

## **Correspondence regarding the buccal smear examination at the 1970 Edinburgh Commonwealth Games**

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6th November, 1969.

Dr. James R. Owen,  
Foxhill,  
West Haddon,  
Near RIGBY.

Dear Dr. Owen,

Col. Fraser of Edinburgh has suggested I write to you for the background information on the decision of the Olympic Games Committee to make sex tests compulsory for all competitors. He has requested that our laboratory do buccal smears on all competitors at the Commonwealth Games who fail to produce certificates that this has been done in their own country.

Although I would like to be as helpful as I can, I feel reluctant to undertake the buccal smear examinations as I am strongly of the opinion that this is not the appropriate test. My reason is that a buccal smear test taken in isolation says nothing about the sex of the individual. For example, in the notorious case of the Polish athlete I understand that the test would have supported his claim to run in the women's events (his karyotype was, I am told, 47,XXY which would make the sex chromatin test +ve). The buccal smear test would thus have the result of excluding males with Klinefelter's syndrome from taking part in mens' events, and would also exclude females with the testicular feminisation syndrome from womens' events. The latter possibility is not so remote, as I have had among my own patients several athletic girls with this condition, one of whom was a Junior Tennis Champion. Apart from the distress that would follow the exposure of a paradoxical sex test in such individuals, I would imagine that the injured party might have a case for claiming damages. Do you know if there is some sort of clause to avoid claims for damages in the regulations?

I understand that the purpose of these sex tests is to detect the male who is masquerading as a female in womens' events. In my opinion, the most practical test would be a simple clinical examination, which could be done in a moment, would not involve expensive laboratory tests, and would be acceptable to both athletes and doctors. I am surprised that the Olympic Games Committee did not see this and would be most grateful if you could give me their views.

Yours sincerely,

M.A. Ferguson-Smith, M.B., Ch.B., M.C.Path.,  
Senior Lecturer in Medical Genetics.

# The British Olympic Association

*Patron:*

HER MAJESTY THE QUEEN

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*General Secretary:*

K. S. DUNCAN, M.B.E.

12 Buckingham Street,

London, W.C.2.

Telephone: 01-930 1761

Cables: Bolempic, London, WC2

"Foxhill",  
West Haddon,  
Near Rugby,  
Warwickshire.

11th November, 1969.

Dear Dr. Ferguson-Smith,

Many thanks for your letter of the 6th November. I am sorry to have been so long in replying, but unfortunately your letter was sent as second class mail, and only reached me this morning.

With regard to your request for information on the background to the decision by the International Olympic Committee to do buccal smears on all competitors, I am afraid I cannot supply you with detailed accounts of the relevant discussions which preceded this decision. I can, however, say that physical examination, which was previously carried at European Championships and elsewhere was regarded as unacceptable by both competitors and medical advisers.

I fully appreciate that the buccal smear is not 100% exact, and it is for this reason that the term "Sex Test" has been replaced by "Eligibility to compete".

I feel that the following are the really relevant points on this difficult matter:-

1. The buccal smear has already been accepted and carried out by the International Olympic Committee.
2. It has been accepted by the International Federations.
3. It has been accepted by the competitors themselves.
4. If another method, such as physical examination, were to be proposed this would certainly be resented by the competitors, and would be most unlikely to be accepted by the Federations.
5. It has never been suggested that the buccal smear is an absolutely infallible test of sex, but it is generally accepted in sport as a sufficiently accurate screening test for the purpose for which it is required.
6. It is hoped that the results of the sex tests in Edinburgh may be accepted by the International Federations, and thereby exempt these individuals from

(Cont.)

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11th November, 1969.

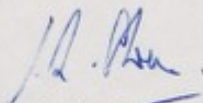
tests on future occasions, such as Munich in 1972. If some different method should be adopted in Edinburgh this would most certainly not be the case.

7. Following from the above this means that if the buccal smear test should not be employed in Edinburgh, then any certificates already issued by the International Olympic Committees in Mexico would have to be deemed invalid.
8. The repercussions in the Press from a statement that the Edinburgh Organising Committee did not accept the International Olympic Committee methods of sex testing would have far reaching effects. It would cause great dissention and much press comment.

With regard to your question on possible claims for damages, you are probably not aware that all female competitors are required to sign a form agreeing to be tested by buccal smear and to accept the result.

I hope that this answers your various questions, which I well appreciate, and that you will now feel happier about undertaking the smears.

Yours sincerely,



Honorary Medical Officer  
British Olympic Association  
Honorary Medical Adviser  
Commonwealth Games Federation

Dr. M.A. Ferguson-Smith,  
Institute of Genetics,  
University of Glasgow,  
GLASGOW, W.2.

Dr. James R. Owen,  
"Foxhill",  
West Haddon,  
Near Rugby,  
Warwickshire.

7112.

21st November, 1969.

Dear Dr. Owen,

Thank you very much indeed for your letter of 11th November and for your detailed reply to my enquiry. As you say, this is a very difficult matter which I believe will not be satisfactorily resolved until the International Olympic Committee reverse their decision to make buccal smears a condition of eligibility to compete.

