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Abbreviations used:

COC: combined oral contraceptives

CMUc: Complementary universal health insurance

EE: Ethinylestradiol

Supplementary Table 1: Sample size and percentage of women of the COC cohort according to the end of follow-up criterion for each COC

	Norethisterone 35	Levonorgestrel 20	Levonorgestrel 30/40	Norgestrel 50	Desogestrel 20	Desogestrel 30	Gestodene 20	Gestodene 30
Discontinuation of COC dispensing	32,766 (45.9)	263,206 (39.4)	1,247,358 (47.0)	31,757 (58.0)	288,591 (47.4)	265,469 (47.0)	71,544 (36.0)	43,795 (34.4)
Pulmonary embolism	19 (0.0)	98 (0.0)	950 (0.0)	27 (0.0)	285 (0.0)	304 (0.1)	71 (0.0)	46 (0.0)
Ischaemic stroke	25 (0.0)	56 (0.0)	705 (0.0)	28 (0.1)	109 (0.0)	70 (0.0)	28 (0.0)	25 (0.0)
Myocardial infarction	14 (0.0)	8 (0.0)	306 (0.0)	16 (0.0)	32 (0.0)	23 (0.0)	4 (0.0)	4 (0.0)
Onset of pregnancy	4,680 (6.6)	42,930 (6.4)	232,143 (8.8)	4,718 (8.6)	39,812 (6.5)	37,005 (6.6)	11,538 (5.8)	6,600 (5.2)
50 years	1,313 (1.8)	1,843 (0.3)	26,884 (1.0)	582 (1.1)	4,942 (0.8)	2,219 (0.4)	1,867 (0.9)	981 (0.8)
Cancer	742 (1.0)	3,353 (0.5)	18,043 (0.7)	709 (1.3)	4,203 (0.7)	3,264 (0.6)	1,145 (0.6)	741 (0.6)
Surgery	1,087 (1.5)	8,400 (1.3)	37,564 (1.4)	1,525 (2.8)	8,859 (1.5)	7,647 (1.4)	2,315 (1.2)	1,605 (1.3)
Death	21 (0.0)	66 (0.0)	755 (0.0)	23 (0.0)	77 (0.0)	102 (0.0)	21 (0.0)	8 (0.0)
30 September 2012	30,666 (43.0)	347,838 (52.1)	1,087,326 (41.0)	15,326 (28.0)	261,718 (43.0)	248,493 (44.0)	110,129 (55.4)	73,521 (57.7)

Supplementary Table 2: Sample size and percentage of women of the COC cohort according to the end of follow-up criterion by generation of progestogen

	1st generation	2nd generation	3rd generation	Total
Discontinuation of COC dispensing	32,766 (45.9)	1,542,321 (45.7)	669,399 (44.7)	2,244,486 (45.4)
Pulmonary embolism	19 (0.0)	1,075 (0.0)	706 (0.0)	1,800 (0.0)
Ischaemic stroke	25 (0.0)	789 (0.0)	232 (0.0)	1,046 (0.0)
Myocardial infarction	14 (0.0)	330 (0.0)	63 (0.0)	407 (0.0)
Onset of pregnancy	4,680 (6.6)	279,791 (8.3)	94,955 (6.3)	379,426 (7.7)
50 years	1,313 (1.8)	29,309 (0.9)	10,009 (0.7)	40,631 (0.8)
Cancer	742 (1.0)	22,105 (0.7)	9,353 (0.6)	32,200 (0.7)
Surgery	1,087 (1.5)	47,489 (1.4)	20,426 (1.4)	69,002 (1.4)
Death	21 (0.0)	844 (0.0)	208 (0.0)	1,073 (0.0)
30 September 2012	30,666 (43.0)	1,450,490 (43.0)	693,861 (46.3)	2,175,017 (44.0)

First generation: norethisterone EE 35 µg

Second generation: levonorgestrel EE 30-40 µg, levonorgestrel EE 20 µg, norgestrel EE 50 µg

Third generation: desogestrel EE 30 µg, desogestrel EE 20 µg, gestodene EE 30 µg, gestodene EE 20 µg

Supplementary Table 3: Adjusted relative risks of pulmonary embolism, ischaemic stroke, myocardial infarction and composite event according to age, CMUc, medical risk factors and gynaecologist visit

