# Antioksidansi i oplodni potencijal sjemena

dr.sc. Miro Šimun Alebić dr. med

Google

Google što moj muž može učiniti da poboljša kvalitetu sjemena

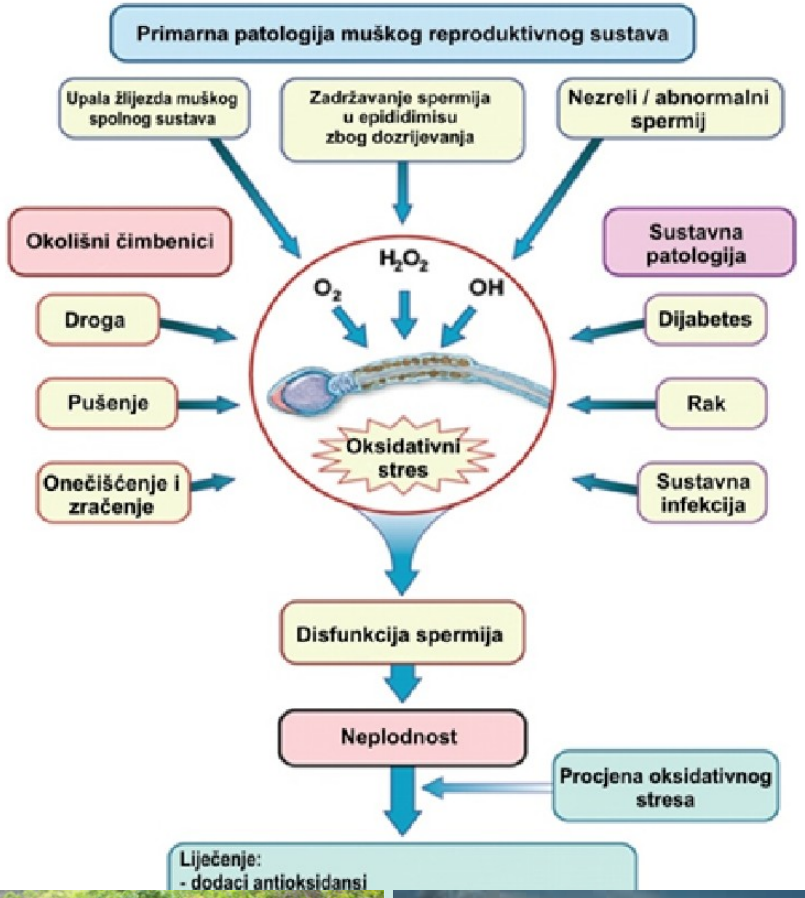
Sve Slike Videozapisi Karte Više ▾ Alati za pretraživanje

Oko 15.400 rezultata (0,31 sek)

