

DYNAMICS OF INDEXES OF FREE RADICAL OXIDATION OF ORAL LIQUID UNDER THE EFFECT OF COBALT-CHROME AND NICKEL-CHROME ALLOYS OF ORTHOPEDIC CONSTRUCTIONS

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SUMMARY

The article is devoted to the problem of biological compatibility of cobalt-chrome and nickel-chrome alloys of metals of orthopaedic constructions. It is revealed that under the effect of metal ions dissociating into the oral liquid from the alloys of metal constructions, the activation of free radical processes in the oral cavity occurs. Thus the most marked changes take place under the effect of nickel-chrome alloys of orthopedic constructions.

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() () () (Fe, Cu, Mn, Co).

[2].

[1].

: Cr, Co, Ni [3].

[4, 9].

(FDI, 1991 .) 15

[3].

20 (Mealloy) (Duceralloy)

+20⁰ 1

[1, 5].

[7];

R.L.Levine

[3, 4, 9]. ;

254, 272 280

(8,10,11). Co-Cr Ni-Cr

Mealloy 39,21% , Duceralloy 27, (.1). 1

Co-Cr (Duceralloy) Ni-Cr (Mealloy)

	N	/
	15	0, 51±0,02
Mealloy	15	0,71 ±0,03*
Duceralloy	15	0,65 ± 0,03*

*- <0,05

Mealloy 32.62%

() 27,62% (),

Duceralloy - 30,7% ()

() 23,51% () (.2 3).

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Co-Cr (Duceralloy) Ni-Cr (Mealloy)

	N				
		346	370	430	530
	15	0,0372 ±0,003	0,0351 ±0,0035	0,0368 ±0,0035	0,0320 ±0,003
Mealloy	15	0,047 ±0,0032*	0,0463 ±0,0042*	0,0470 ±0,0045*	0,0455 ±0,003*
ZX Duceralloy	15	0,0462 ±0,004*	0,0452 ±0,0035*	0,0473 ±0,004*	0,046 ±0,038*

*_ <0,05

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Co-Cr (Duceralloy) Ni-Cr (Mealloy)

	N			
		254	272	280
	15	0,256 ± 0,02	0,192 ± 0,017	0,179 ± 0,015
Mealloy	15	0,329 ± 0,03*	0,246 ± 0,02*	0,226 ± 0,019*
Duceralloy	15	0,310 ± 0,03*	0,243 ± 0,02*	0,2 ± 0,018*

*_ <0,05

1. , - .-1993.- .133.- 1.- .71-79.
2. , - .-1993.- .113.-
- 3.- .286-296.
3. .
2. - / .-14.00.21. « »-2004.- 141 .
4. .
3. (, , , , ,)/ : .-14.00.21. « »- ,2001.-42 .
5. . ,
1. . . , / .-2009.- 6.- .25-26.
7. Uchiyama M.,Mihara M. Analit.Biochem.- 1978,-

v.86,-p. 271.

8. -2008, .12.- 5-6.- .40-45.
9. / ,2000.- 4.- .73-76.
10. Salcano F., Francia C., Roumpedaki I. Immune effect of nickel.// Int. J. Immunopathol. Pharmacol.-2004.-Vol. 17(2).-P.63-70.
11. Schafer T., Bohler E., Ruhdorfer S.J. Epidemiol. of contact allergy in adults.// Allergy 2001.-Vol.56.- P. 17-24.