists felt more inclined to attend their clinic appointments and complete their rehabilitation activities during these sessions. Also, adherence to physiotherapy exercise programs was found to be significantly greater when physiotherapists gave patients positive feedback, asked them for feedback about their progress and treatment, regularly monitored their exercise performance and frequently motivated them to do their home exercises.<sup>19</sup> Conversely, physicians can be responsible for poor levels of adherence if they give patients too much information and if that information is not specific to their needs and disorder.<sup>20</sup>

Evaluation of patients' exercise adherence as a factor in treatment success or failure is thus potentially complex, difficult, and time consuming.<sup>13</sup> Future efforts to improve adherence may require individually - targeted interventions that consider important patient and disease characteristics.

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