

## Shoulder exercise to prevent frozen shoulder for patients after cardiac rhythm management device implantation surgery

The program of shoulder exercises for patients after cardiac rhythm management device implantation surgery is to prevent frozen shoulder joints and to reduce the risk of loosen or broken electrical cable after the patients received treatment. The details of the program are as follows:

Movements of the shoulder joint on the side of the cardiac rhythm management device

- 1-3 days after the cardiac rhythm management device was implanted. The patient can move elbow, wrist, and fingers normally, but can't move the shoulder joint in all directions on the side where the device was implanted.
- 4-7 days after the cardiac rhythm management device was implanted. The patient can begin to move the shoulder joint gently on the side where the device was implanted.
- 2-4 weeks after the cardiac rhythm management device was implanted. The patient can begin to perform shoulder movements, such as raising or spreading the arm further, but not higher than shoulder level, or over 90 degrees (as shown in Figures 1 and 2).
- One month after the cardiac rhythm management device was implanted. The patient can move the shoulder joint in all directions. The patient must try to raise and stretch the arm until the forearm reaches the ear (as shown Figure 3).



Figure 1



Figure 2



Figure 3