Effects of Early Ambulation in Prevention and Treatment of VTE

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**Patient Care Issue**

**Background & Significance**

- Clinical problem is a discrepancy in the methods of prevention and treatment of VTE
- VTE (venous thromboembolism) is a first event in approximately 100 out of 100,000 people\(^1\)
- VTE is the synthesis of DVT (deep vein thrombosis) which can ultimately lead to pulmonary embolism\(^2\)
- DVT occurs when a clot forms in the peripheral veins, possibly dislodging and journeying to the lungs\(^2\)
- PE (pulmonary embolism) is a blockage in an artery of the lungs and causes permanent tissue damage\(^3\)
- 1 in 5 individuals with PE die almost immediately and a further 40% die within three months\(^4\)
- PE can develop 3-7 days after diagnosis of deep vein thrombosis\(^4\)
- A thrombus may possibly detach due to muscle contraction\(^5\)
- Patients often die within one hour after symptoms appear\(^6\)
- Traditionally, health care providers recommend bedrest\(^5\)
- Prolonged bedridden time increases the risk of PE\(^4\)

**Evidence-Based Practice Question**

**Question:** What does current research deems to be the evidence-based practice concerning the use of bed rest compared with early ambulation when either method is combined with thrombolytic therapy in the prevention and treatment of VTE?

**Aim 1:** To describe current methods in the prophylaxis of deep vein thrombosis and pulmonary embolism

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<td>7-10</td>
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<td>&gt;11</td>
<td>Ambulation, education, GECS, IPC and medical attention</td>
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**Aim 2:** To determine if there is a greater risk of developing pulmonary embolism with early ambulation or with bed rest

- Bed rest is prescribed because of the fear that deep vein thrombosis will progress to a pulmonary embolus due to a clot entering the bloodstream\(^5\)
- Early ambulation reduces clot growth and does not increase the risk of PE\(^8\)
- Early ambulation decreases pain and promotes an increased quality of life\(^7\)
- Ambulation provides an increase in ejection ability, decreased edema, and improvement in muscle perfusion\(^7\)

**Synthesis of Evidence**

**Methods**

**Literature Search Record**

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**Registered Nurse Interview**

**Interview with Nurse Mike**

- Ambulate patient if clinically able to get out of bed
- Consider patient, disease process, and personal ability

**Grandview Hospital Policy for Early Ambulation**

- Lippincott Williams & Wilkins journal article used for policy
- Provided by Nurse Corine
- Progressive ambulation used to improve the patient's self-image and confidence
- Progressive ambulation used to prevent complications resulting from long periods of inactivity

**Results**

- Conclusions from Research
  - Ambulation does not increase the risk of VTE\(^5\)
  - Important to encourage early ambulation
  - Early ambulation is key to progressing toward a more independent and healthier individual\(^7\)

- Application in Grandview Hospital
  - Nursing staff should continue the practice of early ambulation in the prevention and treatment of VTE

**Limitations**

- Small number of participants in some studies
- Inability to isolate just bedrest or just ambulation in experimentation
- Use of sources >5 years old since publishing date of some articles used as references

**References**


**Acknowledgements**

A special thank-you to Nurse Mike and Nurse Corine for their assistance in learning hospital policy.