Google is there anything my husband can do to increase his sperm count

**14.4.2016.**

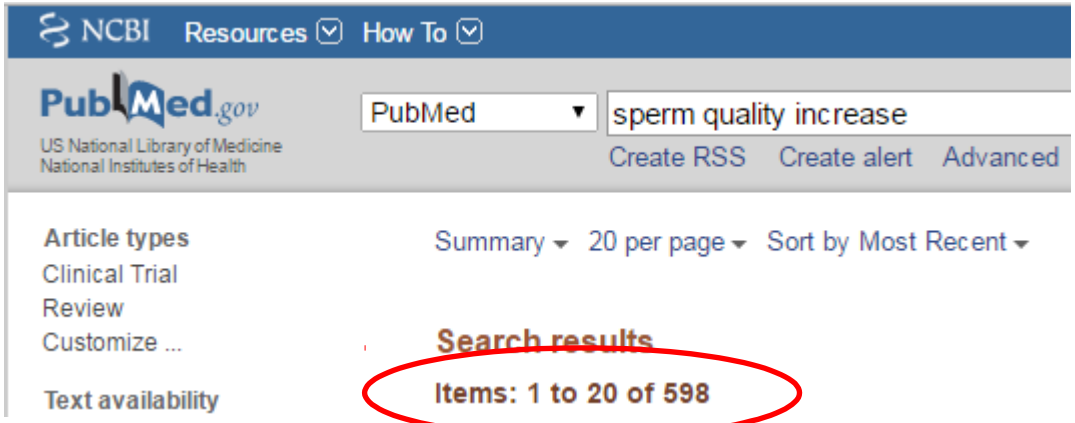
# 1.970.000



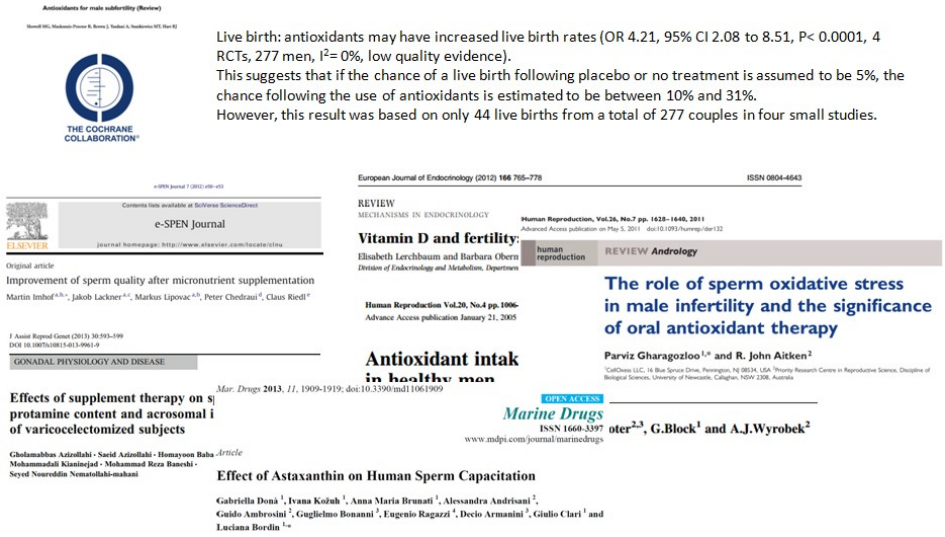

Liječenje:

- izbjegavanje čimbenika koji potiču oksidativni stres
  - poticanje zdravog načina života
    - zdrava prehrana
    - optimalan BMI
    - tjelesna aktivnost
- unos antioksidansa


DREAMS
REALITY




- clinical evidences for :
  - effectivenes
  - safety
- easy-to-use
- available
- low cost (relatively)



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Original article

# Improvement of sperm quality after micronutrient supplementation

Martin Imhof[a,b,*], Jakob Lackner[a,c], Markus Lipovac[a,b], Peter Chedraui[d], Claus Riedl[e]

Each capsule of the active compound (PROfertil®) contained:

- L-carnitine (440 mg),
- L-arginine (250 mg),
- zinc (40 mg),
- vitamin E (120 mg),
- glutathione (80 mg),
- selenium (60 mg),
- coenzyme Q10(15 mg),
- folic acid (800 mg)

participation, leaving 132 subjects who completed 3 months of treatment and provided data for full analysis. The control group included 73 sub-fertile men. Mean age of men taking the active compound was 34 years (min/max: 18–43 years) whereas in the control group this was 38 years (min/max: 22–52 years).

**Table 1**
Semen analysis data among studied groups (active treatment group and controls).

| | Ejaculatory volume (ml) | | Sperm cell density (million/ml) | | Progressive motility (%) | | Total motility (%) | | Normal morphology (%) | |
|---|---|---|---|---|---|---|---|---|---|---|
| | Treatment | Control[c] | Treatment | Control | Treatment | Control | Treatment | Control | Treatment | Control |
| WHO lower limits | 2 | | 20 | | 25 | | 50 | | 30 | |
| Baseline median [IQR] | 2.9 [1.5] | 3.0 [1.7] | 5.0 [6.5] | 4.9 [5.8] | 30.5 [25] | 31 [38.8] | 32.5 [23.8] | 40.5 [44.8] | 29.0 [15.2] | 39.0 [38.5] |
| At three months median [IQR] | 3.5 [2.3] | 3.2 [1.8] | 18.5 [23] | 7.5 [9.0] | 49 [32] | 44.0 [47.2] | 47.0 [26.0] | 50.0 [40.1] | 40.0 [17.5] | 35.5 [42.3] |
| *p* value[a] | 0.0001 | 0.46 | 0.0001 | 0.01 | 0.0001 | 0.06 | 0.0001 | 0.06 | 0.0001 | 0.95 |
| Median % change from baseline | +33.3% | +3.7%[b] | +215.5% | +46.4%[b] | +83.1% | +44.0%[b] | +36.4% | +33.9[b] | +23.0% | −2.4%[b] |

Note: Lower limit values for each semen parameter are provided in accordance to the WHO.[16]

[a] *p* values when comparing 3 months with baseline using Wilcoxon rank test; IQR: interquartile range.

