Table. Multivariate-Adjusted Linear Regression of Coffee Intake With HOMA2 IR and %β.

<table>
<thead>
<tr>
<th>Model</th>
<th>HOMA2 IR, Regression Coefficient (95% CI)</th>
<th>P Value</th>
<th>HOMA2 %β, Regression Coefficient (95% CI)</th>
<th>P Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Model 1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Coffee intake (per 100 mL/d)</td>
<td>-0.010 (−0.020 to −0.000)</td>
<td>.04</td>
<td>-0.579 (−1.073 to −0.081)</td>
</tr>
<tr>
<td></td>
<td>Age, y</td>
<td>0.005 (−0.001 to 0.010)</td>
<td>.11</td>
<td>-0.045 (−0.333 to 0.244)</td>
</tr>
<tr>
<td></td>
<td>BMI</td>
<td>0.140 (0.132 to 0.148)</td>
<td>&lt;.001</td>
<td>3.42 (2.30 to 3.83)</td>
</tr>
<tr>
<td>Model 2</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Coffee intake (per 100 mL/d)</td>
<td>-0.004 (−0.014 to 0.006)</td>
<td>.43</td>
<td>-0.580 (−1.079 to −0.081)</td>
</tr>
<tr>
<td></td>
<td>Age, y</td>
<td>0.008 (0.002 to 0.013)</td>
<td>.007</td>
<td>-0.045 (−0.336 to 0.245)</td>
</tr>
<tr>
<td></td>
<td>BMI</td>
<td>0.130 (0.122 to 0.138)</td>
<td>&lt;.001</td>
<td>3.42 (2.99 to 3.85)</td>
</tr>
<tr>
<td></td>
<td>Serum ferritin concentration (per 10 µg/L)</td>
<td>0.010 (0.008 to 0.012)</td>
<td>&lt;.001</td>
<td>-0.002 (−0.103 to 0.099)</td>
</tr>
</tbody>
</table>

Abbreviations: %β, pancreatic β-cell function; BMI, body mass index; IR, insulin resistance; HOMA2, updated homeostasis model assessment.

Comment. These results suggest that coffee consumption may be associated with both body iron stores and glucose homeostasis as measured by HOMA2 IR and HOMA2 %β. Furthermore, the results suggest that the association of coffee intake with IR may be partially explained by a decrease in body iron level.

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Predictors of Flight Diversions and Deaths for In-flight Medical Emergencies in Commercial Aviation

In-flight medical emergencies are clinically challenging and may result in aircraft diversions, which are costly and inconvenient, or in-flight deaths. We provide an updated description of in-flight medical emergencies and systematically examine predictors of medical flight diversions and in-flight deaths.

Methods. This is a retrospective cohort study of consecutive in-flight emergencies of a large commercial airline based in Hong Kong. Between December 2003 and November 2008, all passengers with in-flight medical problems for whom emergency medical advice was sought by satellite telephone were studied. For incidence-per-flown-mile calculations, only paid trips were included. Variables associated with diversion and deaths were identified using univariate and multivariate logistic regression analyses. Ethical approval for the study was granted by the local institutional review board.

Results. There were 4068 medical emergencies, with 46 diversions and 30 deaths in the 5-year period, giving an incidence of 11.63 medical emergencies, 0.13 diversions, and 0.09 deaths per billion revenue passenger kilometers. Cardiac events accounted for 6.1% of all emergencies but resulted in 23.9% of the diversions and 66.7% of all in-flight deaths. An automated external defibrillator (AED) was used 23 times (0.6% of all events), but only 1 shock was delivered in the 5-year period. The AED was deployed in the management of 63.3% of cases that led to in-flight death.

Increasing age (Figure), altered mental status, and AED use were significant risk factors for diversions and
deaths. Passengers who were reported to be unconscious were 33 times more likely to require diversion and 234 times more likely to die during flight. Passengers who required the use of an AED were 35 times more likely to be diverted.

Diagnostic category was associated with diversions but not deaths. Neurological (39.1%), cardiac (23.9%), and obstetric and/or gynecological (13.0%) problems accounted for most of the diversions. Obstetric and/or gynecological cases had a diversion rate of 10.7%, which was higher than the rate for neurological (2.5%) or cardiac (4.4%) cases.

Comment. Public access to AEDs has been implemented with various successes in a number of airlines, and it has been shown to be cost effective in one study.6 Over the 5-year period of our study, the AED very rarely detected a shockable rhythm. Further study of AED use is necessary to more clearly define their role in emergency care on aircrafts.

Although it is not possible to change most of the risk factors for medical flight diversions and deaths identified in our study, they have important public health implications in relation to prevention and event mitigation. Previous studies have suggested that 65% of in-flight medical events are related to pre-existing problems7 and that preflight medical clearance may be effective in reducing in-flight medical events.8 In our study, advancing age was found to be a major risk factor for diversion and death, and obstetric conditions had the highest risk for diversion. It may be that implementing a proactive prevention strategy including pre-flight screening for these groups of passengers may reduce diversions.

Being unconscious on initial examination was another major risk factor for both death and diversion in-flight. Because basic assessment of consciousness level requires training and practice, it might be worthwhile considering incorporating simple training like the ACU scale into the first aid course for flight attendants.

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Author Contributions: Dr Hung had full access to all of the data in the study and takes responsibility for the integrity of the data and the accuracy of the data analysis.

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Acquisition of data: Cocks and Ong.

Analysis and interpretation of data: Hung, Chan, Cocks, Rainer, and Graham.

Drafting of the manuscript: Hung and Cocks.

Critical revision of the manuscript for important intellectual content: Hung, Chan, Cocks, Ong, Rainer, and Graham.

Statistical analysis: Hung, Chan, and Graham.

Obtained funding: Hung and Graham.

Administrative, technical, and material support: Rainer and Graham.

Study supervision: Chan, Cocks, and Graham.

Financial Disclosure: Drs Cocks and Ong both hold appointments with the Hong Kong–based airline that is the subject of this study.

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Disclaimer: The airline that is the subject of this study did not influence the reporting or analysis of the results in any way.


Effect of Enzyte on QT and QTc Intervals

Dietary supplements represent a distinct class of biologically active compounds which, unlike prescription and over-the-counter products, have been available to the public without regulatory oversight

See Invited Commentary at the end of this letter

for nearly 15 years and are responsible for more than 13 000 adverse events annually.1-2 Like many dietary supplements, Enzyte (Vianda, Cincinnati, Ohio)—a dietary supplement marketed for “male enhancement,” a euphemism for...