Although I fully appreciate the predicament of the British Olympic Association, my opinion remains that the buccal smear examination is an inappropriate and positively misleading test. I believe that the International Committee have been wrongly advised and that it is not in the best interests of the individual competitors to have this test. I am accordingly writing to Col. Fraser to decline the invitation of the Commonwealth Games Committee to have the smears examined in my laboratory.

Yours sincerely,

M.A. Ferguson-Smith, M.B., Ch.B., M.C.Path.,  
Senior Lecturer in Medical Genetics.

INSTITUTE OF GENETICS



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EXT. 7112.

Lt. Col. John Fraser, M.D.,  
Physician Superintendent,  
Astley Ainslie Hospital,  
Grange Loan,  
EDINBURGH, 9.

21st November, 1969.

Dear Colonel Fraser,

After serious consideration I feel I must decline your invitation to undertake the buccal smear examinations required by the Commonwealth Games Committee before female competitors are eligible to compete in next year's Games. As you know, I believe that the International Olympic Committee have been wrongly advised and that it is not in the best interests of the individual competitors to have this test. My main reasons are as follows:-

1. The buccal smear test indicates the number of X chromosomes in the person's chromosome constitution and this has nothing to do with the social or legal sex. In medical practice, the results of the buccal smear mean very little when taken in isolation.
2. It is estimated that at least 7 individuals in 1000 of the population have abnormal sex chromatin findings in the buccal smear examination. Two of the commonest disorders in this group, Klinefelter's syndrome and the testicular feminisation syndrome, have been found among athletes and I suspect that another condition, pure gonadal dysgenesis, may also be found. In these three conditions the result of the buccal smear test is at variance with the apparent social and legal sex. In Klinefelter's syndrome, individuals are entirely male and show the sex chromatin expected in a normal female. (You will recall the case of the Polish male athlete, a transvestite with this condition, who masqueraded as a female and competed in womens' events. In his case, and despite his male external genitalia, the buccal smear would have upheld his eligibility to compete in the womens' events). The testicular feminisation syndrome affects normal-looking, attractive and athletic females whose only problem is primary amenorrhoea. These girls have XY sex chromosomes and a buccal smear test appropriate to males. I personally know a Junior Tennis Champion with this condition and also several others who excel at games. In pure gonadal dysgenesis, the findings are very similar except that breast formation and other

secondary sex characteristics are not so well developed. I feel that with the buccal smear test there is a greater probability of detecting an unsuspecting female with one of these conditions, than a normal male masquerading as a female. As a physician with experience in these conditions, I am disturbed by the possibility of serious consequences to the mental health of the individual irresponsibly labelled as having the wrong sex on the basis of a clinical test performed out of context for a non-clinical reason.

3. The whole purpose of a "sex test" in International Athletics is to disqualify the male athlete who attempts to masquerade as a female in womens' events. In my view, this purpose is most simply and economically achieved by physical inspection by a physician of the athlete's choosing and preferably performed in the athlete's own country. If the athletes regard a simple physical inspection unacceptable, then I think it would be wiser to drop the establishment of sex as a criterion of eligibility to compete, than to employ a test which is wholly inappropriate to the situation.

Yours sincerely,

M.A. Ferguson-Smith, M.B., Ch.B., M.C.Path.,  
Senior Lecturer in Medical Genetics.

JF/LLB.

THE ASTLEY AINSLIE HOSPITAL

(Astley Ainslie, Edenhall & Associated Hospitals Group)

GRANGE LOAN  
EDINBURGH, EH9 2HL.

Any further correspondence on this  
subject should be addressed to the—

Telephone:  
031-447 6271

~~Lt. Col. John Fraser~~.....

Your Ref. ....

Our Ref. ....

...28th November,.....1969.

Doctor M.A. Ferguson-Smith, M.B., Ch.B., M.C.Path.,  
Senior Lecturer in Medical Genetics,  
University of Glasgow,  
GLASGOW, W.2.

Dear Doctor Ferguson-Smith,

Thank you for your most interesting letter of the 21st November,  
together with the relevant enclosures.

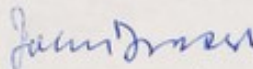
What interests me in this whole affair is who advised the  
International Olympic Committee that the buccal smear was a criterion  
of legal sex. It would seem to me that the physical examination had  
to go and the buccal smear was thought to be a convenient substitute.  
Nevertheless, some form of medical examination must take place before a  
team (which includes females), e.g., from Australia, travels to the United  
Kingdom, to compete in an international sporting event. This I intend  
to enquire about.

On the other hand would the institution of the buccal smear test  
be looked upon as a deterrent by the lay administrators in Sport.

I feel this whole matter should be raised at International level,  
by a body of experts like yourself, after the Commonwealth Games are over.

With kind regards,

Yours sincerely,



(JOHN FRASER, Lt.Col.)