	Pulmonary Embolism			Ischaemic Stroke		Myocardial Infarction		Composite event	
	Number of WY	Number of events	Adjusted relative Risk (95% CI)	Number of events	Adjusted relative Risk (95% CI)	Number of events	Adjusted relative Risk (95% CI)	Number of events	Adjusted relative Risk (95% CI)
Age									
15-19 years	988,556	173	1	34	1	8	1*	212	1
20-24 years	1,241,459	242	1.17 (0.97; 1.42)	83	1.96 (1.40; 2.80)			328	1.27 (1.07; 1.52)
25-29 years	961,351	265	1.65 (1.37; 2.00)	95	2.90 (2.08; 4.11)	20	5.65 (2.58;13.65)	380	1.89 (1.60; 2.25)
30-34 years	751,454	278	2.21 (1.84; 2.67)	147	5.73 (4.19; 8.01)	32	11.55 (5.59;26.96)	457	2.91 (2.47; 3.44)
35-39 years	654,268	319	2.89 (2.42; 3.47)	200	8.81 (6.50;12.21)	90	36.33 (18.77;81.47)	609	4.39 (3.76; 5.16)
40-44 years	464,121	294	3.71 (3.09; 4.46)	247	14.77 (10.95;20.40)	117	62.32 (32.46;139.1)	658	6.51 (5.58; 7.63)
45-49 years	243,092	183	4.33 (3.53; 5.31)	187	20.66 (15.21;28.70)	110	106.0 (54.99;237.0)	480	8.82 (7.50;10.41)
CMUc†									
No	4,757,405	1,512	1	837	1	281	1	2,63	1
Yes	546,899	242	1.40 (1.22; 1.60)	156	1.48 (1.27; 1.71)	96	2.48 (1.95; 3.13)	494	1.56 (1.41; 1.72)
Antihypertensive drugs									
No	5,219,466	1,683	1	921	1	335	1	2,939	1
Yes	84,838	71	1.58 (1.29; 1.91)	72	1.88 (1.51; 2.30)	42	1.96 (1.39; 2.71)	185	1.79 (1.57; 2.04)
Antidiabetic drugs									
No	5,273,339	1,72	1	964	1	356	1	3,04	1
Yes	30,965	34	2.17 (1.62; 2.82)	29	2.23 (1.60; 3.02)	21	2.89 (1.78; 4.43)	84	2.38 (1.96; 2.85)
Smoking status‡									
No	5,165,241	1,673	1	946	1	341	1	2,96	1
Yes	139,062	81	1.60 (1.33; 1.91)	47	1.51 (1.17; 1.92)	36	2.98 (2.07; 4.15)	164	1.75 (1.52; 1.99)
Gynaecological visit									
No	3,080,647	1,076	1	678	1	291	1	2,045	1
Yes	2,223,656	678	0.80 (0.73; 0.88)	315	0.70 (0.62; 0.78)	86	0.56 (0.43; 0.71)	1,079	0.74 (0.68; 0.80)

Model adjusted for age, CMUc, medical risk factors, gynaecological visit during the previous year, type of progestogen and dose of EE

\* The reference category is 15-24 due to the small number of myocardial infarctions

† CMUc: free access to health care for people with an annual income <50% of the poverty threshold

‡ Hospital discharge diagnosis related to tobacco use or dispensing of nicotine replacement therapy

Supplementary Table 4: Crude and standardized rates of pulmonary embolism, ischaemic stroke, myocardial infarction and composite event per 100,000 women-years according to type of COC

	Pulmonary embolism		Ischaemic Stroke		Myocardial infarction		Composite event	
	Crude rate	Standardized rate	Crude rate	Standardized rate	Crude rate	Standardized rate	Crude rate	Standardized rate
EE dose 20µg	31.9	25.5	13.6	14.0	3.1	3.0	48.5	42.5
EE dose 30-40µg	33.5	35.7	20.6	19.2	8.6	7.6	62.7	62.5
Levonorgestrel	27.9	25.8	20.3	18.5	8.4	7.0	56.6	51.2
Desogestrel	46.9	56.0	14.2	15.3	4.4	5.9	65.5	77.1
Gestodene	39.5	40.6	17.9	16.1	2.7	6.1	60.1	62.8
Type of COC								
<i>Norethisterone 35</i>	20.5	12.3	27.0	17.3	15.1	8.7	62.6	38.4
<i>Levonorgestrel 20</i>	17.3	18.7	9.9	13.3	1.4	2.4	28.6	34.4
<i>Levonorgestrel 30/40</i>	29.8	28.2	22.1	20.1	9.6	8.3	61.6	56.6
<i>Norgestrel 50</i>	57.5	46.7	59.6	37.0	34.1	23.7	151.2	107.4
<i>Desogestrel 20</i>	42.4	46.5	16.2	18.0	4.8	6.2	63.3	70.7
<i>Desogestrel 30</i>	52.1	60.2	12.0	15.1	3.9	6.0	68.0	81.3
<i>Gestodene 20</i>	38.3	37.6	15.1	13.9	2.2	3.4	55.6	54.9
<i>Gestodene 30</i>	41.4	41.3	22.5	17.4	3.6	6.7	67.4	65.4

