

Standardized Stretching Postural® postures to care low-back pain in pregnancy: the GEMALODO randomized clinical trial.

Magalie Barbier¹, Julie Blanc^{1,2}, Cindy Faust², Karine Baumstarck², Stephanie Ranque-Garnier³, Florence Bretelle^{1,4}

¹Department of Obstetrics and Gynecology, Nord Hospital, Assistance Publique - Hopitaux de Marseille, Chemin des Bourrely, Marseille, France.
²EA 3279, Public Health, Chronic Diseases and Quality of Life, Research Unit, Aix-Marseille University, Marseille, France
³FHU INOVRAIN, centre d'évaluation et de traitement de la douleur, CHU de Timone, pôle de neurosciences cliniques, 13005 Marseille, France
⁴Aix Marseille University, UM 63, CNRS 7278, IRD 198, INSERM 1095, Marseille, France.

Introduction

Two thirds of pregnant women suffer from low-back pain during pregnancy with negative impacts on the quality of their personal, professional and family life. According to the literature, an 8 to 12-weeks program of **adequate physical exercises during pregnancy** has proven its efficiency on low-back-pain and functional disability. **Stretching Postural®** is a non-dynamic technic using muscular contractions and stretches acting **mainly on the back** that can be practiced alone.

Objective

To evaluate if an **8-weeks program of standardized Stretching Postural® auto-postures** in low-risk pregnant women is associated with a **decrease of low-back pain**.

Study design

We conducted an open-label, **randomized controlled trial** in one **French hospital**. Women with a singleton low-risk pregnancy between 15 and 32 weeks of gestation, with **back, lumbar, or sacroiliac pain**. Women were randomly assigned (1:1) to either undergo an **8-weeks program of standardized Stretching Postural®** (intervention group) or no such program (control group). Both groups received **ergonomic tips and encouragement to practice sport**. We recorded **maternal pain during the past week** on a scale from 0 to 10 at 8 weeks as the primary outcome. Secondary outcomes were pain after 4 weeks, quality of life, satisfaction, and delivery outcomes. The main analysis was focus on intention-to-treat analysis.

Stretching Postural® appears to be a safe and efficient solution to care for low-back pain during low-risk pregnancy



1. Round back stretching

2. Lengthening and toning of the back

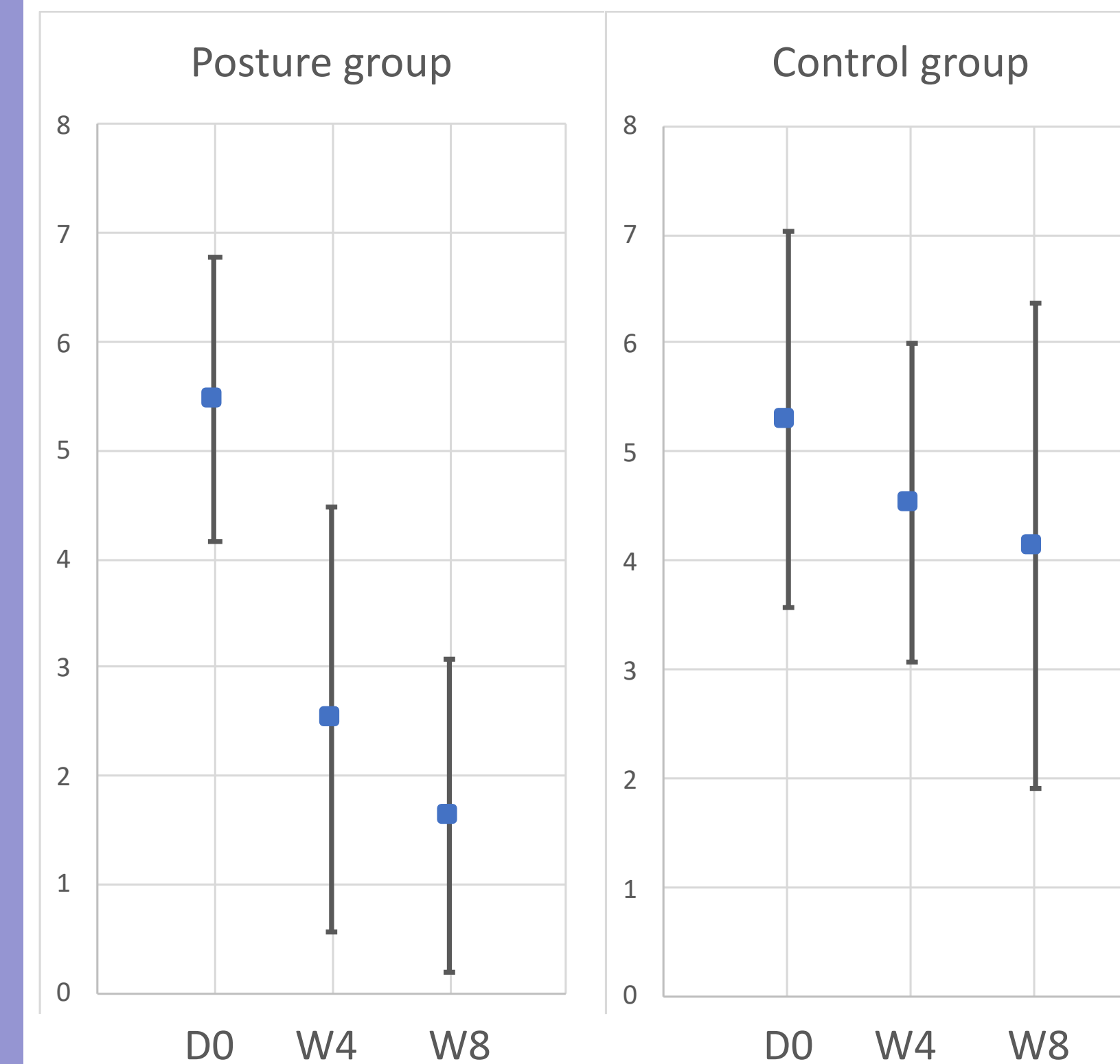
3. « Heavy stretch »

4. Lengthening of the back and amplitude of the chest

Results

From January 2019 to August 2020, **60 women** were randomized: 30 were assigned to the intervention group, 30 to the control group. **The average pain intensity in the past week was significantly lower at 8 weeks in the posture group compared to the control group** (1.6+/-1.4 vs 4.1+/-2.2, p<0.01). The **SF-12 score** was also significantly higher in the posture group (PCS 45.7+/-7.8 vs 37.4+/-8.5, p<0.01 and MCS 54.3+/-5.8 vs 50.4+/-7.1, p=0.04) and the **PGIC satisfaction score** was significantly higher (6.1+/-1.5 vs 3.9+/-2.3, p<0.01). **No adverse effects were described.**

Evolution of the mean pain by randomization group



Conclusion

Stretching Postural® appears to be a safe and efficient solution to **care for low-back pain** during low-risk pregnancy.

