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SPORTING MISCELLANY

Nosejob!

The proliferation of external nasal dilators in sport has been meteoric over the past 18 months. Initially developed for the non-invasive management of snoring, these small adhesive devices have been adopted by sportsmen worldwide since their first appearance, when worn by the Springboks in the Rugby World Cup in 1995.

The recent television coverage of EURO 96 demonstrated widespread use in international football. Many players feel that these devices help their breathing and hence their performance, but I have been unable to uncover any research providing objective physiological evidence. The psychology of the professional footballer, however, is such that any factor which apparently results in improved personal performance will be faithfully adopted until his next poor performance, when it will be summarily discarded.

For performance to be enhanced by the use of these devices it would be necessary to show a significant increase in oxygen delivery to muscle. We are already familiar with the physiology of pulmonary function, alveolar ventilation, and blood gas transfer in professional footballers. Reilly¹ demonstrated that vital capacity in English professional players averaged 5.8 (SD 0.18) litres as compared with 5.15 (0.06) litres predicted from height and age nomograms. Similarly, lung power as measured by FEV₁ was significantly higher at 4.95 (0.16) litres s⁻¹ as opposed to 4.3 (0.04) litres s⁻¹. Maximum minute ventilation would presumably be the variable most influenced by the use of external nasal dilators, and values vary widely among professional footballers, ranging from 108.3 (16.19) litres min⁻¹ by Williams and colleagues² to 149 (12.4) litres min⁻¹ in 30 Dutch professional players.³ It is

likely, however, that the only index of pulmonary function which would limit performance in a trained athlete is respiratory muscle fatigue. This would only be produced during sustained maximal performance to exhaustion, which does not occur in football matches.

Given the physiology of pulmonary ventilation in exercise it is difficult to see how improving any minor contribution from nasal airflow will significantly improve maximal minute ventilation.

What then are the advantages to the professional footballer?

There is no doubt that wearing these devices gives a sensation of increased airflow when voluntarily breathing through the nose (does any nasal breathing occur during intensive exercise?). The psychological effect of apparently increased nasal airflow may help when the end of a hard game seems to be a lifetime away!

Although these devices were freely available for use in both training and matches to the England Youth Squad during their recent European Championship Campaign, only a few players tried them once. The room-mate of one player with a significant snoring problem derived great benefit, however, when his colleague wore the device at night!

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