

## Status kadar thyroid stimulating hormone neonatus berdasarkan status asupan garam beriodium cukup ibu di Indonesia = Neonatal Thyroid Stimulating Hormone status based on maternal adequate iodized salt intake status in Indonesia / Regar Adi Trianto

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### Abstrak

#### <b>ABSTRAK</b><br>

Latar belakang: Hipotiroid kongenital merupakan suatu kelainan endokrin dimana terjadi penurunan sintesis hormon tiroid saat bayi baru lahir. Hipotiroid kongenital merupakan salah satu penyebab paling umum dari penurunan kecerdasan intelektual retardasi mental yang sebenarnya dapat dicegah. Salah satu faktor risiko yang mendukung kejadian hipotiroid kongenital adalah status konsumsi garam beriodium ibu. Tujuan: Penelitian cross-sectional ini dilakukan untuk melihat apakah terdapat perbedaan antara nilai TSH neonatus dengan status konsumsi garam beriodium cukup ibu. Metode: Penelitian ini melibatkan 2.978 subjek yang terdiri atas bayi dan anak yang memperoleh uji saring hipotiroid kongenital di Rumah Sakit Umum Pusat Nasional RSUPN Dr. Cipto Mangunkusumo pada Bulan Mei hingga Bulan Juni 2017. Dari seluruh peserta uji saring hipotiroid kongenital tersebut, terdapat 1.687 subjek yang memenuhi kriteria inklusi dan eksklusi peneliti, kemudian dibagi menjadi dua kelompok, yaitu kelompok bayi yang dilahirkan oleh ibu yang tinggal di daerah dengan persentase konsumsi garam beriodium cukup per rumah tangganya rendah 90 . Jumlah sampel minimal yang harus dipenuhi oleh peneliti dengan menggunakan rumus besar sampel analitik numerik tidak berpasangan adalah 322 sampel. Setelah ditelaah, terdapat 149 subjek untuk kelompok bayi yang dilahirkan oleh ibu yang tinggal di daerah dengan persentase konsumsi garam beriodium cukup per rumah tangganya tinggi dan 173 bayi yang dilahirkan oleh ibu yang tinggal di daerah dengan persentase konsumsi garam beriodium cukup per rumah tangganya rendah. Sampel kemudian dianalisis menggunakan uji Mann-Whitney untuk diketahui hubungannya dengan nilai rerata TSH neonatus. Hasil dan Diskusi: Terdapat perbedaan bermakna nilai rerata TSH pada bayi yang dilahirkan oleh ibu yang tinggal di daerah dengan persentase konsumsi garam beriodium cukup per rumah tangganya rendah dan kelompok bayi yang dilahirkan oleh ibu yang tinggal di daerah dengan tingkat konsumsi garam beriodium cukup per rumah tangganya tinggi.

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#### <b>ABSTRACT</b><br>

Background Congenital hypothyroidism is an endocrine disorder in which there is a decrease in thyroid hormone synthesis at birth. Congenital hypothyroidism is one of the most common causes of a decline in intellectual intelligence mental retardation that can be prevented. One of the risk factors that affects the incidence of congenital hypothyroidism is the consumption status of the mother 39 s iodized salt. Objective This cross sectional study was conducted to see if there was any difference between neonatal TSH value and iodized salt consumption status. Methods The study involved 2,978 subjects consisting of infants and children who received a congenital hypothyroid filter test at the National General Hospital RSUPN . Cipto Mangunkusumo from May to June 2017. From the congenital hypothyroid test participants, 1,687 subjects fulfilled the inclusion and exclusion criteria of the researcher, then divided into two groups, the group of

neonates born to mothers living in the area with the percentage of consumption iodized salt per household is low 90 . The minimum number of samples that must be met by the researcher by using the formula of unpaired numerical analytic sample is 322 samples. Upon examination, there were 149 subjects for groups of neonates born to mothers living in areas with a high percentage of iodized salt intake per household and 173 neonates born to mothers living in areas with sufficient iodized salt intake percentage per household. The samples were then analyzed using the Mann Whitney test to be known to correlate with the mean values of neonatal TSH. Results and Discussions There was a significant difference in mean TSH values in neonates born to mothers living in areas with a moderate percentage of low iodized salt intake per household and neonates born to mothers living in areas with high iodized salt intake per household P 0.001 . This is in line with the theory that if the diet of iodized salt is adequate then TSH levels in the circulation will be normal, whereas if the iodized salt diet is inadequate then TSH levels in the circulation will be high, due to negative feedback of the least amount of thyroid hormones in the circulation due to the raw material of its formation , ie iodides derived from iodized salt are not met. Also there was a significant difference in mean birth weight of neonates born to mothers living in areas with a fairly low percentage of iodized salt intake per household and neonates born to mothers living in areas with sufficient iodized salt intake per household P