[b] $p < 0.05$ when treatments are compared using Mann Whitney test.

[c] Controls were sub-fertile men ($n = 73$) who did not receive active compound.

# Vlastita iskustva

PROfertil®

Peroralni kombinirani suplement antioksidansa:

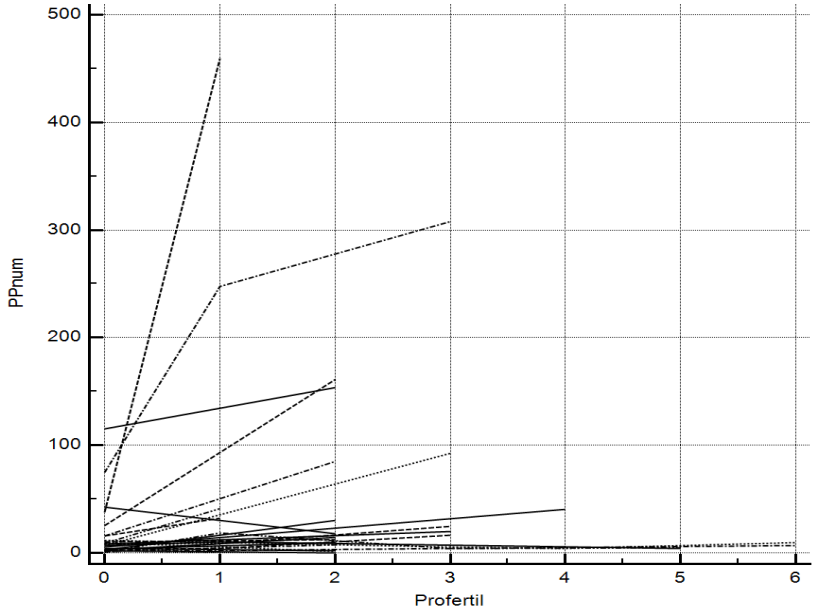
- L-karnitin - pozitivno korelira sa brojem i pokretljivošću spermija
- L-arginin - povezan je s pokretljivošću spermija
- cink - povezan sa duljinom životnog vijeka ejakuliranih spermija
- vitamin E - sudjeluje u očuvanju funkcionalnih značajki spermija
- glutation - ključna uloga sintezi DNA i bjelančevina spermija
- selen - esencijalna komponenta glutation-peroksidaze
- koenzim Q10 - uključen u održavanje energetske ravnoteže
- folna kiselina

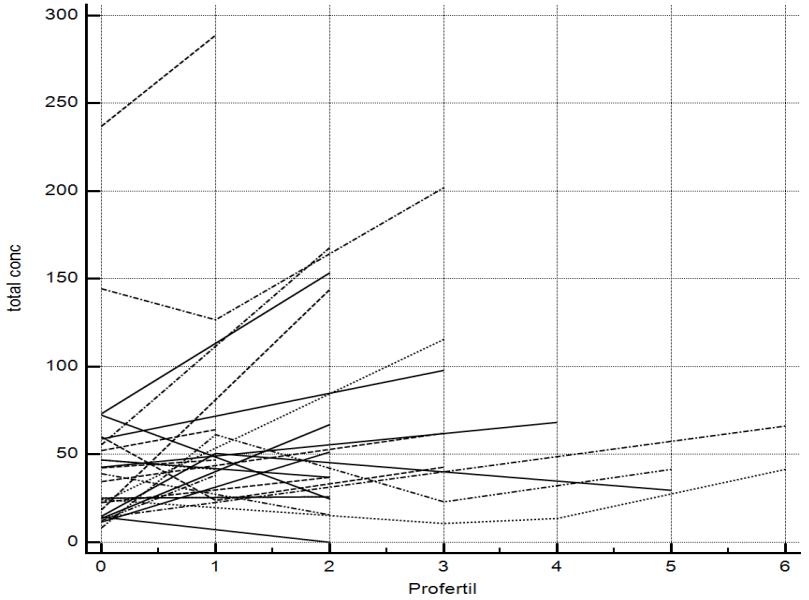
- ishodi
  - koncentracija, broj progresivno pokretnih
- ispitanici
  - isključeni pacijenti s azoospermijom