Direct standardization for age, CMUc (free access to health care for people with an annual income <50% of the poverty threshold), medical risk factors, gynaecological visit during the previous year, type of progestogen (for the dose of EE) and dose of EE (for the type of progestogen)

Supplementary Table 5: Effect of the inclusion of the various potential confounders on the association between pulmonary embolism and type of COC

	Unadjusted model Relative Risk (95% CI)	M1 <sup>a</sup> Relative Risk (95% CI)	M2 <sup>b</sup> Relative Risk (95% CI)	M3 <sup>c</sup> Relative Risk (95% CI)	M4 <sup>d</sup> Relative Risk (95% CI)	M5 <sup>e</sup> Relative Risk (95% CI)
EE dose 20µg	0.95 (0.76; 1.18)	0.99 (0.84; 1.16)	1.00 (0.86; 1.16)	1.02 (0.89; 1.17)	1.05 (0.91; 1.20)	0.75 (0.67; 0.85)
EE dose 30-40µg	1	1	1	1	1	1
Levonorgestrel	1	1	1	1	1	1
Desogestrel	1.68 (1.38; 2.03)	1.77 (1.55; 2.01)	1.79 (1.60; 2.01)	1.84 (1.66; 2.03)	1.93 (1.74; 2.13)	2.16 (1.93; 2.41)
Gestodene	1.41 (0.97; 1.99)	1.28 (0.99; 1.62)	1.32 (1.06; 1.63)	1.38 (1.13; 1.66)	1.43 (1.18; 1.72)	1.63 (1.34; 1.97)
<b>Type of COC</b>						
<i>Norethisterone 35</i>	0.69 (0.28; 1.38)	0.56 (0.30; 0.93)	0.56 (0.33; 0.87)	0.56 (0.35; 0.84)	0.56 (0.35; 0.83)	
<i>Levonorgestrel 20</i>	0.58 (0.40; 0.82)	0.68 (0.52; 0.88)	0.69 (0.55; 0.86)	0.70 (0.57; 0.85)	0.73 (0.60; 0.89)	
<i>Levonorgestrel 30/40</i>	1	1	1	1	1	
<i>Norgestrel 50</i>	1.93 (0.92; 3.51)	1.71 (1.02; 2.65)	1.67 (1.09; 2.44)	1.64 (1.12; 2.31)	1.66 (1.14; 2.34)	
<i>Desogestrel 20</i>	1.42 (1.12; 1.78)	1.43 (1.21; 1.69)	1.46 (1.27; 1.68)	1.51 (1.33; 1.71)	1.60 (1.41; 1.82)	
<i>Desogestrel 30</i>	1.75 (1.39; 2.17)	2.04 (1.73; 2.39)	2.07 (1.80; 2.37)	2.10 (1.85; 2.37)	2.18 (1.93; 2.47)	
<i>Gestodene 20</i>	1.29 (0.83; 1.90)	1.20 (0.88; 1.59)	1.24 (0.95; 1.59)	1.29 (1.02; 1.61)	1.34 (1.06; 1.67)	
<i>Gestodene 30</i>	1.39 (0.80; 2.23)	1.26 (0.85; 1.78)	1.31 (0.94; 1.76)	1.36 (1.01; 1.78)	1.43 (1.07; 1.87)	

<sup>a</sup> M1: Model adjusted for age

<sup>b</sup> M2: Model adjusted for age and medical risk factors

<sup>c</sup> M3: Model adjusted for age, medical risk factors, and CMUc

<sup>d</sup> M4: Model adjusted for age, medical risk factors, CMUc and gynaecological visit during the previous year

<sup>e</sup> M5: Model adjusted for age, CMUc, medical risk factors, gynaecological visit during the previous year, type of progestogen (for the dose of EE), dose of EE (for the type of progestogen)

Supplementary Table 6: Effect of the inclusion of the various potential confounders on the association between ischaemic stroke and type of COC

