Background: The issue of the expectations of elite athletes, their coaches and non-medically qualified athlete support staff of consultations with sports physicians has not been previously dealt with in the sports medicine literature. As fulfillment of expectations of the content of a consultation may influence patient’s satisfaction and clinical outcome, it is important to assess the expectations of athletes and, most importantly, coaches. 

Objective: To assess the expectations and beliefs about fatigue, particularly in relation to blood tests, of athletes, their coaches and support staff in the specific context of tiredness of <7 days’ duration.

Subjects: 28 senior sports science or non-medically qualified sports medicine staff, 22 elite coaches and 62 elite athletes from the Australian Institute of Sport were included in this study.

Methods: A single questionnaire.

Results: The expectation for a blood test at the initial consultation for short-term fatigue was particularly high among athletes (81%) and coaches (91%). This expectation increased in athletes if their performance was worsening. All groups unanimously suggested that a blood test be performed in cases of more prolonged fatigue. Increase in total training load was perceived to be the most important cause of fatigue, but issues relating to sleep were also thought to be highly relevant. All groups suggested that blood tests provide some degree of reassurance, and all groups suggested that the most important blood tests that might be performed related to exclusion of iron deficiency, anaemia and infection.

Conclusion: Athletes and their coaches generally expect that blood tests will be performed even when fatigue has been present for <1 week. This is at odds with currently available evidence of the diagnostic utility of these tests. Despite the current evidence base, individual factors in the athletes, coaches and doctors need to be considered when deciding on whether such testing has to be performed.

Presentation of elite athletes with fatigue or tiredness is not infrequent in a sports medicine practice. Anecdotal evidence indicates that some athletes and many coaches expect blood tests to be performed in this clinical situation. However, there is also recently published evidence that, particularly in cases where fatigue is of short duration (<3 weeks), blood tests do not contribute to the diagnostic outcome.

In view of this potential dichotomy and the potential consequences, this study aims to assess the expectations of athletes, their coaches and support staff, particularly in relation to blood tests, in the specific context of tiredness of <7 days’ duration.

METHODS

Approval for this prospective study was obtained from the ethics committee of the Australian Institute of Sport (AIS). Thirty eight senior sports science or non-medically qualified sports medicine (SSSM) staff at the AIS, 24 AIS coaches and 62 elite athletes were approached by personal contact to participate in the study.

Those who gave their consent completed a three page questionnaire in which they were asked about expectations of the content of a consultation when an athlete presented with a complaint of fatigue or tiredness of 5–7 days’ duration, important areas in the clinical history, types of blood test that might be performed, perceived causes of short-term fatigue and benefits of having a blood test if tests had been shown to be not useful in making a diagnosis of short-term fatigue. Each group was then asked if they would have been disappointed or felt...
null
practices of coaches related to stretching have been assessed threats to open a gateway to this neglected field of study.

Despite what is known from general internal medicine about their relatively small contribution to diagnosis, blood tests assume an almost mystical importance in both sports and general medicine. This study explores how they might be better (or indeed less commonly) used in sports medicine.

In this study, coaches (91%), athletes (81%) and, to a lesser degree, sport science/medicine staff (64%) indicated that a blood test should be performed at the first consultation for fatigue of short duration but, interestingly, when asked whether they would be disappointed or felt that a complete job had not been done at such a consultation, the corresponding figures were 68%, 32% and 46%, respectively. Athletes’ expectations were greater for blood tests if performance was worsening (71%), and all groups felt that a blood test should be performed for more persistent fatigue.

If the evidence suggests that tests are not useful in diagnosis, at least in patients with short-term fatigue, why not just omit them? If only life was so simple. In making a decision about testing, doctor, athlete and coach factors all need to be considered. In treating elite athletes, the stakes are high and time pressure is constant—we cannot afford to miss a diagnosis. In the era of defensive medicine, tests are often performed “just in case” or because the unexpected may be disclosed, whereas in sports no doubt tests are performed for the same reasons. Just like other patients, athletes and coaches seek reassurance, and this study shows that reassurance of some sort is important to both coaches and athletes (table 4). But some of this reassurance cannot be simply provided by a blood test. The most common response of athletes to the question related to non-diagnostic benefits of a blood test was “reassure that there is no serious problem”. Both coaches and SSSM staff noted “excludes/diagnoses some problems” as their second most common response. This is correct for some but not so for many problems. The coaches’ third most common response was “tests general well-being”—clearly, blood tests do not do this. A normal blood test may not provide what some think that it does.

Reassurance by the performance of a blood test has been shown to be important to athletes, coaches and SSSM staff, but there is little consensus on when and whether investigations should be performed solely to reassure patients. It has been suggested that it is usually both unnecessary and unhelpful to investigate patients who have no organic pathology, but some patients may be difficult to reassure, and consideration needs to be given to personal and social factors, such as previous experiences, which may be obstacles to reassurance. Perhaps patient education can increase the chances of reassuring athletes and coaches, but the evidence for this is contradictory. One randomised controlled trial of lumbar spine x ray versus an educational programme in patients with back pain and low risk for “red flag” conditions found no difference in resolution of symptoms, functional improvement or satisfaction between the groups. However, it should be noted that 31% of patients in the education group had received a mark effect on satisfaction—the doctor’s interpersonal behaviour is a more important predictor of satisfaction. So the question remains, should we fulfil the expectations of strong athlete and coach expectations? Firstly it must be realised that perceived patient pressure is a strong independent predictor of all doctors’ behaviours but that doctors often do not correctly perceive patients’ visit-specific expectations. To avoid truly unnecessary investigations, we need to check whether our assumptions of the patients’ expectations are correct. Once that is established, meeting of patients’ expectations may well be productive, but the evidence for the benefit of satisfaction of expectations related to tests is mixed.

