

D.O. SILVA; C.S. SANTANA. *An ergonomic analysis of medicine organizers*. *Gerontechnology* 2010;9(2):247; doi:10.4017/gt.2010.09.02.224.00 **Purpose** Adherence to prescribed medication is one of the most complex instrumental activities of daily living (IADL) for the elderly. Autonomy in the administration of a drug therapy for the elderly requires the integration of physical and mental abilities. The use of pill organizers should be studied primarily because they are a mechanism used by the elderly for the self-administration of drugs, an important IADL¹. Often, non-compliance of medical treatment is related to forgetfulness, difficulty in handling the packaging, confusion in administration, cognitive condition and/or non-recognition of the need for the prescription. To analyze the ergonomics of medicine organizers (pillboxes) available in the Brazilian and international markets. Mechanisms for opening and closing the device, cost benefits, convenience (portability and packaging), the relation between compartments and the distribution of doses as prescribed and a cinesiographical analysis for the use and strength of the material were all considered. **Method** This was an exploratory, prospective, analysis achieved by the pursuit of the pillbox for marketing. We investigated the keywords Port Tablets, Remedies Organizer, Box Tablets (searched in Portuguese) and Pill Organizer and Pillbox (in English) in a total of 100 pages through GoogleTM. **Results & Discussion** There were 25 electronic products and 189 non-electronic. The relation between compartments and doses were observed. There were 4 distinct classes of distribution: daily, weekly, nine days, and monthly. An average of 5 to 8 tablets in each bay. It was observed that these packaging devices were usually made of polypropylene which has great durability and strength. The performance components involved in the task of using the pillbox are motor (manual dexterity, fine coordination of hands and fingers, grip strength of the box and the pills) and cognitive (memory, attention, executive function, praxis). The dimensions of the analysis vary according to the model. No pattern was found. In regard to the mechanisms for opening and closing; 84 models used pressure, while 47 were sliding, 32 used threading, while the others used more than one way to open and close making it harder to hold the pills. For these it was necessary to turn the box over in the hand in a pronation - supination movement that is often compromised in elderly patients with rheumatoid arthritis, hemiplegics and/or other health conditions. Ninety percent of the models surveyed were portable. Pillboxes are important devices to aid with the task of self-medication. Because of the different models and form of packaging of the pills, it is necessary to adequately diagnose and choose a device that can effectively contribute to aiding this IADL. Their use should not be difficult in the presence of disabling diseases. This is one of the activities abandoned early by the elderly and taken on by his caregiver.

References

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Keywords: Porta Comprimidos, Organizador de Remédios, pillbox, pill organizer

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