



FERTILITY
associates

| *a better understanding*
TE RAUHANGA O TE WHARETANGATA



Fertility Associates –
Leaders in Fertility

Lifestyle and Fertility

Elaine Baxter

Nurse Team Leader

Fertility Associates Christchurch

What can we do to increase our
chances of having a baby?

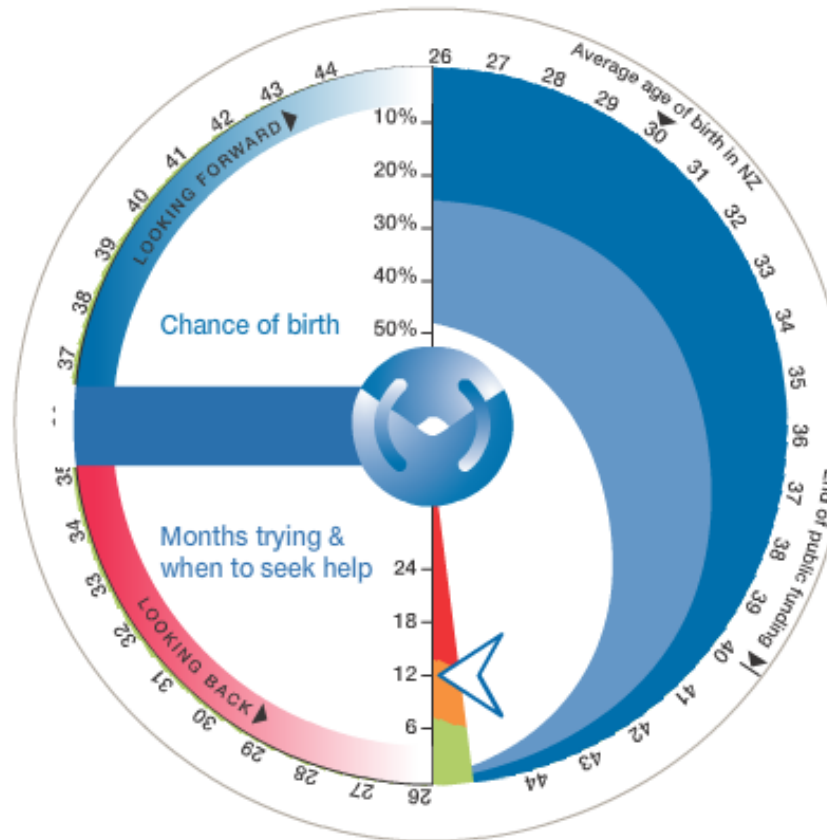
What Lifestyle Factors are Important?

- Age
- Smoking
- Weight
- Diet and Exercise
- Psychological stress
- Caffeine consumption
- Alcohol consumption
- Exposure to environmental pollutants

Age

When is the best age for women to conceive?

Biological Clock™



Chance of birth

■ Chance of having a child per month of trying for fertile couples

25%

■ Chance of having a child from one IVF cycle for people experiencing infertility

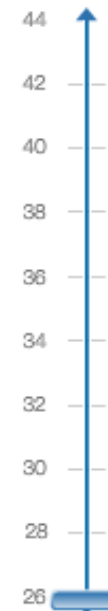
48%

Months trying & when to seek help

- Time to act
- Time to start thinking about seeing your GP or fertility specialist
- OK to wait, except under circumstances noted [here](#)

