Dr Catherine Graham

GP Family Planning

Dunedin

Implantable Contraception Workshop - Concurrent Workshop Repeated

Sunday, 18 August 2013	Start 8:30am	Duration: 55mins	Kandinsky
	Start 9:35am	Duration: 55mins	Kandinsky

Contraceptive implants

Dr Katie Graham

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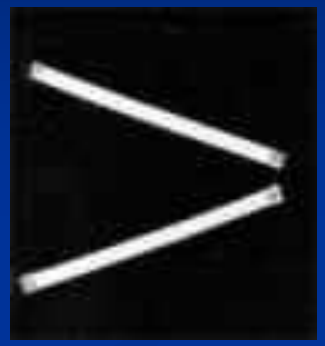
Dunedin family planning clinic.

Implants available in New Zealand

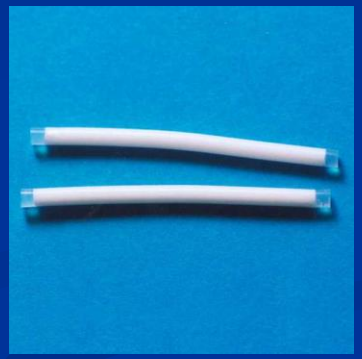
- **Jadelle:** 2 rods; subdermal placement in upper arm
  - levonorgestrel-releasing implant
  - provides contraception up to 5 years
  - fully subsidised on prescription in NZ



- **Implanon NXT** 1 rod preloaded in disposable applicator.(radiolucent),subdermal placement
  - releases etonorgestrel
  - provides contraception for up to 3 years
  - not subsidised in NZ (cost approx $220)

Jadelle

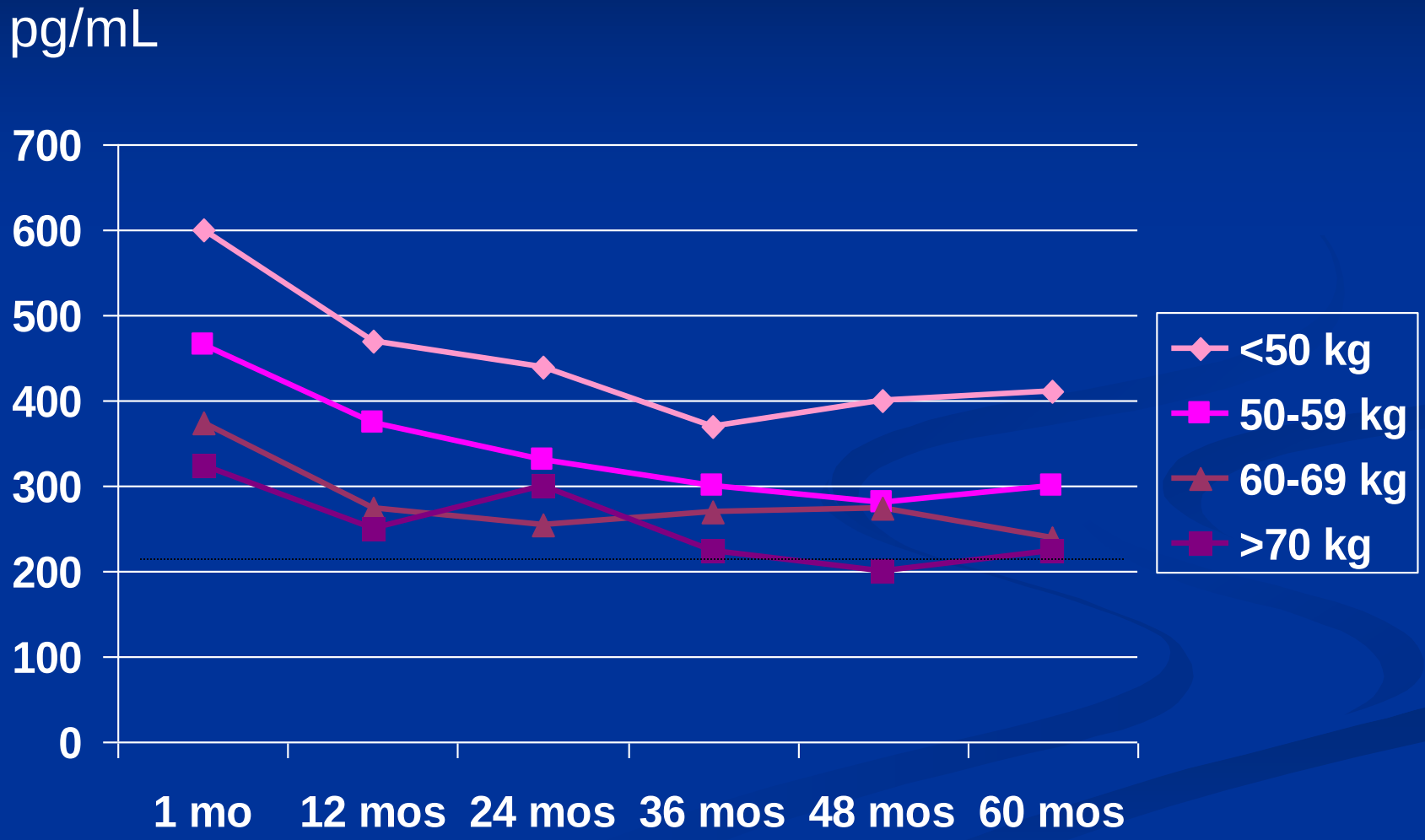
- **Mode of action:**
  - suppresses ovulation, more effectively first 3-4 years
  - thickens cervical mucus
  - thins endometrium
  - suppression of luteal phase progesterone



