



<b>Title</b>	<b>The variation of psychopharmacological treatment for people with autistic spectrum disorder (ASD): an international study</b>
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<b>Citation</b>	<b>The 8th Asian Conference on Pharmacoepidemiology (ACPE 2013), Hong Kong, China, 25-27 October 2013. In Hong Kong Pharmaceutical Journal, 2013, v. 20 n. 3, p. 160</b>
<b>Issued Date</b>	<b>2013</b>
<b>URL</b>	<b><a href="http://hdl.handle.net/10722/204459">http://hdl.handle.net/10722/204459</a></b>
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## The variation of psychopharmacological treatment for people with autistic spectrum disorder (ASD): an international study

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**Aim/Objective:** There is a variation of prescription for ASD treatment between countries. It has been suggested that many people with mental disorders in low/middle-income countries do not receive adequate treatment. This study aimed to investigate psychopharmacological treatment patterns in thirty countries which previously had no published data and the association between country's income and ASD treatment.

**Methods:** The IMS Prescribing Insights database was used to investigate the prescribing patterns for ASD treatment in 2007-2012. Data were obtained from countries in continents of Europe, Asia, Middle East, Australia, Central America, South America and Africa. The Gross Domestic Product (GDP) per capita was used to demonstrate each country's living standard. Spearman correlation was used to examine the association between prescription rates and GDP per capita.

**Results:** The highest prescription rate was found in Europe (1.3-36/10,000). Low prescription rates were found in Middle East (0.5-0.7/10,000) and some of the Asian countries such as Turkey, Indonesia and Pakistan (0.04-0.8/10,000). There was a significant positive relation between GDP per capita and prescription rate (Spearman  $\rho=0.59$ ;  $p=0.002$ ; 95%CI 0.26-0.80). The most common prescribed drug for ASD treatment was risperidone in most of the countries. Antidepressants and anti-epileptic drugs were also frequently prescribed for ASD treatment.

**Conclusion:** A large variation of psychopharmacological treatment for ASD treatment was demonstrated. As a moderate correlation between psychotropic drug use for ASD treatment and countries' income, future research should combine more detailed data for ASD treatment to have in-depth understanding of the disparity of psychopharmacological treatment between countries.

**Keywords:** psychopharmacological treatment, autistic spectrum disorder

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## Examining the association between statin use and lung cancer incidence in patients with type 2 diabetes mellitus

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**Aim/Objective:** Diabetic patients are at higher risks for cancer and atherosclerosis and are usually indicated for statin use. We aimed to examine the relationship between statins, lung adenocarcinoma, and squamous cell carcinoma (SCC) incidence in diabetic patients.

**Methods:** A cohort of 596,812 type 2 diabetic patients was identified from the Taiwan National Health Insurance claims database in year 2000, and followed till the earliest of lung cancer diagnosis, death, or December 31, 2007. A Cox regression model with time-varying statin use was applied to estimate the hazard ratio (HR) of lung cancer incidence comparing statin ever use and nonuse. We further retrieved smoking information which was not recorded in the claims database from the National Health Interview Survey, quantified the imbalance in proportion of smokers between statin users and nonusers, and applied a sensitivity analysis to adjust for the potential confounding effect by smoking.

**Results:** In the diabetic cohort, 60,969 statin users and 535,843 statin nonusers were identified. In a median follow-up time of 7.9 years, a total of 1,182 incident SCC and 2,345 adenocarcinoma cases developed. Initial analysis showed a decreased risk of SCC for ever use of statins (HR: 0.69, 95% CI: 0.60-0.81). However, the relative risk would be 1.01 for statins after controlling for smoking effect. There was no association between statins and adenocarcinoma of the lung (HR: 0.97, 0.88-1.07).

**Conclusion:** There is no statistically significant association between statins and lung cancer incidence in the diabetic patients after adjustment for the confounding effect attributed to cigarette smoking.

**Keywords:** statins, lung neoplasms, diabetes mellitus, smoking