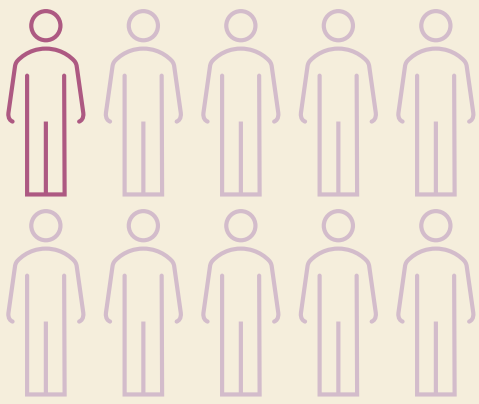
PULMONARY EMBOLISM

An occlusion of arteries in the lung by a clot that originated elsewhere.

AS MANY AS

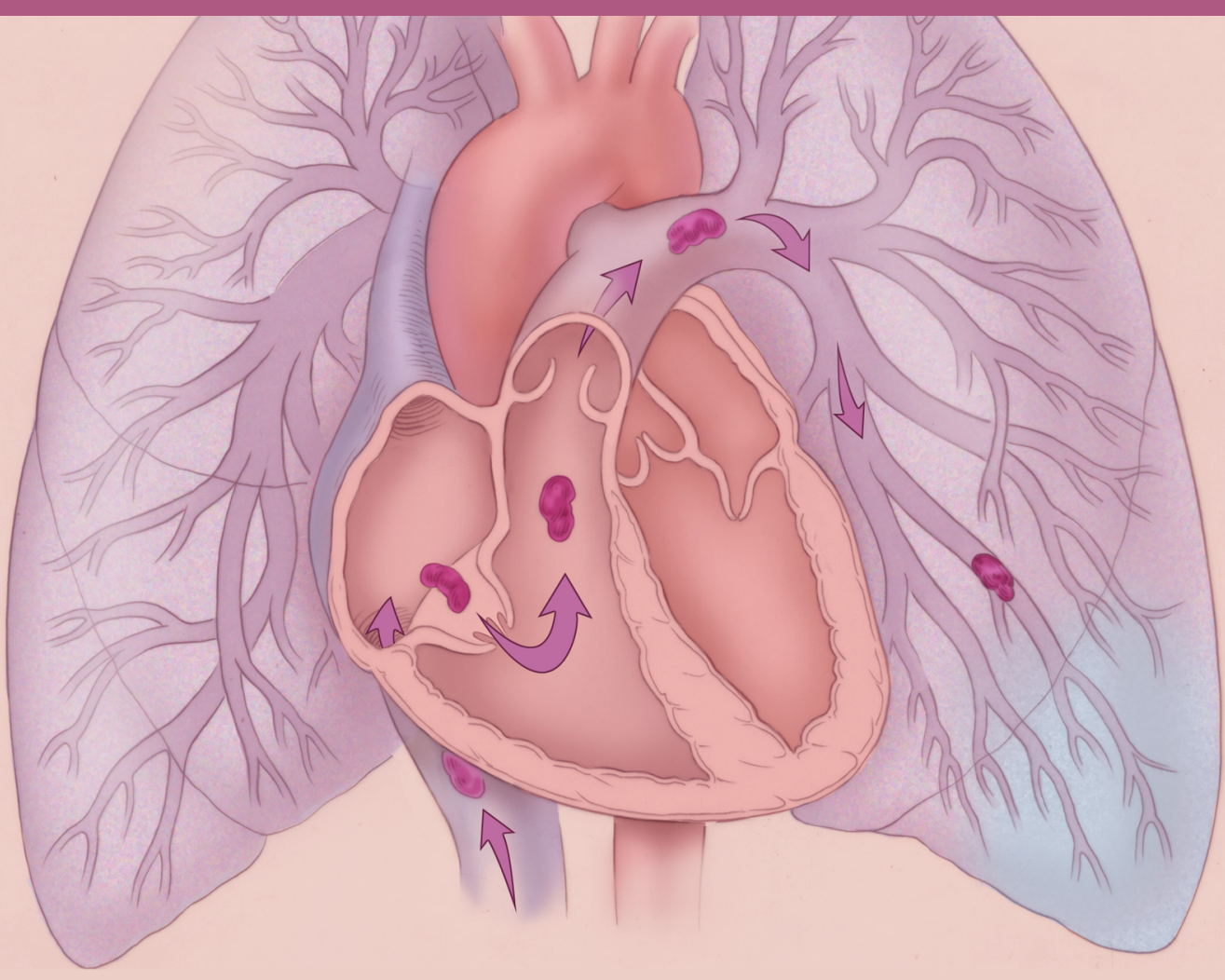
900,000

people in the U.S. may be affected each year



Between **5 and 10%** of hospital deaths in the U.S. are due to PE

PATHOPHYSIOLOGY



A blood clot, most commonly come from the deep veins of the legs, gets dislodged and travels through the venous system to lodge in a pulmonary artery

...which results in...

Reduced or absent blood flow to the affected segment → Impaired ability of the alveoli to expand → Complete or partial collapse of the lung segment (atelectasis) → Death of lung tissue

COMMON

SIGNS & SYMPTOMS

Shortness of breath (dyspnea)

Chest pain

Rapid heartbeat (tachycardia)

Cough

RISK FACTORS

- Surgery within past 2 months
- Recent lower limb trauma
- Sedentary travel
- Active malignancy
- Current DVT
- Thrombotic disorders
- Pregnancy
- Hormone replacement therapy

TREATMENT

Anticoagulants
Medication given via injection, pill, or IV to keep blood clots from getting larger and stop new clots from forming.

Thrombolytics (tPA)
Medication often delivered via a catheter in the affected artery helps to dissolve the blood clot.

Catheter Embolectomy
A catheter placed in the affected vessel is used to remove the clot, either by suction or by pushing with a balloon.

Surgical Embolectomy
The breastbone is divided (sternotomy) and the affected blood vessel is opened to allow for surgical removal of the clot.

SURGICAL CONSIDERATIONS

Sequential compression devices (SCDs) are often used for patients at risk or those undergoing long surgeries. With SCDs, compression is sequentially applied to maintain blood flow to the upper body.

The SCD is usually fitted to the patient in the preoperative stage. The patient may be transported to the operating room with the device, or it may be applied by the circulator when the patient arrives.

SOURCES

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