Abstract
Several studies have been conducted to evaluate the effects of the consumption of the slowly absorbed carbohydrates in a low glycemic index (GI) diet on fat oxidation, in order to obtain dietetic treatment that can favor the achievement of an adequate body composition. Therefore, the purpose of this study was to analyze studies in which the role of low GI diets on body composition, with emphasis on fat oxidation. An internet search for articles, in English or Portuguese, published since 1995, was conducted using the following key words: glycemic index, glycemic load, glycaemic index, glycaemic load, body fat, body composition, fat oxidation. Papers that described animals or humans clinical trials were selected. Data were collected from Web of Science, Science Direct, Pubmed. It was verified that the results of the majority of the analyzed studies indicated that low GI diets lead to a lower insulin response, increasing body fat oxidation. These results indicate that the consumption of low GI diet can be an important strategy to be used for the prevention and control of obesity and chronic diseases associated to it.

Keywords
Glycemic index, Glycemic load, Insulinemia, Body fat.