

Thesis Title	The Efficacy of Time-restricted Eating (TRE) in Improving the Disease Severity, Weight Loss, Sleep Quality, and Quality of Life in Plaque-type Psoriasis
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ABSTRACT

Background: Chronic plaque-type psoriasis is a systemic immune-mediated inflammatory disorder frequently associated with obesity, metabolic dysfunction, sleep disturbance, and impaired quality of life. Time-Restricted Eating (TRE), a subtype of intermittent fasting, has shown potential benefits in metabolic regulation and inflammatory modulation; however, evidence in psoriatic populations remains limited.

Objective: This study aimed to evaluate the effectiveness, safety, and patient satisfaction of a 16:8 TRE regimen on psoriasis severity, anthropometric parameters, sleep quality, and dermatology-specific quality of life in overweight and obese adults with chronic plaque-type psoriasis.

Methods: A 12-week, prospective, single-arm clinical trial was conducted in 18 adults aged 30–60 years with a BMI of 25–35 kg/m² and clinically stable chronic plaque-type psoriasis. Participants practiced daily TRE with an 8-hour eating window and 16-hour fasting period, without calorie restriction. Outcomes measured at baseline, Weeks 4, 8, and 12 included Psoriasis Area and Severity Index (PASI), body weight, BMI, and waist circumference. Pittsburgh Sleep Quality Index (PSQI) and Dermatology Life Quality Index (DLQI) were assessed at baseline and Week 12. Adherence, side effects, and patient satisfaction were systematically recorded.

Results: TRE led to statistically and clinically significant improvements across all primary outcomes. Mean PASI decreased from 9.21 to 6.00 (34.85% reduction, $p < 0.001$), with 44.4% achieving PASI-50 response. Participants experienced clinically meaningful reductions in body weight (–4.57 kg; 5.63%), BMI (–1.62 kg/m²; 5.61%), and waist circumference (–4.36 cm; 4.65%) ($p < 0.001$ for all). Sleep quality improved

substantially, as reflected by a 29.89% reduction in PSQI scores, and 13 out of 18 patients achieved good sleep quality after the intervention ($p < 0.001$). DLQI scores improved by 23.26% ($p = 0.005$), with two-thirds of participants reporting better quality of life. Reported adverse effects were mild, transient, and resolved during early adaptation. Overall acceptability was high, with 17 out of 18 participants expressing willingness to continue TRE.

Conclusion: A 12-week Time-Restricted Eating regimen is a safe, feasible, and effective non-pharmacologic intervention that improves psoriasis severity, metabolic parameters, sleep quality, and dermatology-specific quality of life in overweight and obese individuals with chronic plaque-type psoriasis. TRE demonstrates high adherence and satisfaction and may serve as a valuable adjunctive lifestyle therapy in psoriasis care. Larger controlled trials are warranted to confirm these findings and elucidate underlying mechanisms.

Keywords: Fasting and Psoriasis, Time-restricted Eating in Psoriasis, Adjunctive Treatment in Psoriasis, Sleep in Psoriasis, Quality of Life in Psoriasis, Weight Loss in Psoriasis