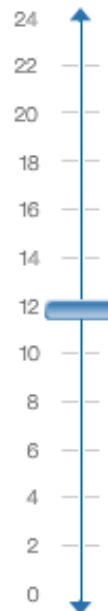
Woman's Age

26



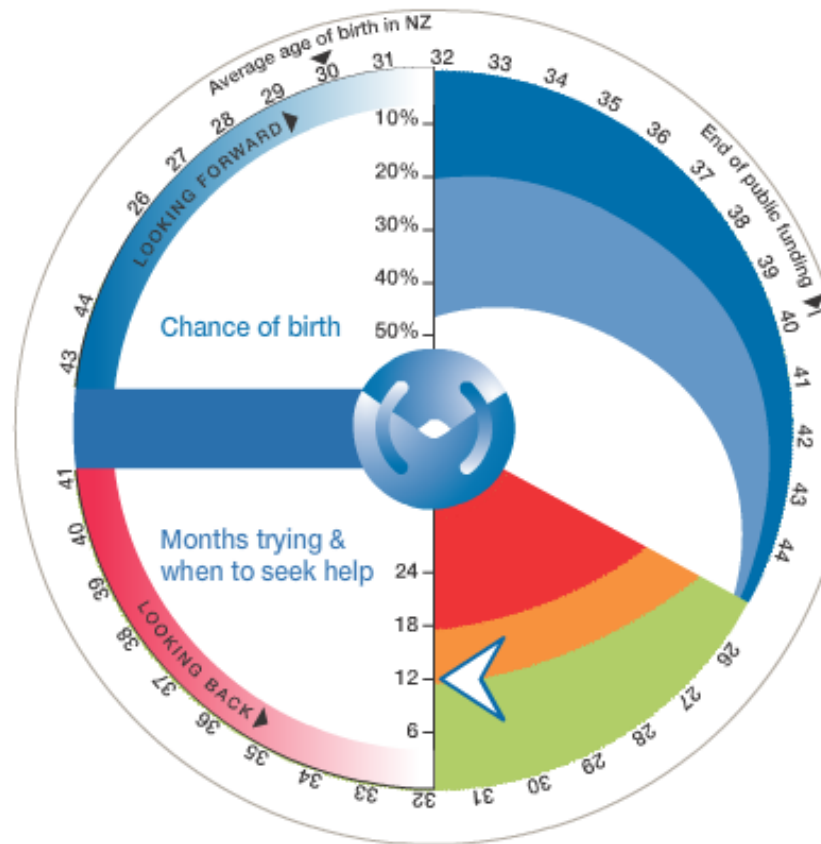
Months Trying

12



6 years later...

Biological Clock™



Chance of birth

Chance of having a child per month of trying for fertile couples

20%

Chance of having a child from one IVF cycle for people experiencing infertility

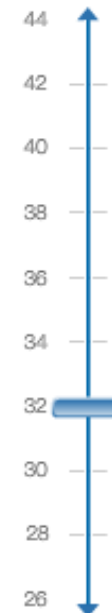
46%

Months trying & when to seek help

- Time to act
- Time to start thinking about seeing your GP or fertility specialist
- OK to wait, except under circumstances noted [here](#)

