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What increases the risk of cardiovascular disease?

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Cardiovascular Disease (CVD) is a serious condition that affects the structure or function of the heart. It is one of the leading causes of death globally with 17.9 million deaths (32.1%) in 2015 alone¹. Once diagnosed with CVD, peoples' lives change incredibly. If a patient is diagnosed with moderate CVD, then symptoms can be suppressed through daily medication and modifiable lifestyle changes. However, if severe, it can take people's lives in an instant through heart failure. It is hardly the case where patients are cured from CVD—most often, patients learn how to deal with the symptoms². Thus, prevention of CVD is strongly encouraged among adults today. Research has shown that 90% of CVD are preventable³. There are numerous research focused on identifying the key risk factors.

For my project, I will be using a dataset from a cross-sectional CVD study done in the US to create a logistic regression model that estimates the probability of a patient having CVD given that certain characteristics. From my analysis, I found that age, gender, BMI, smoking habits, alcohol, glucose and cholesterol intake, blood pressure, and physical activity are significant risk factors that affect a patient's probability of having CVD. Details of my findings will be discussed in my presentation.

¹ Mendis S, Puska P, Norrving B (2011). *Global Atlas on Cardiovascular Disease Prevention and Control* (PDF). World Health Organization in collaboration with the World Heart Federation and the World Stroke Organization. pp. 3–18. ISBN 978-92-4-156437-3. Archived (PDF) from the original on 2014-08-17.

² Go AS, Mozaffarian D, Roger VL, Benjamin EJ, Berry JD, Borden WB, et al. (January 2013). "Heart disease and stroke statistics--2013 update: a report from the American Heart Association". *Circulation*. 127 (1): e6–e245. doi:10.1161/cir.0b013e31828124ad. PMC 5408511. PMID 23239837.

³ Mendis S, Puska P, Norrving B (2011). *Global atlas on cardiovascular disease prevention and control* (1 ed.). Geneva: World Health Organization in collaboration with the World Heart Federation and the World Stroke Organization. p. 48. ISBN 978-92-4-156437-3.