

Nicotine and cardiovascular damage: look at the chemical structure!

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Perspective

When an individual admires a blue sky or a crystal and clear sea feels an inner satisfaction that predisposes him to face the daily activity with a positive approach. This is true if a time factor is added like “in the presence of a sunny day”.

The same situation is characterized differently when the same scene is viewed in a gloomy or very rainy day. It is clear that temporal and spatial events are able to influence people’s behavior and related responses. Similarly, a different approach may characterize the smoking habit of the individuals, particularly for the effect of nicotine on the cardiovascular system because of its chemical isomeric structure that recognizes a temporal-spatial shape.

This chemical is responsible for the effects of early cardiovascular damage, but the latter soon assumes stable characteristics for a long and variable time that are supported by the positive habit that smokers found: cardiovascular damage apparently not evident, which accompanies tone and position of social prestige. Only with running time the adverse effects of the toxic become evident in smoker individuals or individuals passively exposed to tobacco smoke. Why that?

Isomeric structure of nicotine, spatially recognized, is formed by two isomers, S (-) isomer, which begins to act a few days after smoking onset, having a pleasant effect on the smokers, and Nicotine S (+) isomer displaying an initial but transient unpleasant effect. Therefore, it is worth noting that the chemical structure of nicotine explains the cardiovascular effects, which are initially characterized by increased heart rate, increased systolic blood pressure and endothelial dysfunction. These responses are transient, although repeatable, according to the type of smoking exposure.

Analyzing these assessments, my personal opinion is to open the “door” to the knowledge of the chemical structure of a toxic when a research study is conducted, taking into account that the same substance may exert different types of activity depending on its isomeric structure. So did, it is easier to interpret some differences that can be observed in apparently similar findings.

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Conflicts of interest

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