- **Failure rate:**
  - initially 0.2 per 100 woman years
  - cumulative over 5 years 1.1/100 woman years
  - failure rate higher after 4 years use, and with obesity
  - ectopic pregnancy rate 0.03/100 woman years

Sivin 1998

Body weight and serum LNG-concentrations



Sivin et al. 2001

Implanon NXT

Mode of action:

- etonorgestrel secreted at adequate dose over the 3 years of use to reliably suppress ovulation throughout
- also thickens cervical mucus, thins endometrium

Failure rate:

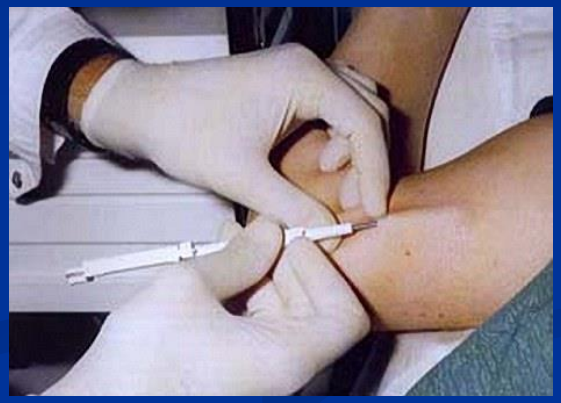
- fewer than 1 per 1000 over 3 years though reported pregnancy rate higher from post marketing surveillance

NICE guidelines 2005

Risks of contraceptive implants:

Insertion risks

- subdermal implantation: removal difficulty if placed too deeply
- infection at insertion site
- scarring



Note:

- Mild insulin resistance
- No apparent effect on bone mineral density though studies are small. Estrogen levels usually maintained. (Cromer 1996)
- No effect on haemostasis or lipids

Contraindications for contraceptive implants:

Pregnancy
Irregular bleeding (before evaluation)
Active VTE, IHD, CVA
Breast cancer; liver cancer
Other steroid dependent tumour
Liver function abnormality

Drug interactions:

Progestagen implant **contraindicated** if using……

Liver enzyme inducing medication

eg. many anticonvulsants

rifampicin, griseofulvin

Possible Side Effects:

- irregular PV bleeding; amenorrhoea
- progestagenic effects: weight gain, low mood, low libido, headache, breast tenderness, acne
- scarring and pain at insertion/removal sites
- pelvic pain

