

# The IAAF's Hyperandrogenism Regulations suspended

On 27 July, the Court of Arbitration for Sport ('CAS') delivered a landmark ruling on the regulation of gender in sport. The decision explores how the categorisation of sport on the basis of sex can be best reconciled with the "biological reality" that human sex cannot necessarily be divided so clearly. Dr. Seema Patel, Senior Lecturer at Nottingham Trent University, Deputy Director of the Centre for Sports Law and author of 'Inclusion and Exclusion in Competitive Sport: Socio-Legal and Regulatory Perspectives,' reviews the case and suggests that sport regulation must be cautious of traditional criteria to determine eligibility in sports.

In 2014, Indian female sprinter Dutee Chand was suspended from international competition after hormone testing reportedly revealed that her body produced excessive natural levels of testosterone. Such elevated levels of testosterone, in a female, were deemed unacceptable according to the 2011 International Association of Athletics Federations ('IAAF') Hyperandrogenism Regulations (hereinafter 'the Regulations').

Hyperandrogenism describes a female who produces excessive levels of natural androgen hormones. An athlete with such condition, who is legally recognised as a female, is eligible to compete in female athletic competitions provided that, 'she has androgen levels below the normal range or, she has androgen levels within the normal range but has an androgen resistance such that she derives no competitive advantage from having androgen levels in the normal male range'. The Regulations measure androgen

in the human body by the levels of total testosterone in serum, with a normal male range measured as 10 nmol/L. Where an athlete does not meet the necessary criteria, a panel of medical experts will recommend conditions under which she could participate in female competition, such as undergoing treatment to lower her testosterone levels.

The rules imply that high levels of testosterone give the athlete an unfair competitive advantage over the majority of female athletes. Chand was therefore banned from competing, until she underwent treatment to reduce her testosterone levels. Notably, this was not the first time that an athlete was prevented from competing after suspicion surrounding gender. Caster Semenya was subject to scrutiny and humiliation after falling short of a previous IAAF policy in 2009.

Chand refused medical treatment to help make her eligible and challenged her ban by appealing to the CAS. She is the first female athlete to challenge the current IAAF Hyperandrogenism Regulations. Generally speaking, the policies in this area have evolved from historical sex testing and gender verification, to a hormone based approach, which was the subject of this appeal. The case centred around four key issues, which have long been debated by academics in the fields of law, science and ethics.

## Are the rules discriminatory?

Chand argued<sup>1</sup> that the Regulations unlawfully discriminated against some female athletes on the basis of a natural physical characteristic, which in this case was the quantity of natural testosterone produced by their body. It was submitted that it was illogical to exclude a female from competing because of an "unusual natural genetic trait, even if that trait confers an advantage

over other fellow female competitors who lack that trait."<sup>2</sup>

It was also proposed that the Regulations discriminated on the basis of sex since no testosterone limits apply to male athletes in the same way. Consequently, these inequities were considered to be an infringement of anti-discrimination provisions.

The IAAF accepted that the Regulations were, *prima facie*, discriminatory, being that they are a sex-based eligibility rule, and also accepted that it was the IAAF's duty to establish that the rule was justified as a "necessary and proportionate means of achieving a legitimate objective."<sup>3</sup>

CAS highlighted that the IAAF have acted in good faith in the construction and implementation of the Regulations. However, they agreed and reinforced that, consistent with legal standards, the responsibility fell with the IAAF to prove that the Regulations are nevertheless justified and necessary for the purpose of maintaining a level playing field<sup>4</sup>.

It is a common feature of sport that discriminatory rules apply to athletes to manage difference and match ability, since exclusion forms part of the essence of sport itself. Where this practice is justified, athletes may be reasonably excluded. Conversely, exclusion becomes unreasonable when the rules and regulations in place to manage our differences do not actually match ability or do not directly relate to the objective of protecting the essence of sport<sup>5</sup>. It is therefore necessary to justify discriminatory rules.

## Are the rules based on flawed science?

Chand and her experts submitted that the Regulations are factually flawed and unsupported by the "best available science." This particular aspect of the case

involved a thorough analysis by experts of the impact of natural endogenous testosterone on the performance advantage of a hyperandrogenic female athlete. Supported by expert evidence, Chand argued that:

a) There was no convincing scientific link between testosterone levels and athletic performance to support the idea that higher levels of natural testosterone give an elite athlete a performance advantage. Instead, it was suggested that endogenous testosterone cannot be a basis for success in athletic performance because other factors also contribute to the performance differences between male and female athletes. It was also submitted that, since the body reacts differently to endogenous and exogenous testosterone, any data concerning the performance enhancing effects of exogenous testosterone does not allow for the same conclusion to be drawn for endogenous testosterone.

b) The 10nmol/L threshold of testosterone where female athletes are considered to be in the male range and, therefore, at an advantage, is flawed because there is a natural overlap between male and female testosterone concentrations and there is insufficient data on elite athletes to establish any accurate reference range<sup>6</sup>. Currently research in the field is too vague and requires development. Chand argued that testosterone levels are naturally dynamic and vary markedly which calls into question the “normal range” stipulated in the rules.

