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"ANTHROPOLOGICAL AND TEO-ANTHROPOLOGICAL VIEWS ON PHYSICAL ACTIVITY FROM THE TIME OF CONSTANTINE THE GREAT TO MODERN TIMES"

EFEKTI HIPERBARIČNE KOMORE NA SATURACIJU I SRČANU FREKVENCIJU

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EFFECTS OF HYPERBARIC CHAMBER TO SATURATION AND HEART FREQUENCY

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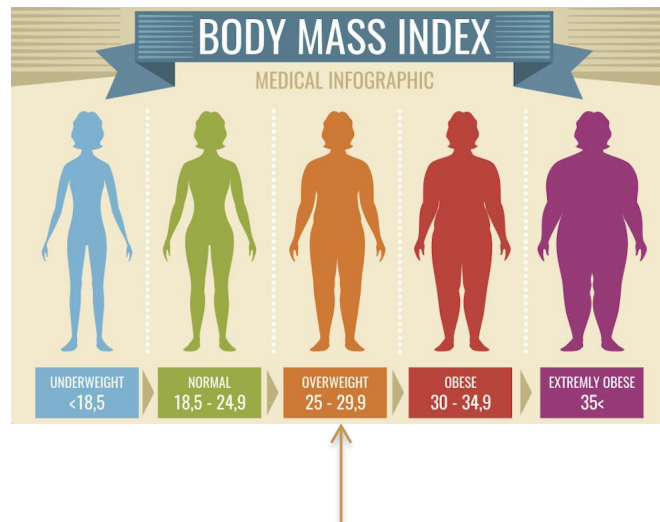
Cilj istraživanja bio je da se utvrde efekti korišćenja hiperbarične komore (HC) na mišićnu, arterijsku saturaciju i srčanu frekvenciju.

Aim of research was to establish effects of using the hyperbaric chamber (HC) to muscle saturation, arterial saturation and heart frequency.



Uzorak je sačinjavalo dvanaest ispitanika prosječne starosti 34 ± 13 mjeseci i BMI 26.1 koji su se bavili rekreativnim vježbanjem 2 puta nedeljno.

Sample consisted of 12 participants aged in average 34 ± 13 months with BMI 26.1 who engaged in recreational exercises twice a week.



- Upotrebljena je HC Macy Pan O₂ 801 (Shanghai, China). Za mjerenje mišićne saturacije u realnom vremenu (SmO₂) infrared uređaj IDIAG Moxy na predjelu pectoralis majora, hamstringa i središnjem dijelu latisimus dorsi-a na visini Th11-Th12.
- Arterijska saturacija (SpO) je praćena uređajem Omron OM-35.
- Srčana frekvencija je praćena pulsmetrom Polar FT2.

- HC used was Macy Pan O₂ 801 (Shanghai, China), for measuring muscle saturation in real time (SmO₂), infrared device IDIAG Moxy in the area of pectoralis major, hamstring and central part of latisimus dorsi at Th11-Th12.
- Arterial saturation (SpO) was monitored using device Omron OM-35.
- Heart frequency was monitored by pulsemeter Polar FT2.



IDIAG Moxy



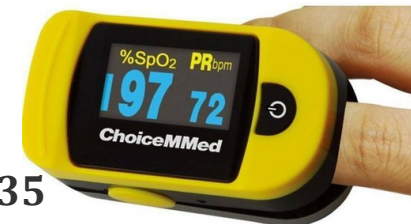
1 x 40 min.

2,5 ATA



Polar FT2
HR monitor

Omron OM-35
Arterial saturation



Rezultatima je utvrđeno da dolazi do povećanja saturacije u pectoralisu na nivou .027, hamstringu .019. U predjelu latisimusa nije zabilježena statistički značajna promjena kiseonika .161, međutim, prisutne su brojčane razlike. Kod kapilarne saturacije nije došlo da značajnih promjena .120, dok je došlo do smanjenja srčane frekvencije, prosječno za oko 7 otkucaja na nivou značajnosti .002.

Upon observing the results, it was established that saturation increases in the area of pectoralis at significance level of .027 and in hamstring at .019. In the area of latissimus no statistically significant change at oxygen levels was observed (.161); however, numerical differences were noticed. In capillary saturation no significant changes occurred (.120), whereas heart frequency reduced, on average by 7 beats at the significance level of .002.

	Heart frequency		Arterial saturation		Muscle saturation <i>Pectoralis m.</i>		Muscle saturation <i>Hamstring</i>		Muscle saturation <i>Latissimus d.</i>	
	Mean	Sig.	Mean	Sig.	Mean	Sig.	Mean	Sig.	Mean	Sig.
Pre treatment	81,5	.00*	96,3	.12	71,9	.02*	71,5	.01*	73,9	.16
Post treatment	74,0		97,0		75,4		74,7		75,2	



- Mišićna saturacija je povećana u dva mjerena segmenta osim u jednom (latissimus dorsi). Potrebno je u narednim istraživanjima obuhvatiti druge mišićne grupe i utvrditi razlog. Takođe provjeriti efekte komore u manjem/dužem intervalu.
- Srednja vrijednost frekvencije srca smanjena je za 7 otkucaja.
- Arterijska saturacija nije statistički značajno promijenjena (normalno 94-98%), ali je došlo do brojčanih promjena.
- Na osnovu rezultata, nivo atmosferskog pritiska je promijenio postotak zasićenosti kisikom, smanjenje srčane frekvencije.
- Hiperbarična komora je efikasno sredstvo za postizanje pozitivnih fizioloških efekata.
- Muscle saturation was increased in two measured segments except one (latissimus dorsi). It is necessary to include other muscle groups in future research and determine the reason. Also check the effects of the chamber at a shorter / longer interval.
- The mean heart rate decreased by 7 beats.
- Arterial saturation was not statistically significantly altered (normally 94–98%), but numerical changes occurred.
- Based on the results, the level of atmospheric pressure changed the percentage of oxygen saturation, a decrease in heart rate.
- Hyperbaric chamber is an effective means of achieving positive physiological effects.

Conclusion

