

3.

What is the risk level of alcohol intake? -
More indulgent than you have been told

Many official and professional groups have published guidelines on the risky levels of drinking. Likewise, recommended levels or safe levels have been presented. These all are guesstimates and underestimates. They are more guided by what is thought to be politically correct than by scientific evidence. As a matter of fact, the risk level of alcohol intake is not easy to estimate. Risk levels vary depending on the outcome we are interested in. Life-span is the most interesting end result. Fortunately, all-cause mortality is the most studied outcome. The best we can do is to see where the risk of death meets that of lifelong abstainers.

No meta-analysis has reported a best estimate of the above risk level in plain numbers. The figure 4A in the meta-analysis by Dr. Di Castelnuovo and his coworkers, however, has the curve we need. With the help of the naked eye and measuring tools we can see that the risk level is more or less 33 g/day (4). This underestimates the risk level because of three reasons. First, at least two studies were excluded (6,7).

Of these, the very important one is the *American Cancer Society Study, Cancer Prevention Study II* (6). This study found that even in the highest intake group, consuming 72 g/day or more, the risk of death was lower than among lifelong abstainers. The relative risk of death was just a little below one. For men the relative risk was 0.96 (95 % CI 0.93 - 1.00) and for women 0.98 (95 % CI 0.89 - 1.07). So we are on the safe side if we make the conservative assumption that the aforementioned 72 g/day is the risk level. These findings were based on the experience of 490,000 persons. To this we can add the 37,000 persons from an Australian study with results closely similar to that of the American one (7). The meta-analysis estimate was based on the experience of approximately one million persons (4). Since the number of person-years was not reported, we have no better way than to use the number of persons in calculating the weighted average. The rough calculation yields 46 g/day for the best risk level estimate. Respective calculations for men and women separately can only be made with all abstainers as the comparison group. In this comparison, the risk level for men is 50 g/day and for women 47 g/day. The above figures are still likely to be underestimates for at least two reasons. The number of persons in the 27 studies with lifelong abstainers must be less than the one million persons in the 34 studies included in the meta-analysis. Moreover, there is a major and commonly neglected bias.