

Painkillers taken before marathons linked to potentially serious side effects

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Many competitors try to prevent pain interfering with their performance by taking painkillers that are readily available in pharmacies and supermarkets, say the authors.

And in a bid to find out what impact these common drugs might have, the authors quizzed participants in the 2010 Bonn Marathon/Half-Marathon about their use of medication and any symptoms they had during and/or after the race.

In all, just under 4000 (56%) of all 7048 competitors returned their online questionnaires. Most (87%) had run marathons before.

Of those who took painkillers before the race, 1 in 5 said they also used painkillers during training to curb or ward off pain; 1 in 10 said they had pain symptoms before the start of the race. This compares with 1% of those who didn't touch painkillers.

Over half the drugs taken (54%) were bought over the counter without a prescription, and included [diclofenac](#), aspirin, and ibuprofen.

The numbers of those forced to withdraw during the race because of pain and other health symptoms differed little between those who took painkillers and those who didn't.

But withdrawal from competition because of [gastrointestinal problems](#) was significantly more common among those taking painkillers, and while withdrawal as a result of [muscle cramps](#) was rare, it was significantly more common in those who had taken these drugs.

Runners who popped painkillers were five times as likely to experience symptoms as those who didn't take these drugs; the overall difference in risk was 13%.

Symptoms included [stomach cramps](#),

[cardiovascular problems](#), gastrointestinal bleeds, blood in the urine and joint and [muscle pain](#).

The rate of symptoms rose in parallel with increasing dose. One in 10 of those taking diclofenac took over 100 mg; 43% of those who took ibuprofen, the second most popular choice, took doses of 800 mg or more—twice the recommended dose.

Virtually none of the respondents said they were aware of any risks associated with taking painkillers for endurance sports.

Nine runners who took painkillers said they had ended up in hospital: three for temporary kidney failure after taking ibuprofen; four for bleeding ulcers (aspirin), and two after a heart attack (aspirin), one of whom had taken 500 mg for mild foot pain.

None of the runners who competed without having topped up on painkillers was admitted to hospital.

[Painkillers](#) block enzymes called cyclooxygenases, which regulate the production of prostaglandins. But the authors suggest that prostaglandins also protect tissues when the body is under extreme stress, such as during endurance sports.

"Taken together, our data indicate that the widespread use of cyclooxygenase inhibitors in connection with [endurance sports](#) is potentially damaging. Further investigations are warranted to examine whether the use of analgesics before and during sports activities should be avoided altogether," they conclude.

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