Woman's Age

32



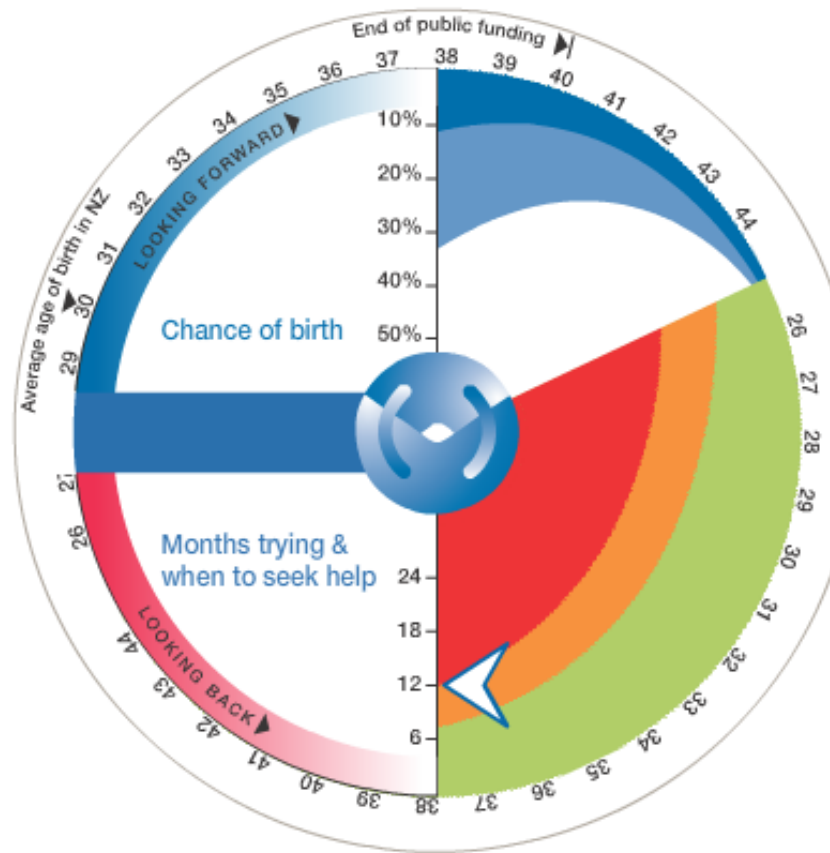
Months Trying

12



another 6 years later...

Biological Clock™



Chance of birth

Chance of having a child per month of trying for fertile couples

11%

Chance of having a child from one IVF cycle for people experiencing infertility

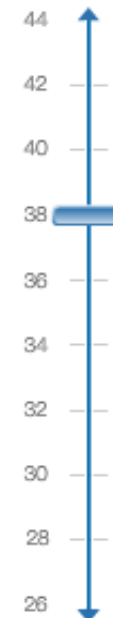
33%

Months trying & when to seek help

- Time to act
- Time to start thinking about seeing your GP or fertility specialist
- OK to wait, except under circumstances noted [here](#)

Woman's Age

38



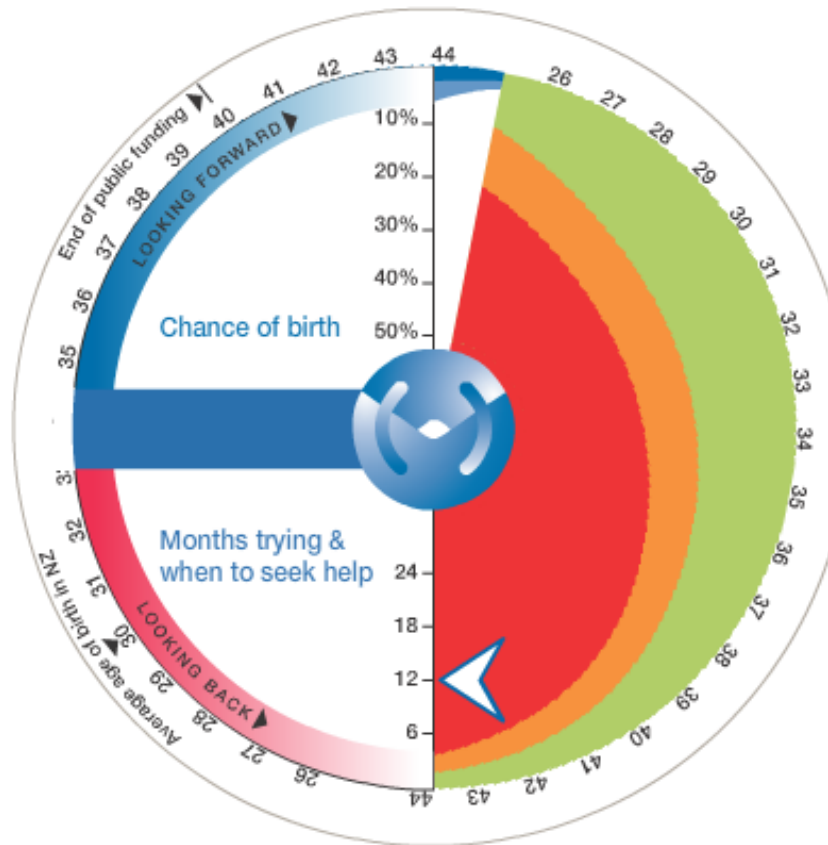
Months Trying

12



another 6 years later...

