Riboflavin is B2 vitamin and antioxidant for our body. It helps our body to manage oxidative stress by itself or in many cellular metabolism. We can improve our insight on antioxidative stress in our body and health generally by exploring the issues. Riboflavin is a potential photosenzitizer of singlet oxygen. I have studied the influence of riboflavin, sodium azide and higher concentration of molecular oxygen on lifetime of singlet oxygen and triplet states of riboflavin via time-resolved luminescence of singlet oxygen in those solutions. I found out that riboflavin works as photosenzitizer of singlet oxygen and its quenching was not observed. I have obtained rate constants of quenching by sodium azide and by dissolved oxygen. Partial exchange of normal water by heavy water led to longer lifetimes of singlet oxygen. It allowed to identify which lifetime corresponds to singlet oxygen and which to riboflavin.