Brijuni, 2015

| **2013-2014; N=27<br>1.8 caps/dne<br>2.7 mjeseci** | **Prije** | | **Poslije** | | **P vrijednost<br>0.051** |
|---|---|---|---|---|---|
| | Median | IQR | Median | IQR | |
| Koncentracija (M/ml) | 34.5 | 15.9-57.3 | 46.8 | 37.0-68.0 | **0.049** |
| prog. pokretnih (x$10^6$) | 7.1 | 2.6-14.7 | 15.6 | 6.9-38.4 | |

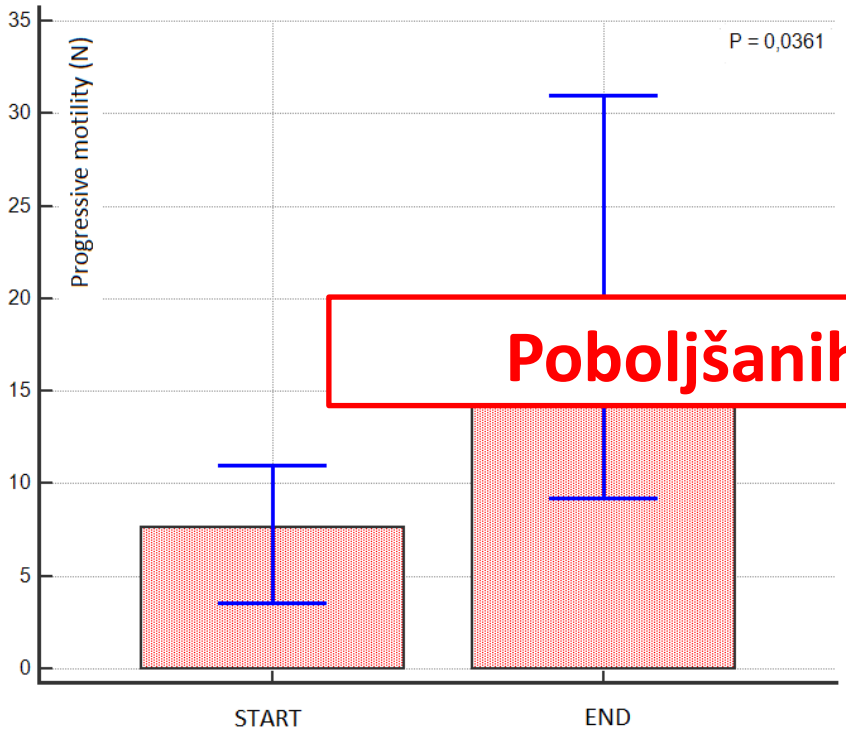
# Vlastita iskustva

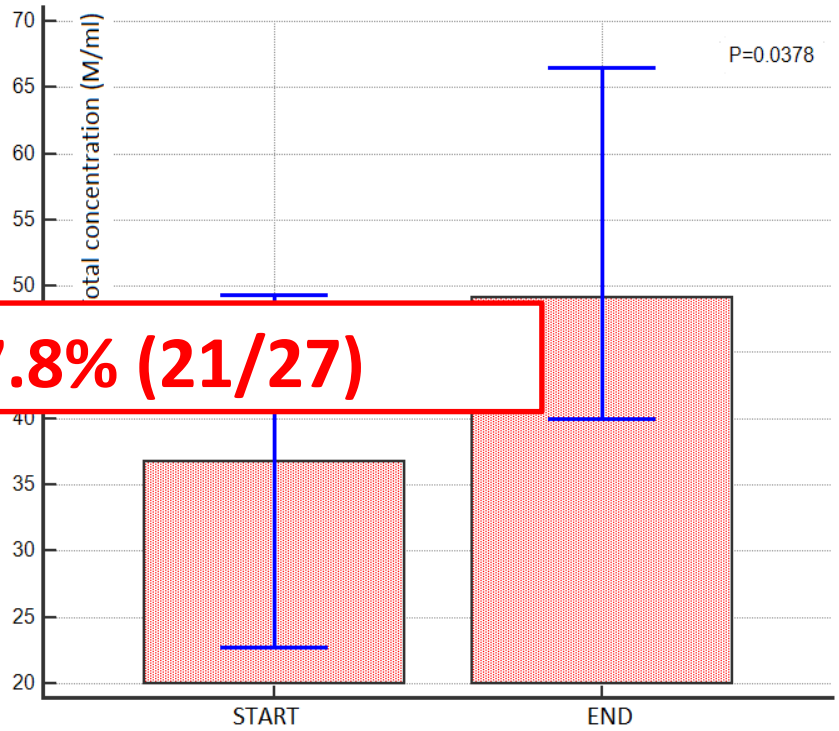



| | N | Mean | 95% CI | Median | 95% CI | 10 - 90 P | N | Mean | 95% CI | Median | 95% CI | 10 - 90 P |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Time Interval | 27 | 2,593 | 2,020 to 3,165 | 2,000 | 2,000 to 3,000 | 1,000 to 5,000 | 27 | 2,593 | 2,020 to 3,165 | 2,000 | 2,000 to 3,000 | 1,000 to 5,000 |
| First | 27 | 15,888 | 5,698 to 26,078 | 7,082 | 3,362 to 10,398 | 1,504 to 41,567 | 27 | 45,707 | 26,803 to 64,611 | 34,500 | 22,502 to 47,336 | 12,540 to 73,080 |
