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**Background** Despite progresses achieved in road safety the number of lives saved is reaching a plateau in developed countries. Inattention at the wheel remains understudied.

**Aims/Objectives/Purpose** In order to examine new ideas about potential causal factors and targets for interventions we investigated the association between mind wandering (MW) and road traffic crash.

**Methods** We performed a case-control responsibility study among 954 drivers attending the Emergency Department following road traffic crash.

**Results/Outcomes** MW with high disturbing thought content was a statistically significant risk factor for being responsible for road-crash (24% of responsible versus 13% of non responsible; aOR=1.84 (1.26 to 2.68); Attributable Fraction of 11%) after adjustment on external distraction and a range of potential confounders including alcohol use, psychotropic medicine use, sleepiness and emotional valence.

**Significance/Contribution to the Field** MW behind the wheel, through intentional lapses towards external stimuli may compromise the ability to integrate road information thus threatening traffic safety. Innovative interventions should be experimented to address the issue of MW in road traffic crashes.