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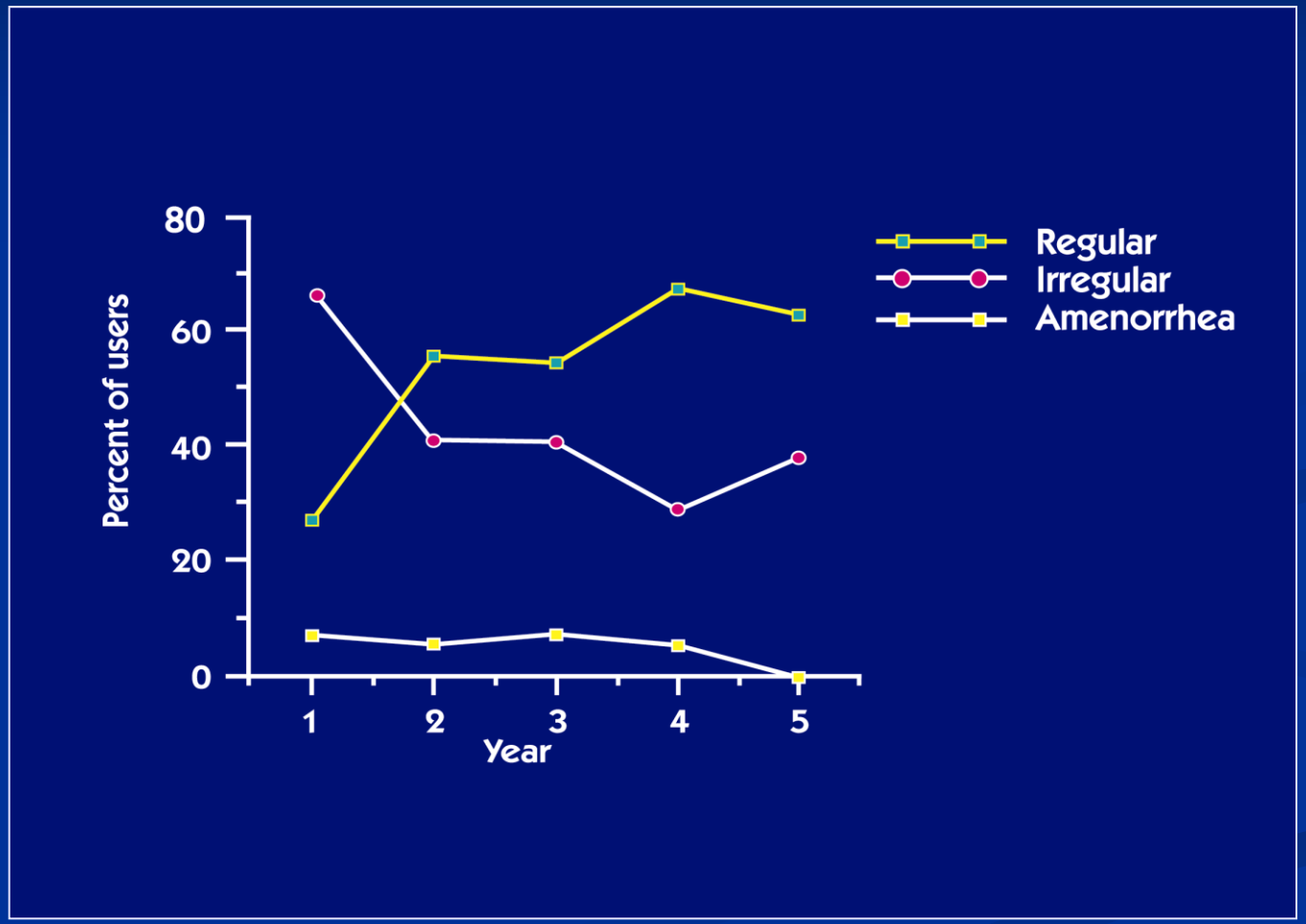
Weight:

- mean weight gain 0.7 kg per year over 5 years, ie. 3.5 kg over 5 years
- 20% lose weight

Bleeding pattern with Jadelle – Shoupe 1991



Side effects Sivin et al 1998

	Mean annual rate (%)	Number who discontinued use (%)
Bleeding problem	Common	13.7
Acne	15.3	0.8
Weight gain	10.7	3.9
Leukorhoea	10.1	0
Headache	9.7	2.2
Pelvic pain	9.6	0.8
Mood change	7.1	1.8
Pain at insertion site	4.8	0.4

- STUDIES COMPARING
- EFFICACY:different progestogens , different duration action. Implanon inhibits ovulation in almost all women for 3 years use . Jadelle/norplant by 5 years 50% cycles ovulatory.
- NICE appraisal (7 RCT 1628 women 43001 women-month fl/up no pregnancies among women using both at 4 years)

- DISCONTINUATION:
- Cummulative discontinuation rates due to amenorrhoea,bleeding irregularities between implanon and norplant European RCT were 30.2% versus 22.5% at 2 years .
- 3 meta-analyses reprot advers events other than bleeding primary reson for discontinuation in 6 % implanon users versus 7.6 % norplant at 2 years .

