Nicole Dille  
Alicia Hayhurst  
Senior Division Medicine & Health  
*Comparing Heart Rates Of Smokers To Non Smokers*

Whose heart rate will beat the fastest as a resting rate, a smoker, a non-smoker or an athlete? Whose heart will beat the fastest after exercise? We hope that after our results, the smokers that we use and their friends will see how unhealthy smoking is and try and quit. We know that everyone sees how bad smoking is for you in the media, but hopefully this will influence the smokers more since it is them being tested. For an athlete, generally as they become more fit, their heart rate slows. This is a sign that the heart is pumping blood with greater efficiency. The rest pulse of a trained heart is less than 70 beats per minute. Aerobically trained people have lower heart rates of cardiovascular disease, such as hypertension and coronary artery disease, but a trained heart is not immune to heart problems. Resting heart rate averages 60 to 80 beats per minute. What is resting heart rate? It is the number of beats in one minute when you are at a complete rest. It indicates your basic fitness level. Smoking increases the risk of coronary artery disease and heart attacks up to 5 times the normal risk. Cigarette smoking should affect blood pressure and heart rate because nicotine narrows the blood vessels that lead to extremities on the body, forcing the heart to work harder to supply blood to these extremities. Heart rates of smokers tend to stay elevated after exercise, while those of fit people return rapidly more towards resting levels. Cardiovascular disease is the main cause of death due to smoking. From the information we have gathered, stating that smoking increases your resting heart rate and also takes your heart rate longer to return to your normal heart rate after exercise, we think that at a resting state, the smokers’ heart rates will beat the fastest. We think that after exercise, the non-athletes will be the highest since they are not use to exercising, but the smokers will take longer to return to normal. The control variables are the resting heart rates. The manipulated variables are that some smokers may smoke more than others. It is possible that the athletes and non-athletes are exposed to second hand smoke to affect their heart rate.