NURSING CARE PLAN  A Client with Heart Failure

One year ago, Arthur Jackson, 67 years old, had a large anterior wall M1 and underwent subsequent coronary artery bypass surgery. On discharge, he was started on a regimen of enalapril (Vasotec), digoxin, furosemide (Lasix), warfarin (Coumadin), and a potassium chloride supplement. He is now in the cardiac unit complaining of severe shortness of breath, hemoptysis, and poor appetite for 1 week. He is diagnosed with acute heart failure.

ASSESSMENT
Mr. Jackson refuses to settle in bed, preferring to sit in the bedside recliner in high Fowler’s position. He states, “Lately, this is the only way I can breathe.” Mr. Jackson states that he has not been able to work in his garden without getting short of breath. He complains of his shoes and belt being too tight.

When Ms. Takashi, RN, Mr. Jackson’s nurse, obtains his nursing history, Mr. Jackson insists that he takes his medications regularly. He states that he normally works in his garden for light exercise. In his diet history, Mr. Jackson admits fondness for bacon and Chinese food and sheepishly admits to snacking between meals “even though I need to lose weight.”

Mr. Jackson’s vital signs are: BP 95/72 mmHg, HR 124 and irregular, R 28 and labored, and T 97.5°F (36.5°C). The cardiac monitor shows atrial fibrillation. An S3 is noted on auscultation; the cardiac impulse is left of the midclavicular line. He has crackles and diminished breath sounds in the bases of both lungs. Significant jugular venous distention, 3+ pitting edema of feet and ankles, and abdominal distention are noted. Liver size is within normal limits by percussion. Skin cool and diaphoretic. Chest x-ray shows cardiomegaly and pulmonary infiltrates.

DIAGNOSES
- Excess Fluid Volume related to impaired cardiac pump and salt and water retention
- Activity Intolerance related to impaired cardiac output
- Impaired Health Maintenance related to lack of knowledge about diet restrictions

EXPECTED OUTCOMES
- Demonstrate loss of excess fluid by weight loss and decreases in edema, jugular venous distention, and abdominal distention.
- Demonstrate improved activity tolerance.
- Verbalize understanding of diet restrictions.

PLANNING AND IMPLEMENTATION
- Hourly vital signs and hemodynamic pressure measurements.
- Administer and monitor effects of prescribed diuretics and vasodilators.
- Weigh daily; strict intake and output.
- Enforce fluid restriction of 1500 mL/24 hours: 600 mL day shift, 600 mL evening shift, 300 mL at night.
- Auscultate heart and breath sounds every 4 hours and as indicated.
- Administer oxygen per nasal cannula at 2 L/min. Monitor oxygen saturation continuously. Notify physician if less than 94%.
- High Fowler’s or position of comfort.
- Notify physician of significant changes in laboratory values.
- Teach about all medications and how to take and record pulse.
- Provide information about anticoagulant therapy and signs of bleeding.
- Design an activity plan with Mr. Jackson that incorporates preferred activities and scheduled rest periods.
- Instruct about sodium-restricted diet. Allow meal choices within allowed limits.
- Consult dietician for planning and teaching Mr. and Mrs. Jackson about low-sodium diet.

EVALUATION
Mr. Jackson is discharged after 3 days in the cardiac unit. He has lost 8 pounds during his stay and states it is much easier to breathe and his shoes fit better. He is able to sleep in semi-Fowler’s position with only one pillow. His peripheral edema has resolved. Mr. and Mrs. Jackson met with the dietician, who helped them develop a realistic eating plan to limit sodium, sugar, and fats. The dietician also provided a list of high-sodium foods to avoid. Mr. Jackson is relieved to know that he can still enjoy Chinese food prepared without monosodium glutamate (MSG) or added salt. Ms. Takashi and the physical therapist designed a progressive activity plan with Mr. Jackson that he will continue at home. He remains in atrial fibrillation, a chronic condition. His knowledge of digoxin and Coumadin has been assessed and reinforced. Ms. Takashi confirms that he is able to accurately check his pulse and can list signs of digoxin toxicity and excessive bleeding.

CRITICAL THINKING IN THE NURSING PROCESS
1. Mr. Jackson’s medication regimen remains the same after discharge. What specific teaching does he need related to potential interactions of these drugs?
2. Mr. Jackson tells you, “Talk to my wife about my medications—she’s Tarzan and I’m Jane now.” How would you respond?
3. Design an exercise plan for Mr. Jackson to prevent deconditioning and conserve energy.
4. Mr. Jackson tells you, “Sometimes I forget whether I have taken my aspirin, so I’ll take another just to be sure. After all, they are only baby aspirin. One or two extra a day shouldn’t hurt, right?” What is your response?
5. Mr. Jackson is admitted to the neuro unit 6 months later with a cerebral vascular accident (CVA). What is the probable cause of his stroke?

See Evaluating Your Response in Appendix C.

Decreased Cardiac Output
As the heart fails as a pump, stroke volume and tissue perfusion decrease.

- Monitor vital signs and oxygen saturation as indicated. Decreased cardiac output stimulates the SNS to increase the heart rate in an attempt to restore CO. Tachycardia at rest is common. Diastolic blood pressure may initially be elevated because of vasoconstriction; in late stages, compensatory mechanisms fail, and BP falls. Oxygen saturation levels provide a measure of gas exchange and tissue perfusion.
- Monitor BNP levels, reporting trends. BNP levels indicate the severity of heart failure: as the cardiac index decreases