	Unadjusted model Relative Risk (95% CI)	M1 <sup>a</sup> Relative Risk (95% CI)	M2 <sup>b</sup> Relative Risk (95% CI)	M3 <sup>c</sup> Relative Risk (95% CI)	M4 <sup>d</sup> Relative Risk (95% CI)	M5 <sup>e</sup> Relative Risk (95% CI)
EE dose 20µg	0.66 (0.45; 0.94)	0.70 (0.58; 0.84)	0.72 (0.61; 0.84)	0.74 (0.64; 0.85)	0.80 (0.70; 0.92)	0.82 (0.70; 0.96)
EE dose 30-40µg	1	1	1	1	1	1
Levonorgestrel	1	1	1	1	1	1
Desogestrel	0.70 (0.47; 1.01)	0.77 (0.64; 0.93)	0.79 (0.67; 0.93)	0.81 (0.70; 0.94)	0.88 (0.76; 1.01)	0.96 (0.82; 1.12)
Gestodene	0.88 (0.43; 1.60)	0.74 (0.53; 1.01)	0.78 (0.58; 1.02)	0.82 (0.63; 1.04)	0.87 (0.68; 1.10)	0.96 (0.74; 1.23)
<b>Type of COC</b>						
<i>Norethisterone 35</i>	1.22 (0.44; 2.64)	0.84 (0.51; 1.31)	0.84 (0.55; 1.23)	0.85 (0.58; 1.19)	0.85 (0.58; 1.19)	-
<i>Levonorgestrel 20</i>	0.45 (0.23; 0.78)	0.60 (0.43; 0.82)	0.62 (0.46; 0.80)	0.63 (0.48; 0.79)	0.68 (0.53; 0.86)	-
<i>Levonorgestrel 30/40</i>	1	1	1	1	1	-
<i>Norgestrel 50</i>	2.69 (1.04; 5.62)	2.19 (1.36; 3.33)	2.14 (1.43; 3.06)	2.10 (1.46; 2.90)	2.13 (1.50; 2.94)	-
<i>Desogestrel 20</i>	0.73 (0.46; 1.11)	0.75 (0.58; 0.94)	0.77 (0.62; 0.94)	0.80 (0.66; 0.96)	0.88 (0.73; 1.06)	-
<i>Desogestrel 30</i>	0.54 (0.30; 0.90)	0.72 (0.53; 0.95)	0.73 (0.57; 0.93)	0.75 (0.60; 0.93)	0.80 (0.64; 0.99)	-
<i>Gestodene 20</i>	0.68 (0.26; 1.43)	0.61 (0.38; 0.93)	0.64 (0.43; 0.92)	0.68 (0.47; 0.93)	0.72 (0.50; 0.99)	-
<i>Gestodene 30</i>	1.02 (0.37; 2.20)	0.87 (0.52; 1.35)	0.92 (0.60; 1.34)	0.96 (0.66; 1.35)	1.04 (0.71; 1.46)	-

<sup>a</sup> M1: Model adjusted for age

<sup>b</sup> M2: Model adjusted for age and medical risk factors

<sup>c</sup> M3: Model adjusted for age, medical risk factors, and CMUc

<sup>d</sup> M4: Model adjusted for age, medical risk factors, CMUc and gynaecological visit during the previous year

<sup>e</sup> M5: Model adjusted for age, CMUc, medical risk factors, gynaecological visit during the previous year, type of progestogen (for the dose of EE), dose of EE (for the type of progestogen)



Supplementary Table 7: Effect of the inclusion of the various potential confounders on the association between myocardial infarction and type of COC

