

## Supplementary Material

**Table S1.** Search terms used for literature research.

Combination of the topics “ <i>combat sport</i> ” and “ <i>metabolic disease</i> ”	combined search-term of all topics was used, split by the “ <i>relevant marker</i> ” key words
1. ((diabetes mellitus, type 1) AND (martial arts) NOT (Tai Chi))	1. (diabetes mellitus, type 1) OR (diabetes mellitus, type 2) OR (metabolic syndrome) OR (obesity) OR (diabesity) AND (martial arts[tw]) OR (combat sports[tw]) OR (full contact[tw]) OR (light contact[tw]) AND (glucose)
2. ((diabetes mellitus, type 1) AND (combat sports) NOT (Tai Chi))	2. (diabetes mellitus, type 1) OR (diabetes mellitus, type 2) OR (metabolic syndrome) OR (obesity) OR (diabesity) AND (martial arts[tw]) OR (combat sports[tw]) OR (full contact[tw]) OR (light contact[tw]) AND (MET)
3. ((diabetes mellitus, type 1) AND (full contact) NOT (Tai Chi))	3. (diabetes mellitus, type 1) OR (diabetes mellitus, type 2) OR (metabolic syndrome) OR (obesity) OR (diabesity) AND (martial arts[tw]) OR (combat sports[tw]) OR (full contact[tw]) OR (light contact[tw]) AND (lactate)
4. ((diabetes mellitus, type 1) AND (full contact [tw]) NOT (Tai Chi))	4. (diabetes mellitus, type 1) OR (diabetes mellitus, type 2) OR (metabolic syndrome) OR (obesity) OR (diabesity) AND (martial arts[tw]) OR (combat sports[tw]) OR (full contact[tw]) OR (light contact[tw]) AND (VO2)
5. ((diabetes mellitus, type 1) AND (light contact) NOT (Tai Chi))	5. (diabetes mellitus, type 1) OR (diabetes mellitus, type 2) OR (metabolic syndrome) OR (obesity) OR (diabesity) AND (martial arts[tw]) OR (combat sports[tw]) OR (full contact[tw]) OR (light contact[tw]) AND (heart rate)
6. ((diabetes mellitus, type 1) AND (light contact [tw]) NOT (Tai Chi))	
7. ((diabetes mellitus, type 2) AND (martial arts) NOT (Tai Chi))	
8. ((diabetes mellitus, type 2) AND (combat sports) NOT (Tai Chi))	
9. ((diabetes mellitus, type 2) AND (full contact) NOT (Tai Chi))	
10. ((diabetes mellitus, type 2) AND (full contact [tw]) NOT (Tai Chi))	
11. ((diabetes mellitus, type 2) AND (light contact) NOT (Tai Chi))	
12. ((diabetes mellitus, type 2) AND (light contact[tw]) NOT (Tai Chi))	
13. ((metabolic syndrome) AND (martial arts) NOT (Tai Chi))	
14. ((metabolic syndrome) AND (combat sports) NOT (Tai Chi))	
15. ((metabolic syndrome) AND (combat sports[tw]) NOT (Tai Chi))	
16. ((metabolic syndrome) AND (full contact) NOT (Tai Chi))	
17. ((metabolic syndrome) AND (full contact [tw]) NOT (Tai Chi))	
18. ((metabolic syndrome) AND (light contact) NOT (Tai Chi))	
19. ((metabolic syndrome) AND (light contact[tw]) NOT (Tai Chi))	
20. ((obesity) AND (martial arts) NOT (Tai Chi))	

21. ((obesity) AND (combat sports) NOT (Tai Chi))	
22. ((obesity) AND (combat sports[tw]) NOT (Tai Chi))	
23. ((obesity) AND (full contact) NOT (Tai Chi))	
24. ((obesity) AND (full contact[tw]) NOT (Tai Chi))	
25. ((obesity) AND (light contact) NOT (Tai Chi))	
26. ((obesity) AND (light contact[tw]) NOT (Tai Chi))	
27. ((diabesity) AND (martial arts) NOT (Tai Chi))	
28. ((diabesity) AND (combat sports) NOT (Tai Chi))	
29. ((diabesity) AND (full contact) NOT (Tai Chi))	
30. ((diabesity) AND (light contact) NOT (Tai Chi))	
31. ((diabetes mellitus, type 1) OR (diabetes mellitus, type 2) OR (metabolic syndrome) OR (obesity) OR (diabesity)) AND ((martial arts[tw]) OR (combat sports[tw]) OR (full contact[tw]) OR (light contact[tw])) NOT (Tai Chi))	