In primary care settings, unmet expectations have been associated with decreased patient satisfaction, poor adherence and possibly worse outcomes. In a study in which, among other expectations, 54% of patients had an expectation of a diagnostic test, those with no unmet expectations had less worry about serious illness and greater satisfaction and those who received diagnostic or prognostic information were more likely to have alleviation of symptoms and functional improvement at 2 weeks. However, when expectations for a test are studied in isolation, meeting such an expectation does not have a marked effect on satisfaction—the doctor’s interpersonal behaviour is a more important predictor of satisfaction. So the question remains, should we fulfill the expectations of athletes and coaches by performing a blood test, in the hope that this will improve compliance with our therapeutic interventions?

Although the doctor’s interpersonal behaviour may be an important predictor of patient satisfaction, a further issue that needs to be considered is the certainty with which doctors make decisions about diagnostic and therapeutic procedures. There is a need for educational programmes in patients with back pain and low risk for “red flag” conditions found no difference in resolution of symptoms, functional improvement or satisfaction between the groups. However, it should be noted that 31% of patients in the education group had received x ray examination (mainly at other centres) by the conclusion of this study. But what about the effects of satisfaction of strong athlete and coach expectations? Firstly it must be realised that perceived patient pressure is a strong independent predictor of all doctors’ behaviours but that doctors often do not correctly perceive patients’ visit-specific expectations. To avoid truly unnecessary investigations, we need to check whether our assumptions of the patients’ expectations are correct. Once that is established, meeting of patients’ expectations may well be productive, but the evidence for the benefit of satisfaction of expectations related to tests is mixed.

In primary care settings, unmet expectations have been associated with decreased patient satisfaction, poor adherence and possibly worse outcomes. In a study in which, among other expectations, 54% of patients had an expectation of a diagnostic test, those with no unmet expectations had less worry about serious illness and greater satisfaction and those who received diagnostic or prognostic information were more likely to have alleviation of symptoms and functional improvement at 2 weeks. However, when expectations for a test are studied in isolation, meeting such an expectation does not have a marked effect on satisfaction—the doctor’s interpersonal behaviour is a more important predictor of satisfaction. So the question remains, should we fulfill the expectations of athletes and coaches by performing a blood test, in the hope that this will improve compliance with our therapeutic interventions?

Although the doctor’s interpersonal behaviour may be an important predictor of patient satisfaction, a further issue that needs to be considered is the certainty with which doctors make decisions about diagnostic and therapeutic procedures. There is a need for educational programmes in patients with back pain and low risk for “red flag” conditions found no difference in resolution of symptoms, functional improvement or satisfaction between the groups. However, it should be noted that 31% of patients in the education group had received x ray examination (mainly at other centres) by the conclusion of this study. But what about the effects of satisfaction of strong athlete and coach expectations? Firstly it must be realised that perceived patient pressure is a strong independent predictor of all doctors’ behaviours but that doctors often do not correctly perceive patients’ visit-specific expectations. To avoid truly unnecessary investigations, we need to check whether our assumptions of the patients’ expectations are correct. Once that is established, meeting of patients’ expectations may well be productive, but the evidence for the benefit of satisfaction of expectations related to tests is mixed.

In primary care settings, unmet expectations have been associated with decreased patient satisfaction, poor adherence and possibly worse outcomes. In a study in which, among other expectations, 54% of patients had an expectation of a diagnostic test, those with no unmet expectations had less worry about serious illness and greater satisfaction and those who received diagnostic or prognostic information were more likely to have alleviation of symptoms and functional improvement at 2 weeks. However, when expectations for a test are studied in isolation, meeting such an expectation does not have a marked effect on satisfaction—the doctor’s interpersonal behaviour is a more important predictor of satisfaction. So the question remains, should we fulfill the expectations of athletes and coaches by performing a blood test, in the hope that this will improve compliance with our therapeutic interventions?

Although the doctor’s interpersonal behaviour may be an important predictor of patient satisfaction, a further issue that needs to be considered is the certainty with which doctors make decisions about diagnostic and therapeutic procedures. There is a need for educational programmes in patients with back pain and low risk for “red flag” conditions found no difference in resolution of symptoms, functional improvement or satisfaction between the groups. However, it should be noted that 31% of patients in the education group had received x ray examination (mainly at other centres) by the conclusion of this study.
What is already known about this topic

- The issue of the expectations of elite athletes, their coaches and non-medical athlete support staff of consultations with sports physicians has not been dealt with previously in the sports medicine literature.

What this study adds

- Athletes and their coaches generally expect that blood tests will be performed even when fatigue has been present for <1 week. Athletes' expectations increase markedly if performance is impaired by fatigue.
- All groups are unanimous in their expectation of a blood test in cases of fatigue lasting four weeks. Total training load or changes in training and sleep problems are the most commonly suggested causes of fatigue. All groups indicate that reassurance is provided by a blood test.
- Blood tests for iron levels, anaemia and infection are believed to be the most appropriate tests to be ordered by all groups.

References


Commentary

This paper has a remarkable contemporary relevance and represents a common dilemma for sports physicians. The author cannot be faulted for his study design and selection of participants. The choice of clinical scenario was most appropriate. Unrealistic demands are often made of sports physicians when consulting with elite athletes. These issues are heightened at times of intense competition or during events such as Olympic and Commonwealth Games. All team physicians have experienced issues highlighted by this study which contributes to a sparse body of existing knowledge. It provides informed comment on athlete expectation, compliance and ultimate satisfaction. Educational strategies for patients are offered in a balanced manner.

D F Gerrard
University of Otago Medical School, Dunedin, New Zealand; david.gerrard@stonebow.otago.ac.nz

www.bjsportmed.com