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Dynamic observation of deadaptation recovery on cardiac functions for Plateau heavy manual labor people after they return to plain
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Objective: Investigate the heart deadaptation rules and influence factors about plateau exposure population after they return to plain.

Methods: Choose 96 youth who fast into the high altitude and engaged in heavy manual labor as research object. Measure their myocardial enzymes and cardiac function, and evaluate the cardiac function recovery after 12 hours, 15 days and 2 years respectively after return to plain.

Results: Tei index increased significantly, LVEF and LVFS significantly reduced after plateau exposure. Tei index had a lower on the day when returned plain, and restored to the plain control level after 15 days; LVEF and LVFS rose returned plain 15 days, and restored to the plain control level after 2 years; serum CK-MB and MDA increased significantly, LDH1 and SOD level reduced significantly after Plateau exposure; the CK-MB, MDA and LDH1 level reduced on the day when returned plain, continue to decline in 15 days, ultimately restored to the plain control level after 2 years; SOD and NO level increased after returned the plain, then continued to increase in the following 15 days; also Continued to increase after 2 years and exceeded the control level; Serum 8-isoPGF2a significantly increased, ET-1 and HIFa significantly increased after plateau exposure; serum 8-isoPGF2a, ET-1 and HIFa reduced on day when returned plain, and had a further fall in 15 days, then restored to the plain control level after 2 years.

Conclusion: the cardiac function of plateau exposure population could recover in a short time to control level after returning the plain, but myocardial enzymes and free radicals and cytokines need a long time to recover.