

concentrations were observed in shrimp and benthic fish (at the maximum concentrations of 12.57 mg kg-1ww and 14.55 kg-1ww), respectively. Estimated magnitude of weekly intake (EWI) values of Pb in shrimp, pelagic and benthic fishes showed that consumption per week for body weight of 70 kg for the local people were found to be in the range of 4.8 to 4.4 mg/kg bw, 15.0 to 46.2 mg/kg bw and 22.7 to 61.9µg/kg bw, respectively. Hence, the assessment of target hazard quotient (THQ) values of water from lake, drinking well water, shrimp and fishes were in the range of 0.005 to 0.35, 0.004 to 0.14, 0.063 to 0.189, 0.077 to 0.165 and 0.081 to 0.221, respectively.

Conclusion: All those levels have not exceeded the limit standard or < 1 for potential health risks which mean safe for consumption. This study also suggested the magnitude of Pb release to Paniai Lake is governed primarily by the scale of waste disposed. In case of health risks assessment by comparing with PTWIs and THQ, (based on the shrimp and fish consumption for 70 years life span of 70 kg body weight), the results showed that people who consumed shrimp and fish from Paniai Lake were not at risk.

#### Poster 11

### Early Detection of Benzene Poisoning in Informal Shoe Workers of Ciomas Shoe Industry, Bogor District, West Java, Indonesia

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Background: Benzene exposure is one of the main health concerns for high risk occupations such as shoe worker. The term of benzene poisoning is used by some researchers to describe a decrease in blood cell count due to exposure to low concentrations of benzene continuously. The purpose of the study was to determine the occurrence of benzene poisoning in informal shoe workers in Ciomas shoe industry in Bogor District, West Java, Indonesia.

Methods: A cross-sectional study was conducted among 259 shoe workers and 87 non-shoe workers from February to April 2013. Blood samples were collected to evaluate the number of erythrocytes, leukocytes, and platelets. We measured concentration of trans, trans-muconic acid, a benzene metabolite, derived from urine samples.

Results: We found a high concentration of urinary trans, trans-muconic acid of 1206 µg/g creatinine in shoe workers as compared to 278 µg/g creatinine in non-shoe workers. The study showed a significant difference on erythrocytes count between shoe workers and non-shoe workers. The mean of erythrocytes count were 4.83x10<sup>6</sup>/µL in shoe workers and 5.24x10<sup>6</sup>/µL in non-shoe workers. However, no difference was found in the leukocytes and platelets counts between shoe workers and non-shoe workers. The mean leukocytes and platelets counts were 8.19x10<sup>3</sup>/µL and 297.71x10<sup>3</sup>/µL in shoe workers, and 8.25x10<sup>3</sup>/µL and 284.01 x10<sup>3</sup>/µL in non-shoe workers.

Conclusion: This study suggests benzene poisoning based on the erythrocytes count but not on leukocytes and platelets counts. Further study is needed to investigate whether the erythrocytes count can be used as early warning sign of benzene poisoning.

#### Poster 12

### The Effects of Propolis to Fasting Blood Glucose and Glucose Tolerance of Prediabetes Patients

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**Background/objective:** Prediabetes has been becoming a pandemic that its prevalence higher than diabetes. Prediabetes increases risk for type 2 diabetes, heart disease, and stroke. Evidence of the benefits of Propolis that proven through research with human subjects after evidence that Propolis has been widely tested in animal experiments is required. The objective of the research was to analyze the effect of Propolis on fasting blood glucose and glucose tolerance prediabetes patients.

**Method:** The research was a Randomized Clinical Trial (RCT). The intervention done was to give Propolis extract 20% with the result of Biofarmaka Laboratory test of Hasanuddin University containing quercetin content 25.29 mg/L and health education with counseling strategy. Fasting blood glucose and glucose tolerance tested by Health Laboratory Great Hall of Makassar with venous blood specimen. The samples were 64 people consisting of 32 people given Propolis and 32 given health education.

**Results:** The result of Wilcoxon test with 0.05 significance level proves that the giving Propolis for 20 days, after eat with low doses (50 mg/Kg or 6 dots per day) significantly decreased fasting blood glucose and glucose tolerance test with respectively -14.28 (p=0.000) and -23.16 (p=0.000). Fasting blood glucose and glucose tolerance test of health education group decreased significantly, with respectively -14.9 (p=0.001) and -13.98 (p=0.000).

**Conclusion:** Giving Propolis and education are effective for changing of blood glucose and glucose tolerance. Propolis is potential to use as a pharmacology therapy for prediabetes

#### Poster 13

### Initiation of Breastfeeding Enhances Survival Exclusive Breastfeeding on Baby Who Had Born in Bengkulu City, Indonesia

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**Background/objective:** Decline in the infant mortality rate in Indonesia according to the 2003 Demographic and Health Survey 35/100KH has been stagnant since 2007 34/100 KH 32/100KH and 2012. To estimating, interpreting and comparing the survival function, median, and mean exclusive breastfeeding based on initiation of breastfeeding and covariates. To know in depth the things that support and resistance the implementation of ten steps to successful breastfeeding.

**Method:** A longitudinal cohort study of initiation of breastfeeding was undertaken in RSUDM. Yunus and by private midwives in Bengkulu City, July 2010-June 2011. Mothers were recruited and interviewed before discharge from hospitals. A total of 400 mothers were recruited into the study. Follow-up was undertaken when the baby was 2 month, 4 month and 6 month.

**Results:** This study found that initiation of breastfeeding increased almost 2 times EB (HR 1.7 and 95% CI 1,2-2,5).

Ante natal care increased 2 times EB (HR 2,0 and 95% CI 1,4-3,0).

Initiation of breastfeeding and ante natal care increased 3,4 times EB (HR 3.4 and 95% CI 1,7-7,0) for infants aged 0-4 weeks.

This study also found that 'mother's education, employment and support obtained are related to EB for infants aged 4-24 weeks.