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## **Facts About Economy Class Syndrome (ECS) and Deep Vein Thrombosis (DVT)**

- “Economy Class Syndrome” (ECS) is the term associated with a serious condition called deep vein thrombosis (DVT). Crowded, cramped conditions and limited physical activity during extended air travel may increase the risks for DVT.
- ECS got its name from the inactivity associated with air travel, particularly in cramped coach seating.
- During prolonged periods of inactivity, the effects of gravity make it difficult for the blood in the veins of the legs to return to the heart. Activity of the calf muscles is needed to contract and pump blood up the legs. Without this activity, blood can pool in the legs, causing swelling and discomfort and may develop into a blood clot in a deep vein – deep vein thrombosis.
- When normal activity resumes, the blood clot can break off and form an embolism that can pass to the heart or lungs, obstruct the pulmonary arteries, and lead to death.
- Development of thrombi during extended air travel has been documented throughout the past 40 years. Air travelers, including Richard Nixon in 1972, have experienced the effects of these conditions after flying. However, with more people taking longer flights to destinations around the globe, there has been an increase in reported episodes of thrombosis.
- Although DVT can strike individuals who are in good health with relatively little warning, there are people who are at greater risk for developing the condition. Obesity, pregnancy, chronic heart disease, use of hormone medications, malignancies, history of blood clots, varicose veins, and recent trauma or surgery may increase a person’s risk for DVT. <sup>1</sup> Travelers should ask a physician if they are predisposed to any risk factors for DVT.
- DVT is not only associated with long flights. This condition may also be linked with activities or occupations that involve long periods of passive sitting. <sup>2</sup>
- To reduce the risk for DVT while traveling, physicians recommend wearing gradient compression hosiery to improve blood circulation in the legs in conjunction with foot/ankle exercises and walking.
- Gradient compression hosiery helps prevent leg discomfort by delivering pressure at the ankle that gradually decreases as it extends up the leg. This pressure helps the veins contract without muscle activity and pump blood up toward the heart rather than allowing blood to remain stagnant and pool in the legs.

- To help prevent leg discomfort, air travelers can wear medical-grade gradient compression hosiery, such as Jobst Gradient Compression Hosiery, which offers the most accurate fit, based on ankle and calf circumference. Proper fit guarantees delivery of the most precise and effective gradient compression profile for the legs and assists the calf muscle to pump during contraction.
- Jobst is the number one physician-recommended brand of gradient compression hosiery, both in the United States and worldwide.
- Physicians also recommend that air travelers stay hydrated and avoid caffeine and alcohol; get up, stretch and walk around the plane often; wear loose-fitting clothing; and stretch and exercise legs when restricted to their seats.
- Medications such as heparin or warfarin may also be used to help regulate blood coagulation for those at higher risk for DVT and pulmonary embolisms (PE).<sup>1</sup>
- According to the American Heart Association, DVT from all causes occurs in approximately two million Americans each year.
- It is estimated that 600,000 patients develop PE each year from all causes and that 60,000 die of the complications. This number exceeds the number of American women who die each year from breast cancer.<sup>1</sup>

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