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The risk of developing deep vein thrombosis during a flight is often overestimated

On the other hand, the risk associated with having your leg in a cast or splint is higher than many believe

Cologne, 23 July 2009. The risk of developing deep vein thrombosis during a long flight is often overestimated. According to the German Institute for Quality and Efficiency in Health Care (IQWiG), this condition is very unlikely in healthy travellers. When people wear a cast or splint after a sports accident, on the other hand, many are not aware that they have an increased risk of deep vein thrombosis in their leg and pelvic area. This is emphasised in information published today on IQWiG's website Informed Health Online (URL: <http://www.informedhealthonline.org/>).

Blood clots can travel to lungs, leading to pulmonary embolism

If you are unable to move your legs regularly, blood flow through your veins is slower than usual. As a result, blood may clump together, forming a blood clot which can lead to deep vein thrombosis. "This can become dangerous if the blood clot dislodges, travels to the lungs and blocks a blood vessel there," says the Institute's Director, Professor Peter Sawicki. "This complication, called a pulmonary embolism, can reduce the supply of oxygen to the body's cells, overstrain the heart and even cause heart failure."

Even in higher-risk groups the risk of air-travel-related thrombosis is still well below half a percent

During the travel season we often hear that long-haul flights increase the risk of deep vein thrombosis (sometimes called "economy class syndrome"). The Institute summarised the results of research on deep vein thrombosis and air travel, involving the experiences of millions of air travellers. They found that only about 2 to 5 out of every 10,000 people who took a flight longer than 6 to 8 hours developed deep vein thrombosis that caused symptoms (at the most 0.05%). Even people who had a higher risk – for example, because they had large varicose veins or were very overweight – were not highly likely to develop deep vein thrombosis: only 20 out of every 10,000 travellers were affected (0.2%). The Institute did not find any convincing evidence that people who flew for less than 4 to 6 hours had an increased risk of thrombosis.

"By the way," says Professor Sawicki, "if you want to lower your risk by wearing compression stockings, you should put them on at least 2 hours before the flight and keep them on throughout the entire journey. Research has

shown that these stockings lower the risk of deep vein thrombosis somewhat when used in this way."

Wearing a cast or splint increases the risk of deep vein thrombosis

If people have to wear a cast or splint, for example after fracturing a bone or tearing a ligament, they can only move their leg a little bit, if at all. Many people do not know that this also increases the risk of developing a blood clot in a vein in their leg or pelvis. "To prevent serious complications, it is important to get back on your feet and move around again as soon as possible," stresses Professor Sawicki. "If that is not possible, for example because putting strain on the leg too soon could slow down recovery, there are effective medications that can be used." These so-called "anticoagulant" medications reduce the blood's ability to clot. Heparins are among the most established anticoagulant medications. They are injected subcutaneously (under the skin).

Today the Institute published up-to-date and evidence-based information about how effective these medications are at preventing thromboses in immobilised legs. The Institute's website, www.informedhealthonline.org (URL: <http://www.informedhealthonline.org/>), provides the public with easy-to-understand information about current medical developments and research on important health issues. If you would like to be kept up-to-date with the latest publications on the independent health information website, you can subscribe to the [informedhealthonline.org newsletter](http://www.informedhealthonline.org/newsletter) (URL: <http://www.informedhealthonline.org/newsletter.69.en.html>).

Information:

Deep vein thrombosis (DVT): What is the risk of developing DVT during a flight and can it be prevented? (URL: <http://www.informedhealthonline.org/index.306.en.html>)

Deep vein thrombosis (DVT): Can medication prevent blood clots in immobilised legs? (URL: <http://www.informedhealthonline.org/index.530.en.html>)

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<http://www.informedhealthonline.org/index.505.en.html>)

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Glossary

evidence

Evidence is what we call scientific proof from well-conducted, good-quality scientific trials that have been carefully designed to answer specific questions. Depending on the types of questions, different scientific research methods (types of study) are most appropriate to find reliable answers to these questions. Randomized controlled trials (RCTs), for example, are the best way to get reliable evidence on the effectiveness of medical treatments (interventions). This type of study, however, is not the best form of evidence for all possible questions, and does not provide the best answers to all kinds of questions, either. Epidemiological studies, for example, are very suitable for establishing well-founded proof for the spreading of a disease in the population.

Sources

The German Institute for Quality and Efficiency in Health Care (IQWiG)

The German Institute for Quality and Efficiency in Health Care (IQWiG) was established by legislation to provide evaluations of the effectiveness, quality and efficiency of healthcare services. This includes the assessment of medicines as well as the publication of health information for consumers and patients.

Evidence basis of our health information

Our information is based primarily on systematic reviews of the effects of health care. Systematic reviews are necessary to gain an objective picture of health care. In order to do this, a clear question is formulated. Researchers then find all the relevant studies that could answer this question. They then evaluate those studies.

You can find a list of the evidence and other scientific literature on which this information is based at [**www.informedhealthonline.org**](http://www.informedhealthonline.org)

Disclaimer

This information was prepared and published by the German Institute for Quality and Efficiency in Health Care (IQWiG). It is based on the evidence and other scientific literature available at the time of publication. The information is intended for the use of patients in Germany. It is not intended to for use to diagnose illnesses and the information is not intended to substitute for medical advice.