Supplementary Figure Legends:

Supplementary Figure S1. GC-MS chromatogram for extract of *Diascorea alata* and structural identifications and quantitative analyses of phytosterol derivatives are presented. The peaks were identified by their retention times using standards. The areas under the peaks were measured with an integrator. Data were acquired and processed with Chemstation software. The upper and middle figures indicate the retention time of standard β-sitosterol and sample compounds in this determination was 14.61 minutes. The lower figure shows the chromatogram and structure of β-sitosterol.

Supplementary Figure S2. Structural identification was confirmed by comparison of the retention times and mass spectra obtained for *Diascorea alata* (upper figure) and those of derivative sterol standards of β-sitosterol, γ-sitosterol, and 22-23-dihydro- stigmasterol.

Supplementary Figure S3. Flow chart for recruiting postmenopausal women in this study.
Supplementary figure S1

Abundance

Standard

TIC: sito0001.D

beta-Sitosterol

Sample

TIC: sito0003.D

beta-Sitosterol
beta-Sitosterol
Supplementary figure S3

Assessed for eligibility (n=164)

Excluded (n=114):
- 18 women had periods during the recall period
- 22 women had surgical menopause
- 3 women had breast or ovarian cancer
- 5 women had uterine endometrial cancer
- 16 women had been exposed to hormone products in recent one year
- 20 women had DM1
- 13 women had hypertension
- 1 woman had a stroke history and another had chronic pulmonary disease

Randomised (n=50)

Allocated to Intervention (n=29)
- Received allocated intervention (n=25)

Lost to follow up (n=4)

Analysis (n=25)

Allocated to Intervention (n=21)
- Received allocated intervention (n=25)

Lost to follow up (n=6)

Analysis (n=25)
Supplementary Table S1. The detection of retained heavy metals in *Diascorea* used.

<table>
<thead>
<tr>
<th>Heavy metals</th>
<th>(ppm)*</th>
<th>Unpeeled (ppm)</th>
<th>Peeled (ppm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pb***</td>
<td>&lt;20ppm</td>
<td>ND**</td>
<td>ND</td>
</tr>
<tr>
<td>Cu</td>
<td>&lt;100ppm</td>
<td>8.943ppm</td>
<td>6.04ppm</td>
</tr>
<tr>
<td>Cd</td>
<td>&lt;1ppm</td>
<td>0.248ppm</td>
<td>ND</td>
</tr>
<tr>
<td>Hg</td>
<td>&lt;0.5ppm</td>
<td>ND</td>
<td>ND</td>
</tr>
<tr>
<td>As</td>
<td>&lt;5ppm</td>
<td>ND</td>
<td>ND</td>
</tr>
</tbody>
</table>

*: Tolerance level of heavy metal contents.

**: Non-detectable.

***: Pb, Cu, Cd, Hg, and As: lead, copper, cadmium, mercury, and arsenic.