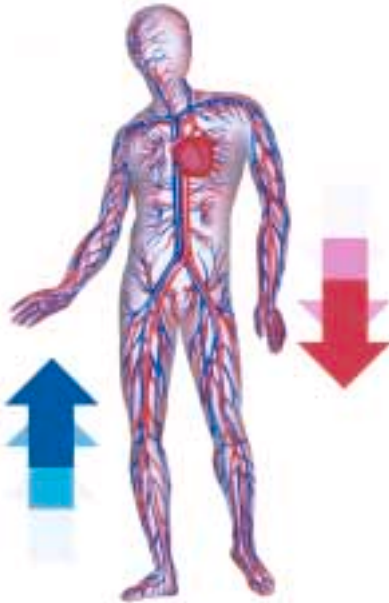


Economy Class Syndrome (ECS):

How Cramped Airline Travel Can Lead to Major Circulatory Trouble

Normal Circulation



- The heart pumps oxygen-rich blood through the arteries (red vessels) into the tissues of the body.
- Oxygen-depleted blood is then returned from the tissues to the heart through the veins (blue vessels). Gravity works against circulation on the return trip, so to assist, the calf muscle acts as a pump to move blood back to the heart. Walking and foot/ankle exercises help this pump work.
- Valves located in the veins of the lower legs also help maintain unidirectional flow of blood toward the heart.



"Economy Class Syndrome" (ECS) got its name from passengers who experience vascular-related problems from sitting in cramped coach cabins during long flights. In some cases, ECS has been associated with the serious health complication deep vein thrombosis (DVT).

Effects of ECS on Circulation

- Long hours of inactivity in a cramped plane cabin, and the resulting significant reduction in pumping by the calf muscle, slows blood circulation back to the heart.
- This lack of blood return can lead to congestion or pooling of blood in the legs, particularly in individuals with damaged or diseased valves. Extended periods of blood congestion contributes to swelling and aching of the lower leg, and may lead to the formation of blood clots in passengers at risk.
- Blood clots that break off can travel to the heart or lungs, causing pulmonary embolism, or even death.

How Gradient Compression Hosiery Helps Prevent ECS Symptoms

- Gradient compression therapy delivers pressure at the ankle that gradually decreases as it extends up the legs.
- Gradient pressure augments calf muscle activity during foot/ankle exercises and walking, pumping blood up toward the heart, rather than allowing it to remain stagnant and to pool in the legs.
- Gradient compression hosiery helps the leg health and comfort of all travelers.

