

# The “Quebrantahuesos” (breaks bones) and the sports-medical examinations

## La Quebrantahuesos y los reconocimientos médico-deportivos

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Recently the organisation of one of the biggest open Spanish sports trials, and the largest cycling event, the “Quebrantahuesos” (QH) – breaks bones – took the decision to require a compulsory medical certificate in order to participate, just as in other countries such as France.

The Spanish Sports Medicine Society, upon request from the organisers, advised on the contents of the medical examination and offered medical centres where they could be performed.

From the very outset, it supported the QH organisation in this decision, and it has publicly acknowledged this brave decision that initially had some negative consequences through the rejection and complaints of some participants.

Without a doubt, the competition will not suffer future detrimental effects, and the majority of participants understand that this measure has no other purpose than to protect the athletes' health, something that has been insistently requested for many years by the Sports Medicine Society. This editorial has arisen as a result of this issue: athletes and the obligation to undergo medical controls BEFORE participating in their sport. This comes on the back of a participant that bitterly complained to the organisation because in the examination that was performed on him, a problem was discovered that contraindicated participation in his sport. His reaction, instead of the logical and expected thanks to the doctor that discovered a significant pathology and furthermore thanks to the QH organisation for having initiated this pioneering measure, was to complain and threaten prosecution for preventing him from participating.

It seems very timely to refer to a well-known Spanish proverb “prevention is better than cure”, to illustrate this sorry response.

Medicine, and in particular Sports Medicine, has the crucial aim of prevention. Undoubtedly it is much better to avoid the pathology than

to have to treat it once it has appeared. This is especially relevant in the case of sudden death in athletes. This is why all possible efforts should be made to prevent sport-related problems, particularly if they are as serious as sudden death<sup>1,2</sup>.

It should be highlighted that physical exercise is fundamentally a source of health and is considered that the greatest potential benefit of exercise is its capacity to preserve the functional capacity, freedom and independence of the subject<sup>3</sup>. Furthermore, it constitutes an excellent therapeutic tool for the majority of chronic illnesses, some of which are truly epidemic, such as obesity, hypertension and diabetes<sup>4</sup>.

However, it should not be overlooked that despite its enormous beneficial effects, exercise has its risks, such as accidents<sup>5</sup>, severe injury due to overloading<sup>6,7</sup>, breakdown of chronic pathologies<sup>8</sup>, sudden death and other cardiac events<sup>9</sup>, and various medical problems related to physical activity in itself, such as dehydration, hyponatremia, acute fatigue, bronchoconstriction, and exercise-induced anaphylaxis, rhabdomyolysis, iron-deficiency anaemia, gastrointestinal disorders, problems related to extreme temperatures, immunological alterations, etc.

Cycle-tourism, except for error or omission, does not appear in the sports catalogue of the Spanish Cycling Federation, and is a physical sporting activity that combines sport with tourism, and does not have a competitive nature.

In Medicine, practising non-competitive sport is often recommended for people with some chronic pathology, to obtain the benefits from physical activity whilst avoiding high-intensity problems, but no doctor in their sound judgement would commit the recklessness of recommending cycle-tourism to these patients.

The QH, classified as cycle-tourism, just as any other cycle-tourism has connotations of the highest competitive level. The cycle-tourist

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will compete with the others, and on many occasions, which is worse, with him/herself, trying to finish it in increasingly quicker times, which converts this type of trial into a risky, even high-risk activity.

The QH covers 200 km of the Pyrenees in which cyclists ascend to ports (Portalet, Somport, Hoz and Marieblanc), the latter classed as special and which starts in a place called Escot "the port of agony". Completion takes between five and a half, and twelve hours.

Its difficult nature is obvious, and in addition, these trials and other similar ones, may have severe health consequences. The first, an immediate increased cardiovascular risk. The paradox of exercise: Exercise performed regularly and suitably reduces the risk of having cardiovascular diseases, but at the time the physical activity is being performed, the risk of suffering sudden death multiplies by two from the start of the physical or sporting activity up to more than 24 hours later<sup>10</sup>.

It is not necessary to carry out an exhaustive and detailed analysis of the consequences of long-lasting activities on the body, but some of them are worth remembering.

Resistance sport increases the prevalence of auricular fibrillation<sup>11</sup>; it seems that this may increase cardiac damage, with remodelling and formation of fibrotic myocardial zones<sup>12</sup>; an overloading of the right cardiac cavities, transitorily reduces the right ventricular ejection fraction and raises cardiac biomarkers<sup>13</sup>; increases morbidity and long-term cardiac mortality<sup>14</sup>.

Some 30-50% of participants in resistant sports experience gastrointestinal symptoms whilst practising the sport, such as nausea, vomiting, abdominal cramping, diarrhoea, and also the presence of blood in faeces<sup>15</sup>.

Finally, the long-lasting effects of sport on the renal system are well known: acute renal injury and haematuria<sup>16</sup>.

By no means is the prevalence of all these problems negligible, and their prevention and control require on-going medical attention, which starts with the first contact between the doctor and the athlete, via the required sports-medical examination. There is no doubt that the participants in the QH will ride bicycles that in many cases, cost a shameful amount of money, not to mention the additional costs of practising amateur cycling (accessories, clothes, trips, energy drinks, nutritional supplements, etc.). But it is somewhat exceptional for these, and other athletes, to include a sports-medical examination in their provisions, or a strength test, and it is not even worth mentioning sports-medical follow-up and supervision.

Reactions have emerged from the decision to enforce a compulsory certification by the organisers of large sporting events, just as with the QH, and it does not cease to amaze that some organisations, already with several sudden deaths recorded throughout their activity history, have opted to impose a voluntary or anonymous questionnaire before participation, with the aim of detecting the risk of cardiac incidents or sudden death.

In this European context, it is not acceptable to resort to self-completed health questionnaires. A medical study by qualified doctors is required before practising sports, fundamentally specialists in Sports Medicine. These self-questionnaires may have some sense, though this is highly doubtful, however, in such as in English-speaking social contexts, and even in these contexts they dare to question it<sup>17</sup>.

In our context, all the sports-medical organisations consider the performing of medical examinations prior to sporting participation to be essential, which should include basic elements such as a resting electrocardiogram<sup>1,2,18-20</sup>, a model that was taken on by the former health protection committee of the Superior Sports Council, and which acts as a guideline for actions that are developed in Spain in this field<sup>21</sup>.

The decision made by the QH organisation to require a compulsory presentation of an aptitude certification is not just extraordinarily important, and something for which they deserve recognition, but it also marks the beginning of a standardisation of this measure across all Spanish sport. We hope that sports organisers will be sensitive to this need and accept the challenge and responsibility of implementing measures that have no other purpose than achieving a healthy sporting practice for all participants.

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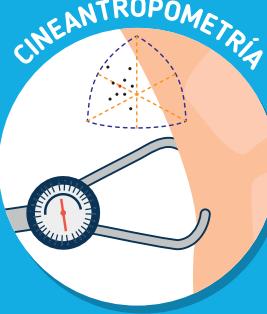
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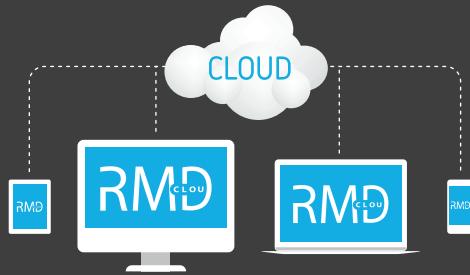
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