	Unadjusted model Relative Risk (95% CI)	M1 <sup>a</sup> Relative Risk (95% CI)	M2 <sup>b</sup> Relative Risk (95% CI)	M3 <sup>c</sup> Relative Risk (95% CI)	M4 <sup>d</sup> Relative Risk (95% CI)	M5 <sup>e</sup> Relative Risk (95% CI)
EE dose 20µg	0.36 (0.26; 0.49)	0.39 (0.28; 0.53)	0.42 (0.30; 0.57)	0.46 (0.33; 0.63)	0.53 (0.38; 0.72)	0.56 (0.39; 0.79)
EE dose 30-40µg	1	1	1	1	1	1
Levonorgestrel	1	1	1	1	1	1
Desogestrel	0.52 (0.39; 0.69)	0.59 (0.44; 0.78)	0.63 (0.47; 0.83)	0.69 (0.51; 0.91)	0.79 (0.58; 1.04)	1.01 (0.73; 1.39)
Gestodene	0.32 (0.15; 0.61)	0.26 (0.12; 0.49)	0.29 (0.13; 0.55)	0.34 (0.15; 0.63)	0.37 (0.17; 0.71)	0.49 (0.22; 0.94)
<b>Type of COC</b>						
<i>Norethisterone 35</i>	1.57 (0.88; 2.58)	0.95 (0.53; 1.57)	0.95 (0.53; 1.57)	0.98 (0.54; 1.60)	0.97 (0.54; 1.60)	-
<i>Levonorgestrel 20</i>	0.15 (0.07; 0.28)	0.22 (0.10; 0.42)	0.24 (0.11; 0.44)	0.25 (0.11; 0.46)	0.28 (0.13; 0.53)	-
<i>Levonorgestrel 30/40</i>	1	1	1	1	1	-
<i>Norgestrel 50</i>	3.55 (2.06; 5.66)	2.69 (1.56; 4.30)	2.56 (1.49; 4.10)	2.44 (1.42; 3.90)	2.50 (1.45; 3.99)	-
<i>Desogestrel 20</i>	0.50 (0.34; 0.70)	0.51 (0.35; 0.72)	0.54 (0.37; 0.77)	0.60 (0.41; 0.86)	0.71 (0.48; 1.02)	-
<i>Desogestrel 30</i>	0.41 (0.26; 0.61)	0.61 (0.39; 0.90)	0.63 (0.40; 0.94)	0.67 (0.43; 1.00)	0.75 (0.48; 1.12)	-
<i>Gestodene 20</i>	0.22 (0.07; 0.53)	0.19 (0.06; 0.46)	0.22 (0.07; 0.52)	0.25 (0.08; 0.59)	0.28 (0.09; 0.66)	-
<i>Gestodene 30</i>	0.37 (0.12; 0.88)	0.31 (0.09; 0.72)	0.35 (0.11; 0.81)	0.39 (0.12; 0.92)	0.45 (0.14; 1.05)	-

<sup>a</sup> M1: Model adjusted for age

<sup>b</sup> M2: Model adjusted for age and medical risk factors

<sup>c</sup> M3: Model adjusted for age, medical risk factors, and CMUc

<sup>d</sup> M4: Model adjusted for age, medical risk factors, CMUc and gynaecological visit during the previous year

<sup>e</sup> M5: Model adjusted for age, CMUc, medical risk factors, gynaecological visit during the previous year, type of progestogen (for the dose of EE), dose of EE (for the type of progestogen).

Supplementary Table 8 Effect of the inclusion of the various potential confounders on the association between the composite event and type of COC

	Unadjusted model Relative Risk (95% CI)	M1 <sup>a</sup> Relative Risk (95% CI)	M2 <sup>b</sup> Relative Risk (95% CI)	M3 <sup>c</sup> Relative Risk (95% CI)	M4 <sup>d</sup> Relative Risk (95% CI)	M5 <sup>e</sup> Relative Risk (95% CI)
EE dose 20µg	0.77 (0.59; 1.00)	0.81 (0.71; 0.94)	0.84 (0.74; 0.94)	0.86 (0.78; 0.95)	0.91 (0.82; 1.00)	0.74 (0.67; 0.82)
EE dose 30-40µg	1	1	1	1	1	1
Levonorgestrel	1	1	1	1	1	1
Desogestrel	1.16 (0.89; 1.49)	1.25 (1.09; 1.42)	1.27 (1.14; 1.42)	1.32 (1.20; 1.44)	1.41 (1.29; 1.53)	1.59 (1.45; 1.74)
Gestodene	1.06 (0.63; 1.68)	0.92 (0.71; 1.18)	0.97 (0.79; 1.19)	1.03 (0.86; 1.22)	1.08 (0.92; 1.27)	1.24 (1.06; 1.46)
<b>Type of COC</b>						
<i>Norethisterone 35</i>	1.02 (0.44; 1.98)	0.75 (0.49; 1.08)	0.75 (0.54; 1.01)	0.75 (0.57; 0.98)	0.75 (0.58; 0.96)	-
<i>Levonorgestrel 20</i>	0.47 (0.29; 0.71)	0.58 (0.46; 0.74)	0.60 (0.49; 0.73)	0.61 (0.51; 0.72)	0.65 (0.55; 0.76)	-
<i>Levonorgestrel 30/40</i>	1	1	1	1	1	-
<i>Norgestrel 50</i>	2.46 (1.16; 4.52)	2.07 (1.42; 2.91)	2.02 (1.49; 2.66)	1.97 (1.52; 2.50)	2.00 (1.57; 2.51)	-
<i>Desogestrel 20</i>	1.03 (0.76; 1.37)	1.04 (0.89; 1.22)	1.07 (0.94; 1.22)	1.12 (1.00; 1.25)	1.22 (1.10; 1.35)	-
<i>Desogestrel 30</i>	1.10 (0.80; 1.49)	1.38 (1.17; 1.62)	1.40 (1.23; 1.60)	1.43 (1.28; 1.60)	1.52 (1.36; 1.69)	-
<i>Gestodene 20</i>	0.90 (0.49; 1.52)	0.82 (0.60; 1.09)	0.87 (0.67; 1.10)	0.92 (0.74; 1.12)	0.97 (0.79; 1.17)	-
<i>Gestodene 30</i>	1.10 (0.53; 1.99)	0.96 (0.67; 1.34)	1.02 (0.76; 1.33)	1.07 (0.83; 1.35)	1.15 (0.91; 1.43)	-

