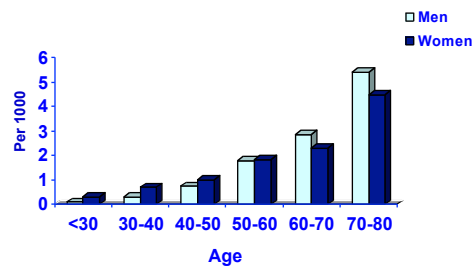


**First Global Conference on
Contraception, Reproductive and
Sexual Health
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Venous thromboembolism in women:
a specific reproductive health risk

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**ANNUAL INCIDENCE OF DEEP VENOUS
THROMBOSIS IN CENTRAL NORWAY:
EFFECT OF AGE**



(Naess, 2007)

**VENOUS THROMBOEMBOLISM:
DEFINITIONS**

- ✓ Clot formation in a vein (VTE)
- ✓ Mostly: in a deep vein (DVT)
- ✓ Complication: pulmonary embolism (PE)

**RELATIVE RISKS OF VTE IN OBESE
WOMEN ACCORDING TO AGE**

Age group	RR: obese vs non obese
<40	5.20
40-49	2.13
50-59	1.67
60-69	1.88
70-79	1.89
≥80	2.16
All ages	2.50

(Stein et al., 2005)

**VTE: RISK CONDITIONS FOR
MEN AND WOMEN**

- ✓ Age
- ✓ Obesity
- ✓ Thrombophilia

**COAGULATION ABNORMALITIES CAUSING
INHERITED THROMBOPHILIA AND
ASSOCIATED RR OF VTE**

Causes	Prevalence (%)	Relative risk of first venous thrombosis
Antithrombin deficiency	0.02	5 – 10
Protein C deficiency	0.2	4 – 6.5
Protein S deficiency	0.03 – 0.13	1 – 10
Factor V Leiden	3.0 – 7.0	3 – 5
Prothrombin G20210A	0.7 – 4.0	2 – 3
High factor VIII	10	5
High factor IX or XI	10	2

(Vossen et al., 2004)

VTE: SPECIFIC REPRODUCTIVE RISK FOR WOMEN HORMONAL CONTRACEPTION

OCs	RR
No	1
LNG	1.5
GST – DSG - DRSP	3

(O. Lidegaard, *Maturitas* 2013;74:1-2)

THE SUSPENDED USE OF DIANE IN FRANCE

- ✓ OC preparation containing Cyp. A. ↑ VTE
(FDA, 2011)
Frequently prescribed for acne and hirsutism
- ✓ ↑ VTE: in PCOs women
(Okoroh et al., 2012; Bird et al., 2013)

VTE: RR AND ANNUAL CASES (n 1000 women) RELATED TO CONTRACEPTIVE CHOICES AT DIFFERENT AGE

Contraceptive choice	RR	Age (yrs)	
		25	40
DSG/IUS	0.6	0.3	0.6
None	1	0.5	1.0
LNG/NGT pill	3	1.5	3.0
DSG/GEST/DSP p.	6	3.0	6.0
Patches	6	3.0	6.0
Vaginal ring	6	3.0	6.0

(O. Lidegaard, *Maturitas* 2013;74:1-2)

CONTRACEPTION: MEDICAL ELIGIBILITY CRITERIA FOR WOMEN WITH KNOWN VTE RISK FACTORS

Condition	Category		
	POP	P. implants	DMPA
VTE			
a) History of DVT/PE	2	2	2
b) Acute DVT/PE	3	3	3
c) Family history (first-degree relatives)	1	1	1
Major surgery			
- with prolonged immobilization	2	2	2
- without prolonged immobilization	1	1	1
Known thrombogenic mutations (e.g. factor V Leiden, prothrombin mutation, protein S, protein C and antithrombin deficiencies)	2	2	2

(WHO, 2011)

RR OF VTE IN OC USERS WITH SPECIFIC RISKS

PC/PS/AT-deficiency	High
Factor V Leiden mutation	20 – 30
Prothrombin G20210A mutation	10 – 20
High levels of procoagulant factors	5-10
Obesity	24
Smoking	9

PC = Protein C; PS = Protein S; AT = Antithrombin
(ESHRE Capri Workshop Group, 2013)

VTE: SPECIFIC REPRODUCTIVE RISK FOR WOMEN PREGNANCY AND PUERPERIUM

- ✓ Pregnancy: RR x 5
- ✓ Puerperium: RR x 60
- ✓ VTE is the main cause of maternal death

(ESHRE Capri Workshop Group, 2013)

RISK FACTORS FOR VTE DURING PREGNANCY

- ✓ Age
- ✓ Type of delivery
- ✓ Thrombophilia
- ✓ Comorbidities

VTE: SPECIFIC REPRODUCTIVE RISK FOR WOMEN POSTMENOPAUSAL YEARS

Main risk factors:

- ✓ age
- ✓ thrombophilia
- ✓ oral estrogen

(ESHRE Capri Workshop Group, 2013)

VTE: SPECIFIC REPRODUCTIVE RISK FOR WOMEN FERTILITY TREATMENTS

- ✓ The risk of thrombosis is increased by ovarian hyperstimulation
- ✓ Thrombosis could be either venous or arterial
- ✓ May occur up to several weeks after ovarian stimulation *(ESHRE Capri Workshop Group, 2013)*

POSTMENOPAUSAL HORMONE THERAPY: PREVENTIVE MEASURES

- ✓ General screening for inherited thrombophilias: not cost effective
- ✓ Low estrogen dose
- ✓ Transdermal treatments seem safer

(ESHRE Capri Workshop Group, 2013)

UNUSUAL LOCATION OF THROMBOSIS AFTER OVARIAN STIMULATION

- ✓ Venous: upper extremities and neck
- ✓ Arterial: intracranially

(ESHRE Capri Workshop Group, 2013)

CONCLUSIONS

- ✓ VTE is a specific reproductive risk for women.
- ✓ Clinicians should be aware of the risk, the importance of a careful medical history and the identification of co-existing risks.
- ✓ Clinicians should be able to suggest how to diagnose VTE and to approach its prevention.

