

Driving with heart disease: Checking fitness to drive for safety

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People suffering from various types of cardiovascular disease are subject to a certain accident risk when driving a vehicle on the road. High blood pressure, coronary heart disease and cardiac insufficiency

might be grounds for a (temporary) driving ban. Numerous diseases are capable of causing traffic accidents and therefore impact personal and public safety. In a publication, cardiologist Thomas Pezawas from MedUni Vienna has summarized the relevant diseases, thereby providing an overview for those affected and their treating physicians. Palpitations and dizziness can also occur in those recovering from COVID-19.

"Although only between 1 and 5 percent of sudden cardiac deaths occur while people are driving, even a brief black-out at the wheel can have fatal consequences," explains study author Thomas Pezawas from the Department of Medicine II (Division of Cardiology). "People with heart [disease](#) are not necessarily unfit to drive. However, they should be notified whether their condition currently allows them to drive a vehicle."

Patients are advised by their doctors whether they are fit to drive. "For example, someone with [high blood pressure](#) in excess of 180/110 mmHg should not drive a vehicle and a four-week driving ban is imposed on [professional drivers](#) after a cardiac catheter examination with stent implantation," explains Pezawas. Drivers have to be aware that, if they are spotted behind the wheel after having received a documented warning, their insurance would be invalid in the event of an accident. In any case, the burden of proof lies with the driver, since avoiding going to a doctor does not give carte blanche to carry on driving.

List of cardiovascular diseases—even COVID-19 carries a risk

The recently published paper relates to specific cardiovascular diseases, in which the patient is either temporarily or permanently unfit to drive: e.g. after implantation of a defibrillator (ICD), replacement of a device or after the ICD has triggered a shock. The spectrum of mapped diseases

comprises all [cardiac arrhythmias](#), seizure-like black-outs (syncope episodes), [coronary heart disease](#), [cardiac insufficiency](#), and hypertension. "It is very beneficial for all concerned to record fitness to drive and/or waiting times in the doctor's letter," says Pezawas, summarizing his systematic guidelines, which have been published in the journal "Current Problems in Cardiology." In this context, post-COVID patients represent new territory. "Palpitations and dizziness can also occur in those recovering from COVID-19," explains Pezawas, "and it will be necessary to introduce regulations about fitness to drive for post-COVID patients as well."

Formula calculates risk of a serious accident

The annual risk of harm (RH=risk of harm) to other [road users](#) can be individually calculated using the formula $RH=TD \times V \times SCI \times Ac$ (TD= time at the wheel, V= vehicle type, SCI= annual risk of sudden incapacity to drive, Ac= probability of a serious accident). It is assumed that a private driver spends 4% (1 hour/day) at the wheel and a professional driver 25% (6 hours/day)—stricter rules must therefore be imposed for the latter. The generally socially accepted annual risk of death is 1:20,000 ($RH=0.25 \times 1 \times 0.01 \times 0.02 = 0.00005$).

More information: Thomas Pezawas, Fitness to Drive After Syncope and/or in Cardiovascular Disease – An Overview and Practical Advice, *Current Problems in Cardiology* (2020). [DOI: 10.1016/j.cpcardiol.2020.100677](#)

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