

Table S1 Comparison of PE subtypes in each group

	NC group	NDM group	DM group
pPE (nmol/mL)	184.44±13.45	170.05±13.04 <sup>Δ</sup>	170.16±13.44 <sup>Δ</sup>
aPE (nmol/mL)	11.62±0.9	9.24±0.72 <sup>Δ</sup>	8.26±0.64 <sup>ΔΔ</sup>
dPE (nmol/mL)	106.00±12.04	120.22 ±15.95	120.17±16.88

Compared with NC group, <sup>Δ</sup>*P*<0.05, <sup>ΔΔ</sup>*P*<0.01; Compared with NDM group, \**P*<0.05, \*\**P*<0.01

Table S2 Comparison of PC subtypes in each group

	NC group	NDM group	DM group
pPC (nmol/mL)	108.85 ± 4.08	105.07 ± 3.94	104.51 ± 3.66
aPC (nmol/mL)	49.42 ± 8.82	47.62 ± 1.80	46.96 ± 8.77
dPC (nmol/mL)	1713.05 ± 48.22	1746.40 ± 60.82	1849.06 ± 70.30

Compared with NC group, <sup>Δ</sup>*P*<0.05, <sup>ΔΔ</sup>*P*<0.01; Compared with NDM group, \**P*<0.05, \*\**P*<0.01

Table S3 Comparison of 4-HNE subtypes in each group

	NC group	NDM group	DM group
HHE (nmol/mL)	0.72 ± 0.08	0.85 ± 0.08	1.03 ± 0.08 <sup>ΔΔ</sup>
HNDE (nmol/mL)	0.06 ± 0.01	0.08 ± 0.02	0.13 ± 0.04 <sup>Δ</sup>
HNE (nmol/mL)	0.74 ± 0.09	0.80 ± 0.10	0.90 ± 0.15
TOTAL	1.52 ± 0.13	1.73 ± 0.14	2.06 ± 0.21 <sup>Δ</sup>

Note: Compared with NC group <sup>Δ</sup>*P*<0.05, <sup>ΔΔ</sup>*P*<0.01; Compared with Non-DM group, \**P*<0.05, \*\**P*<0.01

**Table S4 Internal standard concentration of various lipids in internal standard mixture**

<b>species</b>	<b>Monoisotopic mass</b>	<b>Concentration (nmol/mL plasma)</b>
D14:1 PC	673.91	226.95
D16:1 PE	687.91	24.09
D15:0 PG (Na)	716.9	11.16
14:0 LPE	425.5	6.48
17:0 LPC	509.66	81.02
N12:0 SPhingomyelin	646.93	53.92
N17:0 Ceramide	551.94	2.43
D14:0 PS (Na)	701.85	4.50
d7-Cholesterol	393.70	4.13
T17:1 TAG	843.37	323.71
<sup>13</sup> C4 Carnitine	440.04	0.10
1,3-D15:0 DAG	541.04	20.04
17:1 MAG	342.50	20.09
d4-16:0 FFA	260.40	215.85
T14:0 CardioliPin	1275.71	5.99
D14:0 PA(Na)	614.78	0.41
d3-4-HNE	156.22	10.47