

Abstract

Portable, Inflatable and Self-Adjusting Cushion for Upper and Lower Back Support

This present invention relates to not only providing the conventional support for upper and lower back under normal circumstances of a proper sitting position, it even provides a self-adjusting experience and improved degree of lumbar support whenever a relaxed lean-backward seating posture is taken. This Self-Adjusting Cushion has executed without any compromise of losing the expected level of contoured support for the spine to be in proper alignment. Thus relieving and alleviating any possible fatigue or pain due to improper sitting position.

Portable, Inflatable and Self-Adjusting Cushion for Upper and Lower Back Support is a sealed support device, which is configured and designed with a semi-oval shape structure to provide the contoured lumbar support. It is characterized with the following major components:

1. 3 rectangular-shaped slip-sheets of different breadths (depth) but of same length are attached horizontally and parallel to one another. They are configured to be at different heights of the cushion. They are hidden within the sealed support device to form 3 open compartments. During the self-adjusting phenomena, these 3 sheets will prevent the sealed support device from being over-expanded beyond its maximum depth to avoid creation of any discomfort to user when more than necessary volume of air is pumped into the sealed support device. In addition, these 3 sheets together will yield the desired semi-oval shaped cushion to provide support for the lumbar region.
2. A safety air valve that allows user to manually adjust the degree of firmness for desired comfort by pumping air into or releasing air from the sealed cushion.
3. Two adjustable elastic straps with buckles – allow the cushion to be either fixed onto any sizes of seat or to the different sizes of waistline of users.

Figure 1

