

## Hubungan pemberian seng profilaksis terhadap kejadian infeksi respiratori akut ira pada balita = Correlation of zinc as prophylactic incidence of acute respiratory infections in infants

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### Abstrak

**ABSTRAK**  
Latar Belakang. Infeksi respiratori akut IRA merupakan penyebab utama morbiditas dan mortalitas anak terutama balita di negara berkembang. Bronkiolitis dan pneumonia merupakan IRA yang paling sering menyebabkan kematian. Seng zinc berperan utama pada system imunitas tubuh manusia, baik imunitas non-spesifik maupun spesifik, serta selular dan humoral. Dengan demikian, pemberian suplementasi seng sebagai pencegahan profilaksis diperkirakan dapat menurunkan insidens, frekuensi episode dan durasi episode IRA pada anak. Tujuan. Mengetahui peranan pemberian seng profilaksis terhadap insidens, frekuensi episode, durasi lama episode dan rerata durasi episode IRA pada balita. Metode. Dilakukan penelitian uji klinis acak terkontrol randomized controlled trial = RCT, dengan acak tersamar ganda double blind randomized kepada 160 orang balita dari Desember 2016 hingga April 2017 di Rumah Sakit Dr. Wahidin Sudirohusodo, Makassar, Sulawesi Selatan. Subyek terbagi atas 2 kelompok, yaitu kelompok seng dan plasebo, dengan subyek pada kelompok seng diberikan suplemen seng 10 mg/hari selama 2 minggu, kemudian di pantau tanda dan atau gejala IRA selama 4 bulan. Hasil. Sebanyak 160 orang subyek berpartisipasi dalam penelitian ini, terbagi dalam kelompok seng 79 subyek 49.4 dan plasebo 81 subyek 50.6. Tidak terdapat perbedaan yang bermakna secara statistik pada insidens IRA antara kelompok seng dengan plasebo, 38.8 vs 44.4.  $p=0.406$ , demikian juga pada frekuensi episode IRA tidak terdapat perbedaan bermakna yaitu rerata 1.20 kali episode pada kelompok seng, dan rerata 1.19 kali episode pada kelompok plasebo. Pemberian seng secara bermakna berhubungan dengan rerata durasi episode IRA pada kelompok seng dan plasebo 5,28 hari vs 6,28 hari,  $p=0.05$ . Pemberian seng berhubungan bermakna dengan durasi IRA kurang dari 5 hari yaitu 63.3 pada kelompok seng dan 38.9 pada kelompok plasebo.  $p=0.04$ . Kesimpulan. Suplemen seng secara bermakna berhubungan dengan durasi lama episode dan rerata episode IRA yang lebih singkat, namun tidak berhubungan dengan insidens dan frekuensi episode IRA

**ABSTRACT**  
Background. Acute respiratory infection ARI is a major cause of morbidity and mortality in children, particularly under 5 years old, in developing countries. Bronchiolitis and pneumonia are the most common cause of death. Zinc has a major role in the human immune system, both in non specific and specific immunities, cellular and humoral immunity. Administration of zinc as prophylactic may decrease incidence, episode frequency, duration and average duration of ARI in children. Objectives. To determine the role of prophylactic zinc for incidence, episode frequency, duration and average duration episodes of ARI in children under 5 years old. Methods. A randomized controlled trial RCT, double blind randomized study was performed in 160 infants, from December 2016 to April 2017 in Dr. Wahidin Sudirohusodo Hospital. Makassar, South Sulawesi. Subject were classified into two groups, zinc group and placebo group. In zinc group, subjects were given 10 mg day zinc for 2 weeks then being followed up for sign and symptoms of ARI for four months. Results. One hundred and sixty infants participated in the study and were divided into zinc group 79 subjects and placebo group 81 subjects. There was no statistically significant difference in incidence of ARI between both groups. 38.8 in zinc group and

44.4 in placebo group , p 0.406 . There was also no significant difference in frequency episodes of ARI between both groups 1.2 episodes in zinc group and 1.19 episodes in placebo group . While, average of duration of ARI, in zinc and placebo group was statistically significant 5.28 and 6.28 day, respectively. p 0.05 . Administration of zinc was also significantly related to shorter duration of ARI less than 5 days 63.3 in zinc group and 38.9 in placebo group , p 0.04 . Conclusion. Zinc as prophylactic is significantly correlated duration and average duration of ARI. On the other hand, no significant correlation is found between zinc prophylactic and incidence and frequency episode of ARI also frequency episodes.