It was therefore submitted that the Regulations should be declared void unless the IAAF could establish that these propositions were correct.

The IAAF strongly rejected these arguments and presented extensive expert evidence to support the scientific basis for the Regulations.

They clarified that the regulations were not using testosterone to distinguish between men and women but instead they were seeking to “address the position of female athletes who, due to a special condition, have functional levels of serum testosterone that are usually only seen in males.”<sup>7</sup>

In response to the first argument, the IAAF contended that testosterone is a significant determinant of athletic performance and testosterone levels are considered to be the “best discriminating factor” in explaining the performance differences between male and female athletes<sup>8</sup>. Experts argued that there was a proven relationship between endogenous and exogenous testosterone and since exogenous testosterone has a performance enhancing effect, natural levels of testosterone would have the same effect, thus warranting the same sanctions.

On the second challenge, the IAAF saw no basis for attacking the threshold levels of testosterone in the Regulations because they established a “clear objective criterion.”<sup>9</sup> They disagreed with the proposition that there is a natural overlap between male and female levels, instead arguing that it would be very rare for a female to exceed the specified threshold unless she had a condition. It was therefore considered to be an appropriate cut off for testosterone levels.

When relying on data from studies investigating the ‘testosterone sex gap,’<sup>10</sup> there was disagreement amongst the experts on whether ‘outliers’ should be included when defining the normal reference range for endogenous testosterone levels. Including them resulted in a significant overlap in testosterone levels between men and women, supporting Chand’s argument. The IAAF experts were of the opinion that only what they

referred to as “healthy” women should be tested to define a normal range and that the outliers should therefore be excluded<sup>11</sup>.

With contrasting interpretations of the scientific evidence, CAS sought to distinguish hypothesis from truth to conclude that Chand did not sufficiently address the relationship between testosterone and performance<sup>12</sup>. She had not therefore met her onus on the balance of probabilities to prove that testosterone is not a material factor in athletic performance. Conversely, the IAAF did provide scientific and clinical data in support of their position and CAS were satisfied with their explanation.

Neither party could establish whether there was a difference between endogenous or exogenous testosterone. No single study offered with certainty, a scientific basis for the panel to incline one way or the other. Since the issue remained unresolved, Chand failed to discharge her responsibility of proving that the Regulations were unsupported by science and that a difference does exist.

Overall, CAS ruled that there is a scientific basis for the use of testosterone as a marker for male and female difference in the Regulations and the IAAF could continue to rely on it, a matter which continues to be the subject of scientific debate<sup>13</sup>.

#### **The rules are discriminatory, but are they justified?**

Having accepted that the rules are ‘*prima facie*’ discriminatory, the onus fell on the IAAF to prove that they were necessary and proportionate for the purpose of achieving fairness in competition. CAS reinforced that this was not an easy task, but clarified that they were “dealing with the matter from a legal perspective and in the context of accepted facts.”<sup>14</sup> A

number of multi-disciplinary propositions were raised to ascertain whether there was any justification for the discriminatory effect of the Regulations.

Chand accepted the pursuit of fairness as a legitimate objective, but her key submission on this point was that the Regulations were “grossly disproportionate” and resulted in detrimental effects such as the stigmatisation of the suspected females, damage to their self-esteem, a lack of informed consent and/or guarantee of confidentiality, and concerns around the long term effects of corrective medical procedures<sup>15</sup>. The idea that athletes with hyperandrogenism threaten the integrity or essence of sport had not been substantiated in science or history<sup>16</sup>. Instead, the rules were deemed to have the same negative effects as the previous sex testing and gender verification policies. The IAAF disagreed with these arguments and advanced that the Regulations are based upon recognised medical guidelines.

The IAAF insisted that the restriction was necessary and proportionate to maintain a level playing field, a concept which Chand rejected as “illusory.”<sup>17</sup> The IAAF claimed to have an “ethical obligation” to address the concerns of the majority of female athletes and to maintain the categories of sport<sup>18</sup>. Further, by assisting with diagnosis of hyperandrogenism, the Regulations were protecting the health of affected athletes. These benefits therefore outweighed any harm caused by the Regulations.

Chand argued that the rules were unfair because they exclude on the basis of a natural trait that is no different to other factors that may contribute to athletic performance. Other natural physical traits exist which may confer a competitive advantage, yet those are not screened in the same way. Chand’s



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experts contended that the Regulations rested on the assumption that all competitors can be scientifically segregated into categories of male or female which is misguided because this is a natural trait that should not be treated any differently to any other biological variation<sup>19</sup>.

The IAAF rejected the notion that high levels of natural testosterone are no more unfair than other natural advantages, because testosterone goes to the heart of the male/female division in sport. Indeed, sex segregation in sport was defended on the basis that it is necessary for the protection of the essence of sport. Experts for the IAAF stated that sport should have the right to decide whichever values it wishes to uphold in this regard<sup>20</sup>. From their perspective, the integrity of sport was still compromised, despite being a natural trait with no deliberate attempt to cheat.