- Weight:
- women over 70kgs small trials but no pregnancies reported at 1,2 and 3 years

Cumulative discontinuation/(continuation) of Jadelle over 5 years Sivin et al 1998

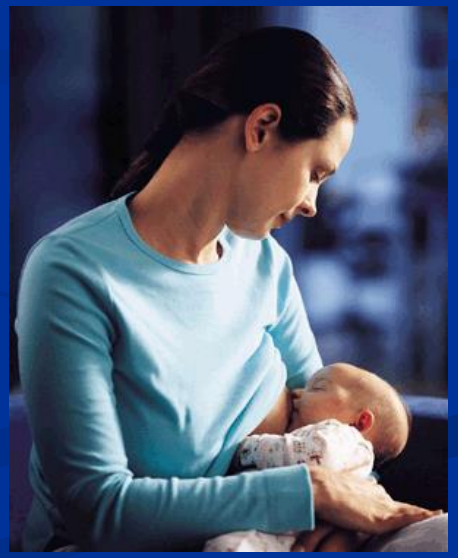
Reason for discontinuation	%
Pregnancy	1.0
Menstrual problems	16.4
Medical problem	15.0
Planning pregnancy	14.7
Other	6.8
(Continuation rate)	**(55.1%)**

Timing of placement

- **Immediate contraception** if implant inserted :
  - in first 7 days after start of menstrual period

  or if other contraceptive method used for first 7 days after insertion

- **After pregnancy**:
  - if breast feeding wait 6 weeks
  - if not breast feeding wait 2 weeks
  - after TOP, miscarriage - immediate placement



Treatment for bleeding problems:

1) NSAIDs eg. Mefanamic acid 500mg bd for 5 days

2) Oestrogens as COC, or HRT eg. Premarin

3) Mifepristone +ethinyl estradiol/mifepristone + doxycycline- no effect on subsequent bleeds though

RCT treatment problem bleeding
Implanon users.