<sup>a</sup> M1: Model adjusted for age

<sup>b</sup> M2: Model adjusted for age and medical risk factors

<sup>c</sup> M3: Model adjusted for age, medical risk factors, and CMUc

<sup>d</sup> M4: Model adjusted for age, medical risk factors, CMUc and gynaecological visit during the previous year

<sup>e</sup> M5: Model adjusted for age, CMUc, medical risk factors, gynaecological visit during the previous year, type of progestogen (for the dose of EE), dose of EE (for the type of progestogen)

Supplementary Table 9: Adjusted relative risks of pulmonary embolism, arterial event and composite event for postpartum women according to type of COC

	Number of WY	Pulmonary embolism		Arterial events (ischaemic stroke and/or myocardial infarction)		Composite event	
		Number of events	Adjusted relative Risk (95% CI)	Number of events	Adjusted relative Risk (95% CI)	Number of events	Adjusted relative Risk (95% CI)
EE dose 20µg	133,017	38	0.65 (0.44; 0.94)	12	0.36 (0.20; 0.62)	50	0.54 (0.39; 0.75)
EE dose 30-40µg	335,633	119	1	76	1	195	1
Levonorgestrel	343,223	97	1	64	1	161	1
Desogestrel	104,278	53	2.16 (1.52; 3.03)	19	1.40 (0.86; 2.20)	72	1.87 (1.39; 2.50)
Gestodene	21,149	7	1.49 (0.64; 2.99)	5	1.99 (0.79; 4.20)	12	1.65 (0.86; 2.89)

Model adjusted for age, CMUc (free access to health care for people with an annual income <50% of the poverty threshold), medical risk factors, gynaecological visit during the previous year, type of progestogen (for the dose of EE), dose of EE (for the type of progestogen)

Supplementary Table 10: Adjusted relative risks of pulmonary embolism stratified by medical follow-up by a gynaecologist and CMUc

	Levonorgestrel		Desogestrel/Gestodene	
	20 µg	30 µg	20 µg	30 µg
consultation with a gynaecologist*	0.75 (0.56; 0.98)	1	1.55 (1.31; 1.83)	2.06 (1.76; 2.42)
No consultation with a gynaecologist	0.71 (0.51; 0.97)	1	1.53 (1.27; 1.85)	2.00 (1.63; 2.44)
Without CMUc †	0.70 (0.55; 0.87)	1	1.48 (1.30; 1.68)	2.03 (1.78; 2.31)
With CMUc	0.92 (0.55; 1.45)	1	2.30 (1.59; 3.25)	2.01 (1.42; 2.79)

Model adjusted for age, CMUc (for consultation with a gynaecologist), medical risk factors, consultation with a gynaecological (for CMUc)

\*during the previous year

† CMUc: free access to health care for people with an annual income <50% of the poverty threshold

Supplementary Table 11 : Adjusted relative risks of pulmonary embolism, ischaemic stroke, myocardial infarction confirmed by two outpatient prescriptions following discharge from hospital\* according to type of COC

