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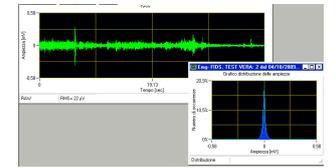
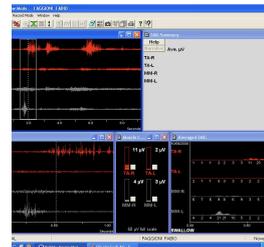
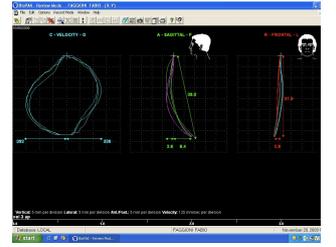


**Instrumental approach to sportsman:
 analysis of movement in FIDS athletes.**

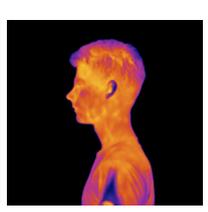
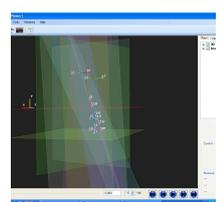
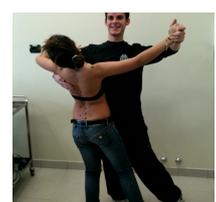
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Objectives: The protocol of the clinical and instrumental analysis developed at the gnatology wards of the University of Milano – Bicocca, in collaboration with the forensic medicine institute of the Italian Air Force in Milan, has been applied to the evaluation of a couple of federal (Italian Dance Sport Federation) athletes, with the aim to identify any possible correlations between dental occlusion, static and dynamic body posture (even while you are making the athletic motion) and the sportive performance, with the purpose to define if, in this context, a bite application could be indicated.

Material and Methods: A couple of dancers, 17 (F) and 18 (M) years old, with a constant performance, as showed by the maintained top positions in the national rankings, has been submitted to a clinical investigation, including the sports career anamnesis and the evaluation of the oral cavity. Subsequently some instrumental tests have been realized, such as: kinesiography, electromyography, stabilometry, the three- dimensional evaluation of the posture and of the ratio cranium-shoulder CON 3D-TMT, the body teletermography. Results: Both the athletes, completely asymptomatic, have presented totally different instrumental results. The female athlete showed harmonic mandibular movements that give origin to ideal kinesiographic traces; a rotation trend to the right in the postural control strategies, that result to vary depending on the occlusal provocations changes; a mandibular movement free from any speed flexion and the symmetry in the muscle recruitment, with considerable prodding during the performance. The male subject presented a completely different situation, with anomalies in the mandibular movement and in the muscle recruitment, less prodding while dancing and a postural position with a rotation to the partner's opposite direction. The teletermography showed some thermic peaks in correspondence to the temporal muscles of both the athletes and to the mimical musculature (especially of the woman), not at the level of the masseters, and warm areas at the neck and shoulders level after the performance, that instead appeared very similar after the warm-up exercises.



Discussion: The first consideration is that the subjects practise ballroom dance at the highest level and that they look perfectly coordinated during the performances, despite of the significantly different instrumental values. We can assume that the registered anomalies can be referred to some latent dysfunctional conditions of the subjects (that didn't seem to emerge during the exercise faced in the tests), well compensated by their excellent physical training and their perfect psychological status.



Conclusions: The dance race conditions can exasperate the physical and emotional stress of the athletes. Therefore we can conclude that, in a multidisciplinary rehabilitation context, the bite application is indicated to optimize the subject's health and performance thanks to the enforcement of his physical compliance and to the effective resolution of the verified functional anomalies.