

Men who live alone have problems taking 'blood thinning' drug

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Living alone is associated with difficulties using the "blood thinner" warfarin in men, but not women, according to research presented today at ESC Congress 2019 together with the World Congress of Cardiology.

"'Ask my wife' is a common reply among [older men](#) to questions about their medication, disease, and treatment," said Dr. Anders N. Bonde of Gentofte University Hospital, Copenhagen, Denmark.

"Our study suggests that when it comes to anticoagulation control, men are more dependent on their partner than [women](#)," he added. "Women living alone often have better relationships with children or a broader network of people who could help them manage a demanding medication like [warfarin](#). Furthermore, divorces are often more difficult for men than for women, and the largest percentage of patients with diagnoses related to [alcohol abuse](#) (which is known to be important for anticoagulation control) was found in men living alone in our study."

Warfarin is a common anticoagulant treatment worldwide for preventing stroke in [atrial fibrillation](#), the most common heart rhythm disorder. It is a type of vitamin K antagonist since it reduces blood clotting by blocking the action of vitamin K. Continuous blood-monitoring with international normalised ratio (INR) measurements is required for warfarin to be safe and effective, since too little of the drug may allow a blood clot to form and cause a stroke while too much causes bleeding.

Quality of INR control is usually measured as time in therapeutic range

(TTR), meaning the percentage of time with optimal warfarin concentrations in the blood to prevent stroke and avoid bleeding. ESC guidelines advise being in the therapeutic range at least 70% of the time. Warfarin can be challenging for patients, with dose adjustments needed to maintain high TTR coupled with a number of food and [drug interactions](#).

Previous studies on anticoagulation control have mainly identified clinical variables that predict low TTR—for example depression and cancer. But few studies have evaluated [socioeconomic factors](#). This study examined the influence of cohabitation status on TTR in men and women with atrial fibrillation.

A total of 4,772 atrial fibrillation patients with six months of continuous warfarin use and INR monitoring were identified from Danish registers. Patients were divided according to sex and whether they lived alone or with others. The researchers calculated TTR for men living alone, men not living alone, women living alone, and women not living alone separately. Factors known to influence TTR, such as depression, cancer, interacting medication, and age, were measured and adjusted for in a regression model.

The study found that the median TTR in men living alone was 57%. After adjustment for other factors known to be important for TTR, this was still significantly lower—by 3.6% - than in cohabiting men.

Dr. Bonde said: "Men living alone had low poor anticoagulation control. The impact of living on their own was larger than several factors previously known to affect TTR, such as cancer, use of interacting medication, or heart failure."

Women living alone also had lower TTR than cohabiting women, but after adjustment the difference was very small (0.2%) and non-

significant.

"We also found a significant interaction between sex and living alone in our model, meaning that cohabitation status was a strong and important predictor for TTR among men, but not among women," said Dr. Bonde.

He concluded: "Men who live on their own may need extra support to use warfarin, such as education, home visits, telephone contacts, or additional follow-up visits. They might also consider using a newer type of drug, a non-vitamin K antagonist oral anticoagulant (NOAC), which is easier to manage and has fewer interactions with food and drugs compared to warfarin."

More information: The abstract "Men who live alone have poor anticoagulation control: results from Danish registries" will be presented during Poster Session 5; Atrial fibrillation and oral anticoagulation 3 on Monday 2 September at 14:00 to 18:00 CEST in the Poster Area.

Paulus Kirchhof et al. 2016 ESC Guidelines for the management of atrial fibrillation developed in collaboration with EACTS, *European Heart Journal* (2016). [DOI: 10.1093/eurheartj/ehw210](https://doi.org/10.1093/eurheartj/ehw210)

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