| Last | 27 | 57,931 | 16,286 to 99,575 | 16,692 | 9,034 to 32,453 | 1,693 to 159,905 | 27 | 73,963 | 47,938 to 99,988 | 46,800 | 38,243 to 66,966 | 24,800 to 164,980 |
| difference | 27 | 42,572 | 6,161 to 78,983 | 11,564 | 3,279 to 27,766 | -6,604 to 125,836 | 27 | 29,056 | 12,301 to 45,810 | 26,000 | 4,149 to 51,638 | -21,620 to 90,500 |

# Vlastita iskustva

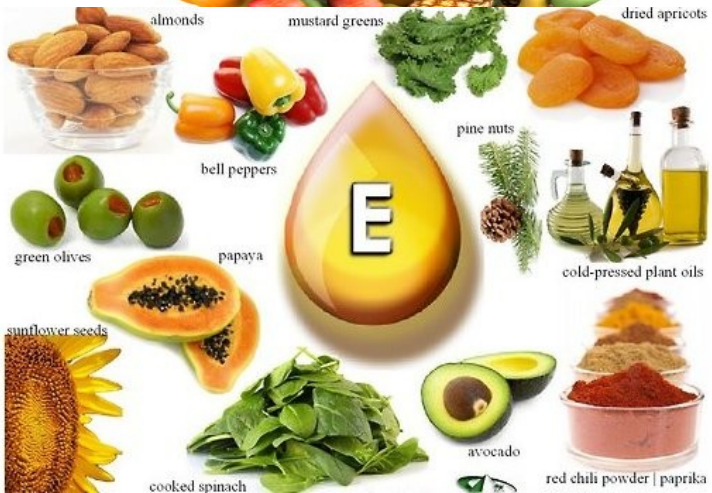



**Poboljšanih 77.8% (21/27)**

- ishodi
  - koncentracija, broj progresivno pokretnih
- ispitanici
  - uključeni
    - svi koji su počeli uzimati Profertil
    - dva spermiograma ≥ 1 mjesec odvojena
  - isključeni
    - pacijenti s azoospermijom

2014-2016
N=27
1.9 caps/dne
2.8 mjeseci


almonds
mustard greens
dried apricots
bell peppers
pine nuts
E
green olives
papaya
cold-pressed plant oils
sunflower seeds
avocado
cooked spinach
red chili powder | paprika


13 ZINC RICH FOODS
Cereals
Wheat germ
Sesame seeds
Pumpkin Seeds
Meats
Shellfish
Squash Seeds
Fruits
Vegetables
Spinach
Mushroom
Dark Chocolate
Nuts
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