

# Optimal Exercise Levels for Dermatology Patients With Psoriasis

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## PRACTICE POINTS

- Patients with psoriasis should exercise for less time (~30 min) more frequently (4–5 times per week).
- Exercise that involves excessive sweating should be avoided; recommended types of exercise for patients with psoriasis include walking, yoga, and bike riding.
- Physicians should educate patients on the processes behind psoriasis and direct them to the National Psoriasis Foundation's website when needed.

There is a direct link between psoriasis and metabolic conditions such as diabetes mellitus and obesity.<sup>1</sup> Exercise of varied intensity in patients with chronic inflammatory and metabolic conditions can help improve quality of life and severity of disease; however, there has not been a clear consensus on the recommended duration and types of exercise that are most advantageous.<sup>1–5</sup> We reviewed the literature to identify physical and mental health impacts of exercise on patients with psoriasis, and we present the recommended duration and types of exercise that are most impactful for these patients.

One indicator of the link between psoriasis and exercise is the level of peroxisome proliferator activated receptor gamma coactivator-1  $\alpha$  (PGC-1 $\alpha$ ) in muscle cells.<sup>2</sup> This marker reduces inflammation. When levels are low in muscle cells, an induction occurs that leads to systemic or

local inflammation; however, skeletal muscle PGC-1 $\alpha$  levels increase following exercise, indicating reduced inflammation.<sup>2</sup> The level of PGC-1 $\alpha$  is measured through muscle biopsy and polymerase chain reaction.<sup>6</sup> Another indicator of the correlation between exercise and inflammation is lipoprotein-associated phospholipase A2, which is produced by inflammatory cells and has a correlation with cardiovascular disease. Exercise reduces lipoprotein-associated phospholipase A2 levels, and a sedentary lifestyle correlates with increased levels of this marker.<sup>3</sup> Lipoprotein-associated phospholipase A2 is measured through an enzyme-linked immunosorbent assay of the blood, with levels around 200 ng/mL considered high.<sup>7</sup> Patients with psoriasis are 30% less likely to participate in physical activity compared to patients without psoriasis, which can be attributed to psychosocial impairment and other factors. Sedentary lifestyle is associated with new or worsening metabolic disease and prevalence of psoriatic lesions.<sup>1</sup>

A metabolic equivalent task score is a classification system that measures the rate of the body's oxygen uptake for any given activity.<sup>4</sup> A score of 20.9 or more metabolic equivalent task hours of vigorous exercise per week—equal to 105 minutes of running or 180 minutes of swimming or playing tennis—is linked with a 25% to 30% risk reduction of psoriasis in women.<sup>4</sup> Therefore, we recommend 30 minutes of exercise 4 to 5 times per week for women. These periods of exercise should consist mainly of activities that will not cause psoriasis flares due to excessive

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sweating, skin trauma, or prolonged sun exposure.<sup>5</sup> Walking, yoga, and bike riding all could be good exercise options for those with psoriasis. The National Psoriasis Foundation offers guidance on physical activity in patients with psoriasis or psoriatic arthritis.<sup>8</sup> Psoriasis has apparent physical and psychosocial impacts on patients that can be prevented and improved through the exercise recommendations presented in this article. Dermatologists should use these recommendations to address psoriasis in their everyday practice.

## REFERENCES

1. Do YK, Lakhani N, Malhotra R, et al. Association between psoriasis and leisure-time physical activity: findings from the National Health and Nutrition Examination Survey. *J Dermatol*. 2015;42:148-153. doi:10.1111/1346-8138.12721
2. Handschin C, Spiegelman BM. The role of exercise and PGC1alpha in inflammation and chronic disease. *Nature*. 2008;454:463-469. doi:10.1038/nature07206
3. Clark K, Sharp S, Womack CJ, et al. Increased sedentary time and decreased physical activity increases lipoprotein associated phospholipase A2 in obese individuals. *Nutr Metab Cardiovasc Dis*. 2022;32:1703-1710. doi:10.1016/j.numecd.2022.04.023
4. Yeh C, Flatley E, Elkattawy O, et al. Exercise in dermatology: exercise's influence on skin aging, skin cancer, psoriasis, venous ulcers, and androgenetic alopecia. *J Am Acad Dermatol*. 2022;87:183-184. doi:10.1016/j.jaad.2021.07.023
5. Sheppard R, Gan WK, Onambele-Pearson GL, et al. Developing an aerobic exercise intervention for patients with psoriasis to support lifestyle behaviour change and improve health outcomes. *Clin Exp Dermatol*. 2023;48:5-11. doi:10.1093/ced/llac008
6. Lin J, Wu H, Tarr P, et al. Transcriptional co-activator PGC-1 $\alpha$  drives the formation of slow-twitch muscle fibres. *Nature*. 2002;418:797-801. doi:10.1038/nature00904
7. Clark K, Sharp S, Womack CJ, et al. Increased sedentary time and decreased physical activity increases lipoprotein associated phospholipase A<sub>2</sub> in obese individuals. *Nutr Metab Cardiovasc Dis*. 2022;32:1703-1710. doi:10.1016/j.numecd.2022.04.023
8. National Psoriasis Foundation. Active and mindful lifestyles. <https://www.psoriasis.org/active-and-mindful-lifestyles/>