Nonalcoholic beer reduces inflammation and incidence of respiratory tract illness.

Abstract:
Strenuous exercise significantly increases the incidence of upper respiratory tract illness (URTI) caused by transient immune dysfunction. Naturally occurring polyphenolic compounds present in food such as nonalcoholic beer (NAB) have strong antioxidant, antipathogenic, and anti-inflammatory properties. The objective of this study was to determine whether ingestion of NAB polyphenols for 3 wk before and 2 wk after a marathon would attenuate postrace inflammation and decrease URTI incidence. Healthy male runners (N = 277, age = 42 ± 9 yr) were randomly assigned to 1-1.5 L · d(-1) of NAB or placebo (PL) beverage (double-blind design) for 3 wk before and 2 wk after the Munich Marathon. Blood samples were collected 4 and 1 wk before the race and immediately and 24 and 72 h after the race and analyzed for inflammation measures (interleukin-6 and total blood leukocyte counts). URTI rates, assessed by the Wisconsin Upper Respiratory Symptom Survey, were compared between groups during the 2-wk period after the race. Change in interleukin-6 was significantly reduced in NAB compared with PL immediately after the race (median (interquartile range) = 23.9 (15.9-38.7) vs 31.6 (18.5-53.3) ng · L(-1), P = 0.03). Total blood leukocyte counts were also reduced in NAB versus PL by approximately 20% immediately and 24 h after the race (P = 0.02). Incidence of URTI was 3.25-fold lower.
(95% confidence interval = 1.38-7.66) (P = 0.007) in NAB compared with PL during the 2-wk postmarathon period. Consumption of 1-1.5 L · d(-1) of NAB for 3 wk before and 2 wk after marathon competition reduces postrace inflammation and URTI incidence.