Bioavailability may be defined as the amount of a nutrient that is available for absorption in the form that it is physiologically usable. For a better nutritional food exploitation is important to develop studies of nutrients bioavailability in food preparations. Although there are few data in literature about the knowledge of interactions between nutrients and food components, on the other hand, there are interesting relations reported that could be useful to assistance the process of planning diets. Considering the above, this study aimed to interconnect the study of bioavailability to the process of planning diets. Was developed a menu based on the recommendations of the Food Guide of the Brazilian Population, adapted and suitable for calcium, iron, zinc, magnesium, sodium, phosphorus and fiber for men and women between 19 and 30 years, according to Dietary Intake References - DRI's. The meals were designed around "key nutrients", in other words, combinations of food were made in order to enhance the absorption of minerals in small and large meals. For breakfast, the calcium was prevalent in large concentrations because of the food sources (dairy). For lunch and dinner, there was quantitative prevalence of zinc, iron and magnesium, which were considered the "key nutrients" of large meals, with meat as a food source. The negative factors, but little modified, were fiber, phytates and oxalates present in vegetables, beans and rice. Since the menu created is a mixed diet, the bioavailability of minerals (calcium, iron, zinc and magnesium) was balanced.