Mifepristone 25mg bd 1/7 +
doxycycline 100mg bd 5/7
Mifepristone 25mg bd 1/7 +EE 20mcg days 2,3,4,5
Better than placebo better than doxy alone better than EE +doxy
But no improvement in subsequent bleeding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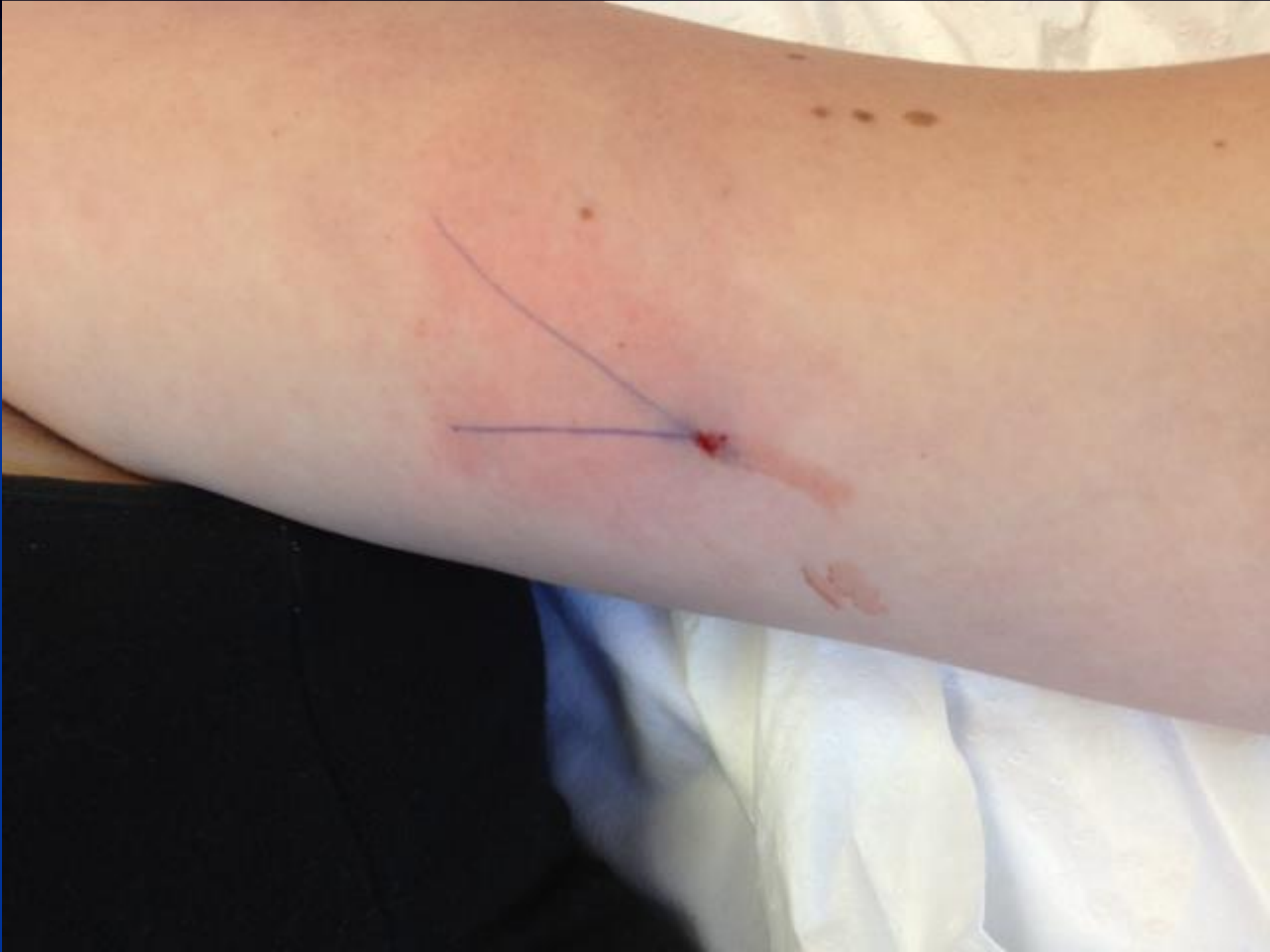