Essentially, the IAAF argued that the essence of sport is a level playing field and this necessitates some categorisation in the interest of achieving fair competition. The community of female athletes demand this parity in the female category. Secondly, the IAAF relied on the idea that testosterone provides the best criterion to ensure that the rationale for the separation of categories remains unchanged, and to ensure a level playing field within the female category<sup>21</sup>.

CAS sympathised with the IAAF’s efforts to deal with this subject. However, it was of paramount importance to address whether the rule was necessary and proportionate, since the Regulation has such a detrimental and discriminatory effect on the athletes concerned. For instance, being placed at the centre of this controversy has come at a personal cost for Chand who has been

abused and ostracised throughout this fight for inclusion<sup>22</sup>.

CAS agreed that sport should be separated into male and female categories to maintain fairness and were therefore satisfied that the rules intended to pursue a legitimate objective. They commended the IAAF for the way in which they sought to create rules which balance the right of athletes against the protection of the essence of sport.

The aim of the rule was to determine eligibility for female competition and was based upon the assumption that a female athlete with hyperandrogenism enjoys a significant advantage over a non-hyperandrogenic female. CAS concluded that there is currently insufficient quantitative evidence about the degree of advantage enjoyed by such athletes<sup>23</sup>. It is not enough to establish that the characteristic has some performance enhancing effect. There may be indirect evidence that high levels of endogenous testosterone improve athletic performance but it is critical to know the magnitude to justify the “male/female divide” such that it is reasonable and proportionate to render females with, and sensitive to, that level of testosterone ineligible to compete as female athletes.<sup>23a</sup>

In light of the evidence provided, CAS were unable to “conclude on the balance of probabilities that androgen-sensitive hyperandrogenic female athletes enjoy such a substantial performance advantage over non-hyperandrogenic female athletes that excluding them from competing in the female category, and thereby excluding them from competing at all unless they take medication or undergo treatment, is a necessary and proportionate means of preserving fairness in athletics competition and/or policing the binary male/female

classification.<sup>25</sup>

Consequently, according to CAS, the Regulations do not currently fulfil their stated purpose. They highlighted that evolving scientific evidence may reach a sufficient level of proof about the precise degree of advantage in the future.

#### Doping controls

The final argument presented by Chand's counsel was that the Regulations were disguised as a doping rule because they had the practical effect of imposing a doping sanction on female athletes who fall foul of the endogenous testosterone limit. This sanction is not authorised by the WADA Code and should therefore be declared invalid. The IAAF considered the Regulations to be entirely different in character to doping rules and argued that "they established an eligibility condition equivalent in character to a boxing weight-limit" and there has not been a suggestion that the Regulations breach the WADA Code. CAS concluded that the Regulations were an eligibility rule and not a form of anti-doping control and rejected this ground of appeal.

#### Decision and implications

Without sufficient proof that the Regulations were necessary and proportionate for the purpose of pursuing the legitimate objective of organising competitive female athletics to ensure fairness in competition, CAS suspended the Hyperandrogenism Regulations for a period of two years. During that time the IAAF may provide further evidence in relation to the link between performance advantage and high androgen levels in hyperandrogenic females<sup>26</sup>. In the absence of any evidence, the Regulations will be declared void. Dutee was once again permitted to compete in both national and international-level athletics events.

**Whilst the case demonstrates that the classification is defensible, the obsession with maintaining these categories will result in the continued conflict between inclusion and exclusion in sport**

Following the ruling, the IAAF stated that they "will now meet as soon as possible with its experts and with the IOC and its experts to discuss how best to address this interim ruling by the CAS."<sup>27</sup>

The division of sport and society along the lines of sex is challenged by individuals who do not sit neatly into those categories and who do not conform to the gender attributes typically associated with man and woman. As long as sport is segregated along the lines of sex and determined by testosterone levels, this will continue to be a grey area. Whilst the case demonstrates that the classification is defensible, the obsession with maintaining these categories will result in the continued conflict between inclusion and exclusion in sport. Although scientific advances in this field will improve our understanding of the relationship between hyperandrogenism and sport, equal attention must be given to socio-legal and ethical perspectives on human diversity<sup>28</sup>, and to what extent sport and society are essentially willing to accept natural differences.

With that in mind, the regulation of such categories requires careful consideration. At a basic internal level of sports governance, sports rules should be monitored and audited to ensure that they reflect more accurately an informed, modern understanding of human differences. The CAS award has gone some way to reconcile the tension between inclusion and exclusion in sport by implicitly encouraging sport to regulate in a more accountable way by using truth and fact to draw competitive lines. The decision implies that, in the future, eligibility rules and policies in sport will need to be reviewed to ensure that they are evidence based rather than founded on unproven assumptions, in the pursuit of

legitimate objectives and compliant with principles of fairness and equality. In addition, rules which have a significant detrimental and discriminatory impact upon athletes must be justified according to legal and ethical standards. After all, sport should not be free to regulate itself in any way that it wishes, and the CAS award reflects that position to some extent. The balance between inclusion and exclusion rests on the more responsible regulation of sports rules and policies.

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