	Number of WY	Pulmonary embolism		Ischaemic Stroke		Myocardial infarction	
		Number of events	Adjusted relative Risk (95% CI)	Number of events	Adjusted relative Risk (95% CI)	Number of events	Adjusted relative Risk (95% CI)
EE dose 20µg	1,423,797	402	0.75 ( 0.67; 0.84)	134	0.75 ( 0.61; 0.91)	42	0.54 ( 0.34; 0.84)
EE dose 30-40µg	3,880,507	1139	1	621	1	314	1
Levonorgestrel	3,751,457	912	1	591	1	295	1
Desogestrel	1,256,568	530	2.22 ( 1.99; 2.48)	122	0.87 ( 0.71; 1.07)	53	1.02 ( 0.67; 1.51)
Gestodene	296,425	99	1.57 ( 1.28; 1.91)	42	0.98 ( 0.71; 1.32)	8	0.47 ( 0.17; 1.05)
<b>Type of COC</b>							
Norethisterone 35	92,646	19	0.64 ( 0.41; 0.94)	20	0.86 ( 0.57; 1.24)	13	0.96 ( 0.52; 1.60)
Levonorgestrel 20	565,772	85	0.73 ( 0.59; 0.89)	41	0.65 ( 0.49; 0.85)	8	0.30 ( 0.14; 0.57)
Levonorgestrel 30/40	3,185,684	827	1	550	1	287	1
Norgestrel 50	46,970	23	1.64 ( 1.10; 2.33)	20	1.95 ( 1.29; 2.80)	15	2.49 ( 1.42; 4.03)
Desogestrel 20	672,846	257	1.64 ( 1.44; 1.87)	69	0.72 ( 0.58; 0.90)	30	0.71 ( 0.47; 1.02)
Desogestrel 30	583,721	273	2.24 ( 1.97; 2.54)	53	0.79 ( 0.61; 1.00)	23	0.80 ( 0.51; 1.20)
Gestodene 20	185,213	60	1.29 ( 1.01; 1.62)	24	0.79 ( 0.55; 1.11)	4	0.30 ( 0.09; 0.70)
Gestodene 30	111,212	39	1.37 ( 1.01; 1.82)	18	0.96 ( 0.62; 1.41)	4	0.47 ( 0.15; 1.11)

Model adjusted for age, CMUc (free access to health care for people with an annual income <50% of the poverty threshold), medical risk factors, gynaecological visit during the previous year, type of progestogen (for the dose of EE), dose of EE (for the type of progestogen)

\* Confirmation that women had not died 30 days after the event of interest by at least two drug prescriptions during the following 4 months - corresponding to oral anticoagulants after hospitalisation for pulmonary embolism, - antiplatelet agents after stroke –at least two drug classes from among antiplatelet agents, beta-blocking agents, statins, angiotensin-converting enzyme inhibitors or angiotensin-receptor blockers (AEC-I/ARB) after myocardial infarction.

Supplementary Table 12 Adjusted relative risks of pulmonary embolism, ischaemic stroke, myocardial infarction according to the type of COC with censoring of exposure just after the end of the period covered by the last dispensing (M0)

	Number of WY	Pulmonary embolism		Ischaemic Stroke		Myocardial infarction	
		Number of events	Adjusted relative Risk (95% CI)	Number of events	Adjusted relative Risk (95% CI)	Number of events	Adjusted relative Risk (95% CI)
EE dose 20µg	666,964	230	0.76 (0.65; 0.89)	93	0.87 (0.68; 1.09)	18	0.58 (0.32; 0.99)
EE dose 30-40µg	1,680,484	613	1	347	1	127	1
Levonorgestrel	1,628,760	491	1	333	1	118	1
Desogestrel	567,694	284	2.10 (1.80; 2.44)	80	0.90 (0.70; 1.15)	24	1.19 (0.71; 1.92)
Gestodene	150,994	68	1.69 (1.31; 2.15)	27	0.91 (0.62; 1.30)	3	0.45 (0.11; 1.25)
<b>Type of COC</b>						<b>Ischaemic Stroke or Myocardial infarction</b>	
Norethisterone 35	38,575	6	0.40 (0.18; 0.77)			10	0.57 (0.27; 1.04)
Levonorgestrel 20	267,349	57	0.84 (0.65; 1.07)			35	0.71 (0.48; 1.00)
Levonorgestrel 30/40	1,361,410	434	1			416	1
Norgestrel 50	19,616	16	2.22 (1.38; 3.36)			25	3.09 (1.97; 4.60)
Desogestrel 20	304,846	131	1.52 (1.27; 1.81)			62	0.86 (0.64; 1.13)
Desogestrel 30	262,847	153	2.26 (1.91; 2.66)			42	0.81 (0.57; 1.12)
Gestodene 20	94,767	42	1.43 (1.07; 1.88)			14	0.54 (0.29; 0.91)
Gestodene 30	56,226	26	1.48 (1.02; 2.08)			16	1.01 (0.57; 1.64)

Model adjusted for age, CMUc (free access to health care for people with an annual income <50% of the poverty threshold), medical risk factors, gynaecological visit during the previous year, type of progestogen (for the dose of EE), dose of EE (for the type of progestogen).

