

## **ABSTRACT**

This study had the objective of showing to be viable the use of bicycles that provide comfort and safety and to notice for the physiopathology appearance in the users of bicycles. For such, recommendations of the point of view anthropometric and postural were elaborated for the development of projects of bicycles. It was necessary to compare the embarrassments biomechanics and dimensional of different types of bicycles. For this comparison, four basic models of bicycles found at the Brazilian market were used: Mountain Bike, Speed, Cruiser and Transport, that become separated in two types of the point of view postural, Traditional and Aerodynamic, that induce the user to maintain, respectively, the erect log and flexion log. Tends as base other examples, experiment was accomplished where the degree of the users' discomfort/pain was verified in relation to the dimensions of the bicycles and with the type of assumed posture using ergonomic methodology to find the user's relationship with the product to define usability parameters between both. Observations were accomplished for registrations of the assumed postures and applied questionnaires for taking of the users' opinion in relationship discomfort/pain of the bicycles during the experiment. The developed chapters deal with matters on Design of Product, Ergonomic Methodology, Anthropometric, the bicycle, the spine. We presented a statistical analysis of the obtaining data in the accomplished experiment and, finally, a case study in Design of products, exemplifying with the bicycle. In this chapter, items are presented as the morphology of the bicycle, it is made a morphologic analysis of Brazilian bicycles and we presented the applied ergonomic recommendations to the dimension of bicycles.