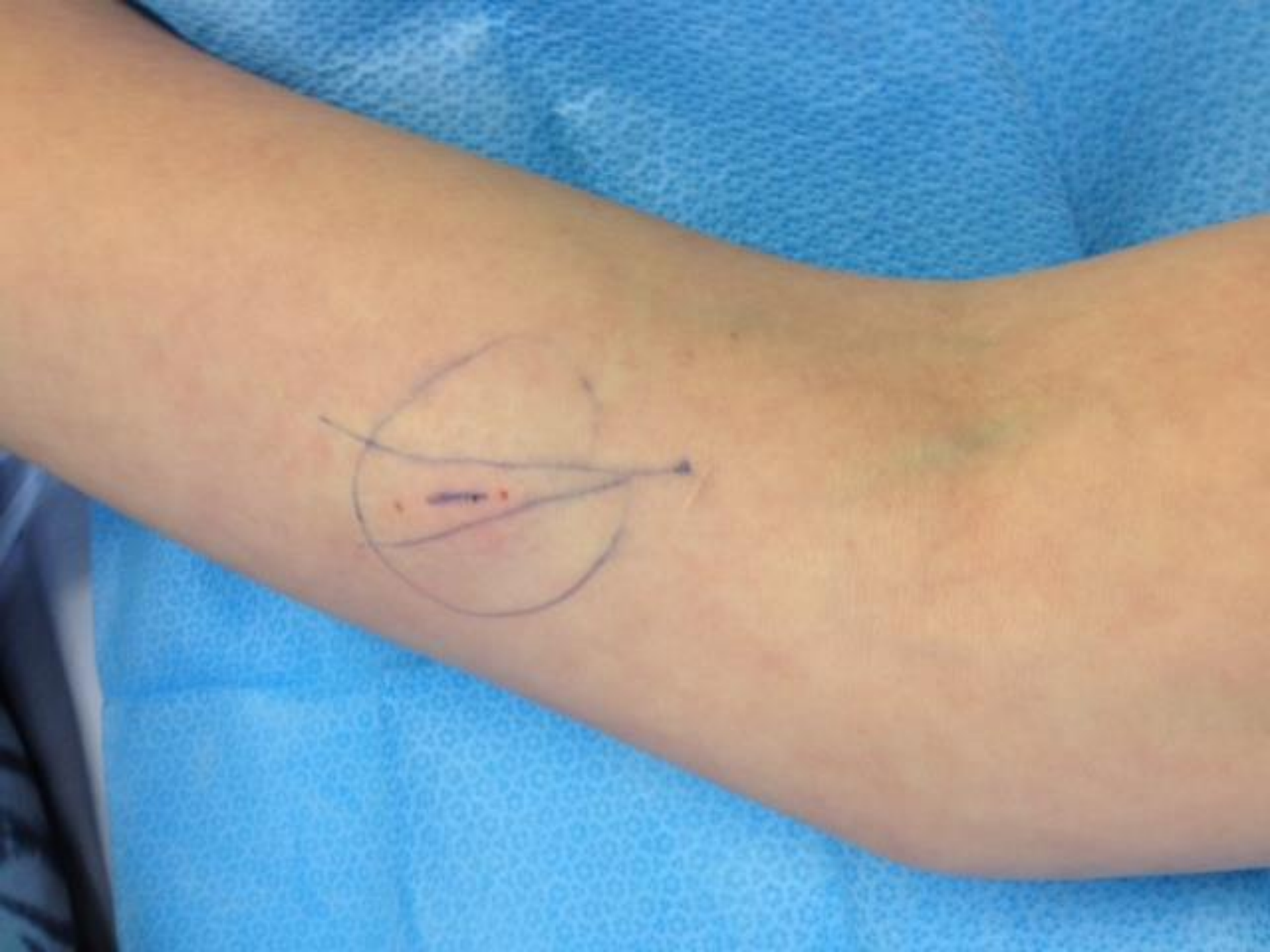

References

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Sivin I, Wan L, Ranta S, Alvarez F, Brache V, Mishell DR Jr, Darney P, Biswas A, Diaz S, Kiriwat O, Anant MP, Klaisle C, Pavez M, Schechter **J. Levonorgestrel concentrations during 7 years continuos use of Jadelle contraceptive impalnts. Contraception. 2001 Jul;64(1):43-9**

National Institute for Health and Clinical Excellence (NICE).Long-acting Reversible Contraception (Clinical Guideline 30).2005. http://www.nice.org.uk/nicemed

Shoupe D, Mishell DR Jr, Bopp BL, Fielding M. **The significance of bleeding patterns in Norplant implant users. Obstet Gynaecol 1991;77(2):256-60**

Cromer BA, Blair JM, Mahan JD, et al. **A prospective comparison of bone density in adolescent girls receiving depot medroxyprogesterone acetate (Depo-Provera), levonorgestrel (Norplant), or oral contraceptives. J Paediatrics 1996;129(5):671-6**

Weiberg E,Hickey M,Palmer D,O'Connor V,Salamonsen L,Findlay J,Fraser I.Hum Reprod 2009:24(8):1852-1186

Recommended websites

- www.rcog.org.uk
- www.ffprhc.org Faculty of Family Planning and Reproductive Health Care
- www.fsrh.org Faculty of Sexual & Reproductive Healthcare

WHO websites:

- www.who.int/rhl/fertility/contraception/en/
- www.who.int/reproductive-health/ WHO's reproductive health website

Specific resources:

- • Medical eligibility criteria for contraceptive use. 4th ed. Geneva: Department of Reproductive Health and Research, World Health Organisation; 2010. Available from: www.who.int/reproductive-health/publications/mec/
- • Selected practice recommendations for contraceptive use. 2nd ed. Geneva: Department of Reproductive Health and Research, World Health Organisation; 2004. Available from: whqlibdoc.who.int/publications/2004/9241562846.pdf

Also:

www.fpanz.org.nz New Zealand Family Planning Association

www.medsafe.co.nz Medsafe New Zealand

www.nice.org.uk/Guidance/CG/Published

(Includes a review of long-acting reversible contraception.)

www.uptodate.com

(A useful resource if you are prepared to subscribe to it.)

- Guillebaud J. Contraception: your questions answered. 5th ed. Edinburgh: Churchill Livingstone; 2008.