Supplementary Table 13 Adjusted relative risks of pulmonary embolism, ischaemic stroke, myocardial infarction according to the type of COC with censoring of exposure one month after the end of the period covered by the last filled prescription (M+1)

	Number of WY	Pulmonary embolism		Ischaemic Stroke		Myocardial infarction	
		Number of events	Adjusted relative Risk (95% CI)	Number of events	Adjusted relative Risk (95% CI)	Number of events	Adjusted relative Risk (95% CI)
EE dose 20µg	1,067,982	358	0.76 ( 0.67; 0.87)	140	0.80 ( 0.65; 0.99)	33	0.56 ( 0.32; 0.93)
EE dose 30-40µg	2,827,526	981	1	574	1	237	1
Levonorgestrel	2,738,238	787	1	546	1	223	1
Desogestrel	930,647	455	2.16 ( 1.90; 2.45)	132	0.97 ( 0.78; 1.19)	41	1.02 ( 0.62; 1.61)
Gestodene	226,622	97	1.69 ( 1.36; 2.10)	36	0.83 ( 0.58; 1.16)	6	0.45 ( 0.13; 1.13)
<b>Type of COC</b>						<b>Ischaemic Stroke or Myocardial infarction</b>	
Norethisterone 35	66,714	13	0.52 ( 0.30; 0.83)			22	0.71 ( 0.45; 1.05)
Levonorgestrel 20	426,609	82	0.79 ( 0.64; 0.98)			46	0.56 ( 0.41; 0.75)
Levonorgestrel 30/40	2,311,628	705	1			723	1
Norgestrel 50	32,770	20	1.73 ( 1.12; 2.54)			36	2.66 ( 1.88; 3.64)
Desogestrel 20	499,495	214	1.58 ( 1.37; 1.82)			106	0.86 ( 0.69; 1.05)
Desogestrel 30	431,152	241	2.28 ( 1.98; 2.61)			67	0.77 ( 0.60; 0.98)
Gestodene 20	141,877	62	1.49 ( 1.16; 1.88)			21	0.52 ( 0.33; 0.78)
Gestodene 30	84,745	35	1.39 ( 1.00; 1.88)			21	0.84 ( 0.53; 1.26)

Model adjusted for age, CMUc (free access to health care for people with an annual income <50% of the poverty threshold), medical risk factors, gynaecological visit during the previous year, type of progestogen (for the dose of EE), dose of EE (for the type of progestogen)

Supplementary Table 14: Adjusted relative risks of pulmonary embolism, ischaemic stroke, myocardial infarction and composite event for non-switcher patients according to type of COC

	Number of WY	Pulmonary embolism		Ischaemic Stroke		Myocardial infarction		Composite event	
		Number of events	Adjusted relative Risk (95% CI)	Number of events	Adjusted relative Risk (95% CI)	Number of events	Adjusted relative Risk (95% CI)	Number of events	Adjusted relative Risk (95% CI)
EE dose 20µg	1,081,717	382	0.77 (0.68; 0.88)	155	0.80 (0.67; 0.95)	42	0.64 (0.44; 0.94)	579	0.76 (0.68; 0.85)
EE dose 30-40µg	3,442,349	1,203	1	766	1	327	1	2,296	1
Levonorgestrel	3,313,297	994	1	724	1	310	1	2,028	1
Desogestrel	1,007,165	500	2.13 (1.89; 2.41)	155	0.99 (0.83; 1.17)	52	1.03 (0.72; 1.44)	707	1.59 (1.44; 1.76)
Gestodene	203,604	91	1.68 (1.34; 2.08)	42	1.01 (0.76; 1.33)	7	0.51 (0.21; 1.02)	140	1.28 (1.06; 1.54)

Model adjusted for age, CMUc (free access to health care for people with an annual income <50% of the poverty threshold), medical risk factors, gynaecological visit during the previous year, type of progestogen (for the dose of EE), dose of EE (for the type of progestogen)