Biological Clock™



Chance of birth

■ Chance of having a child per month of trying for fertile couples

1%

■ Chance of having a child from one IVF cycle for people experiencing infertility

5%

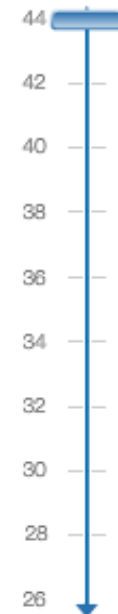
Months trying & when to seek help

- Time to act
- Time to start thinking about seeing your GP or fertility specialist
- OK to wait, except under circumstances noted [here](#)

Woman's Age

44

End of public funding.

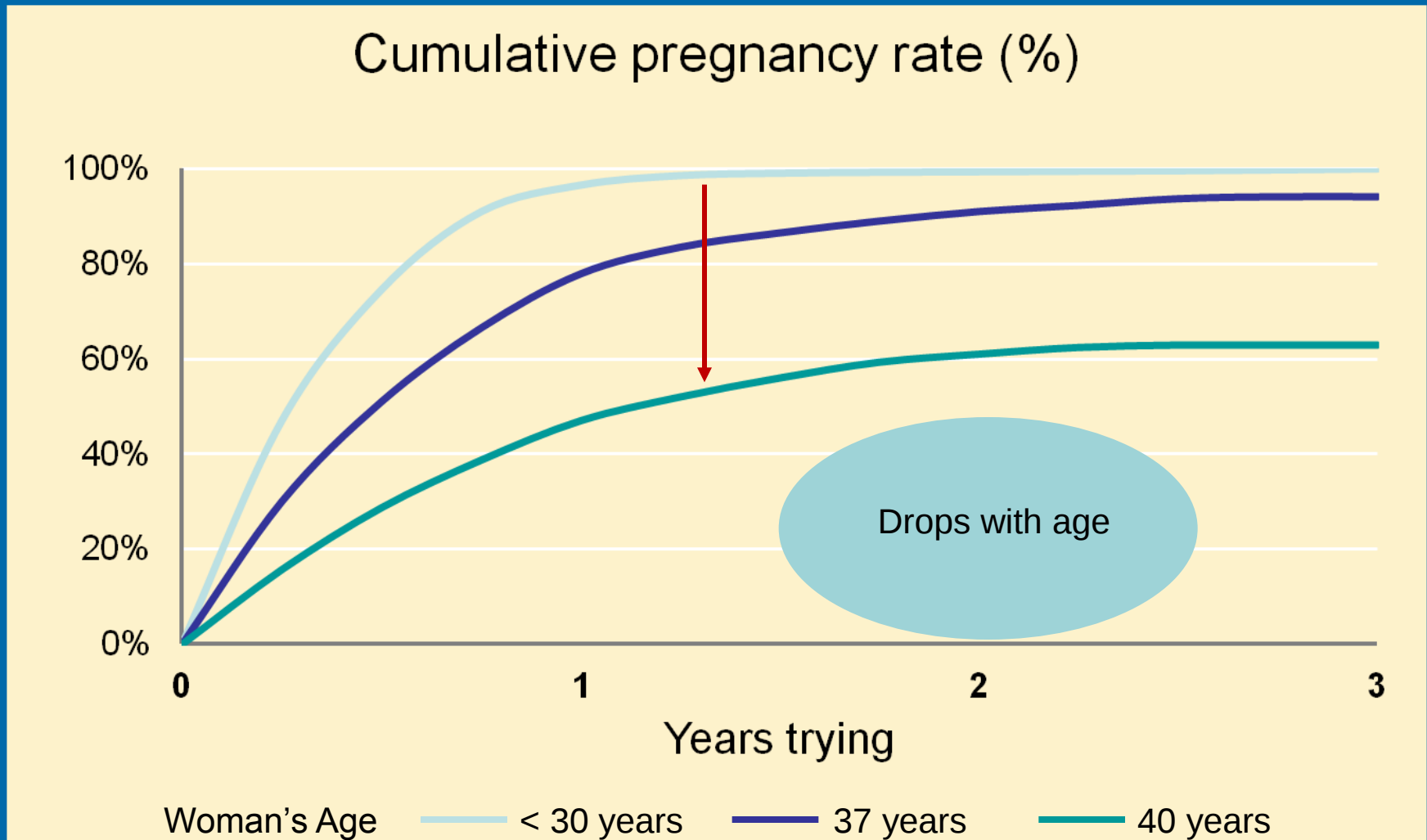


Months Trying

12



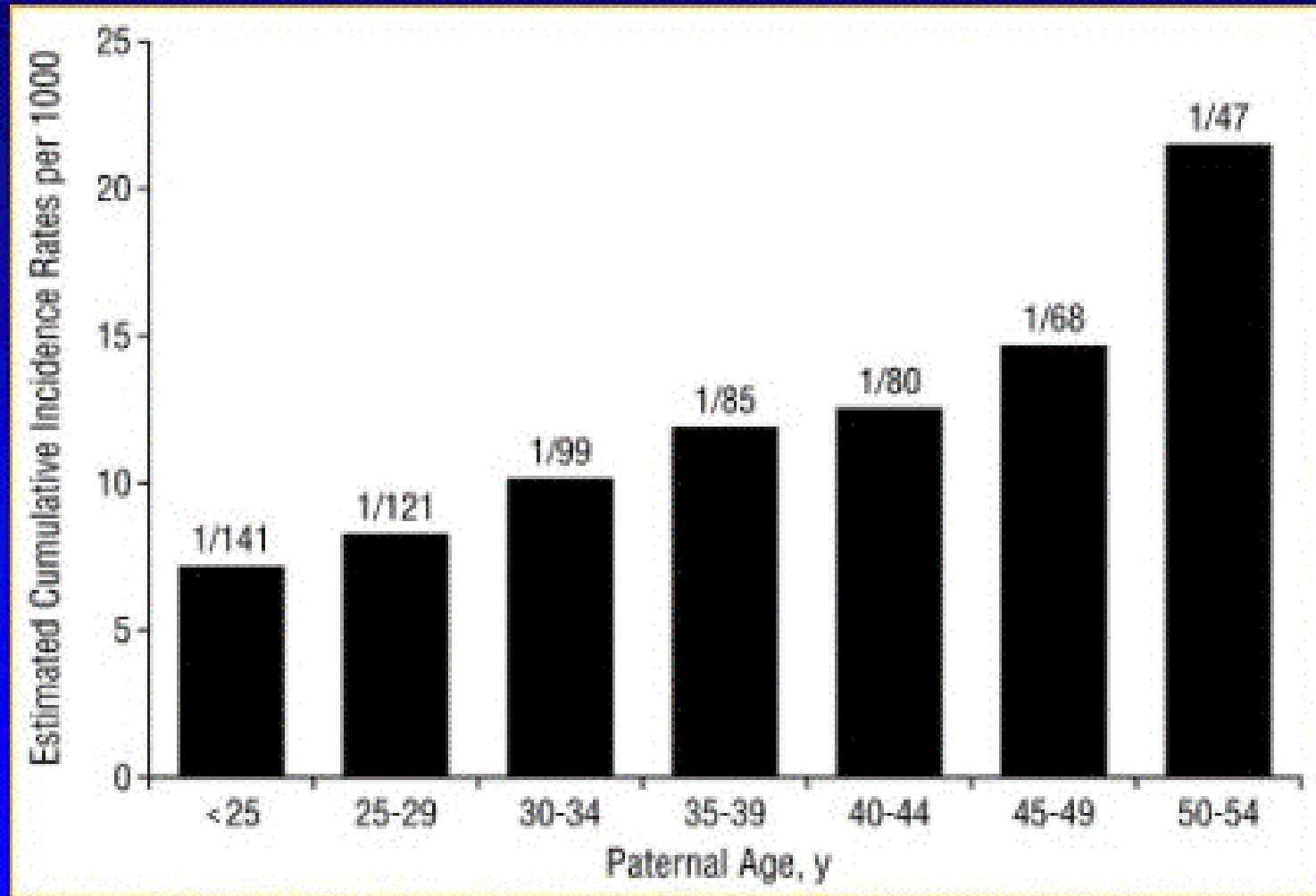
Chance of Pregnancy – Woman's Age



Male Age

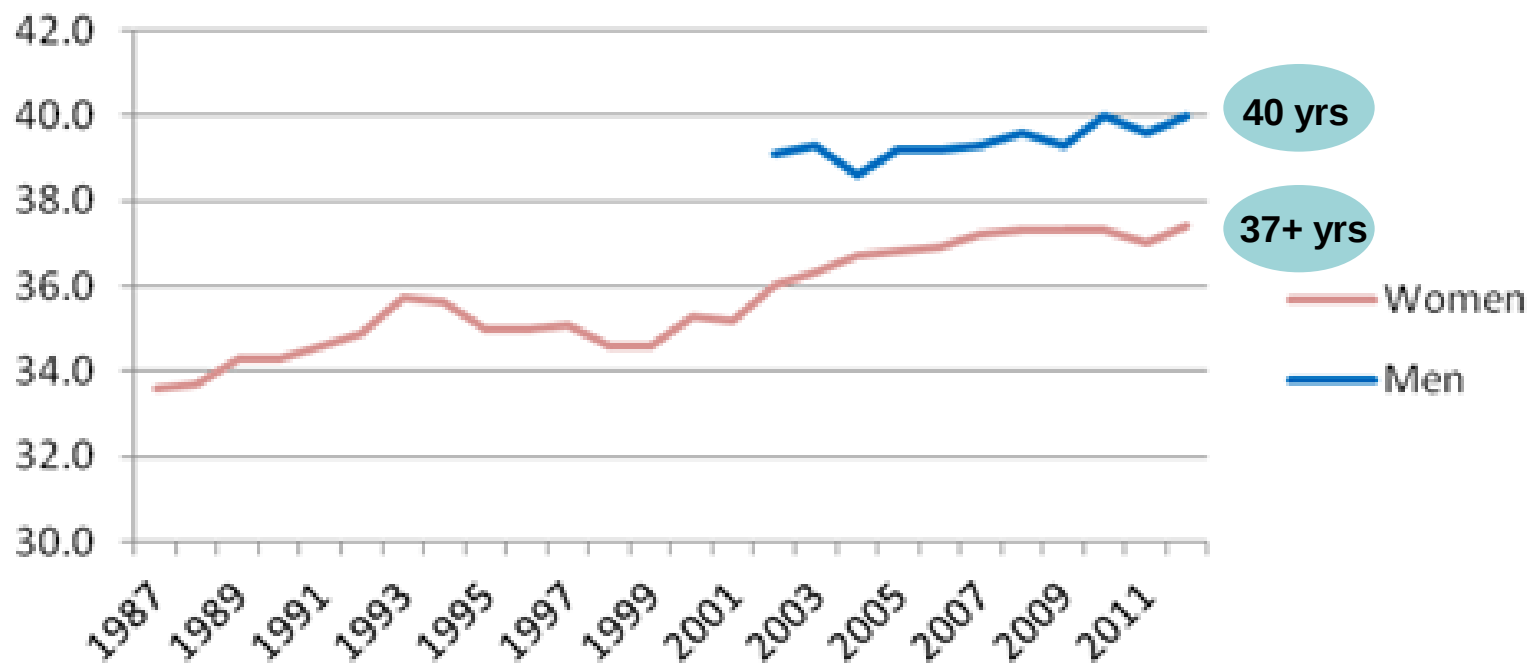
- Fit and healthy men >40 yrs – partners conceive at a slower rate than younger men
- Young woman with male partner > 50 yrs up to half the chance of conception than with a younger man
- Single gene mutations, or mixed genetic and environmentally caused adverse outcomes, are much more common in the children of older men
 - Autism
 - Schizophrenia

Paternal age and schizophrenia risk



Average Age at IVF Treatment

Age of men and woman at IVF treatment at FAA



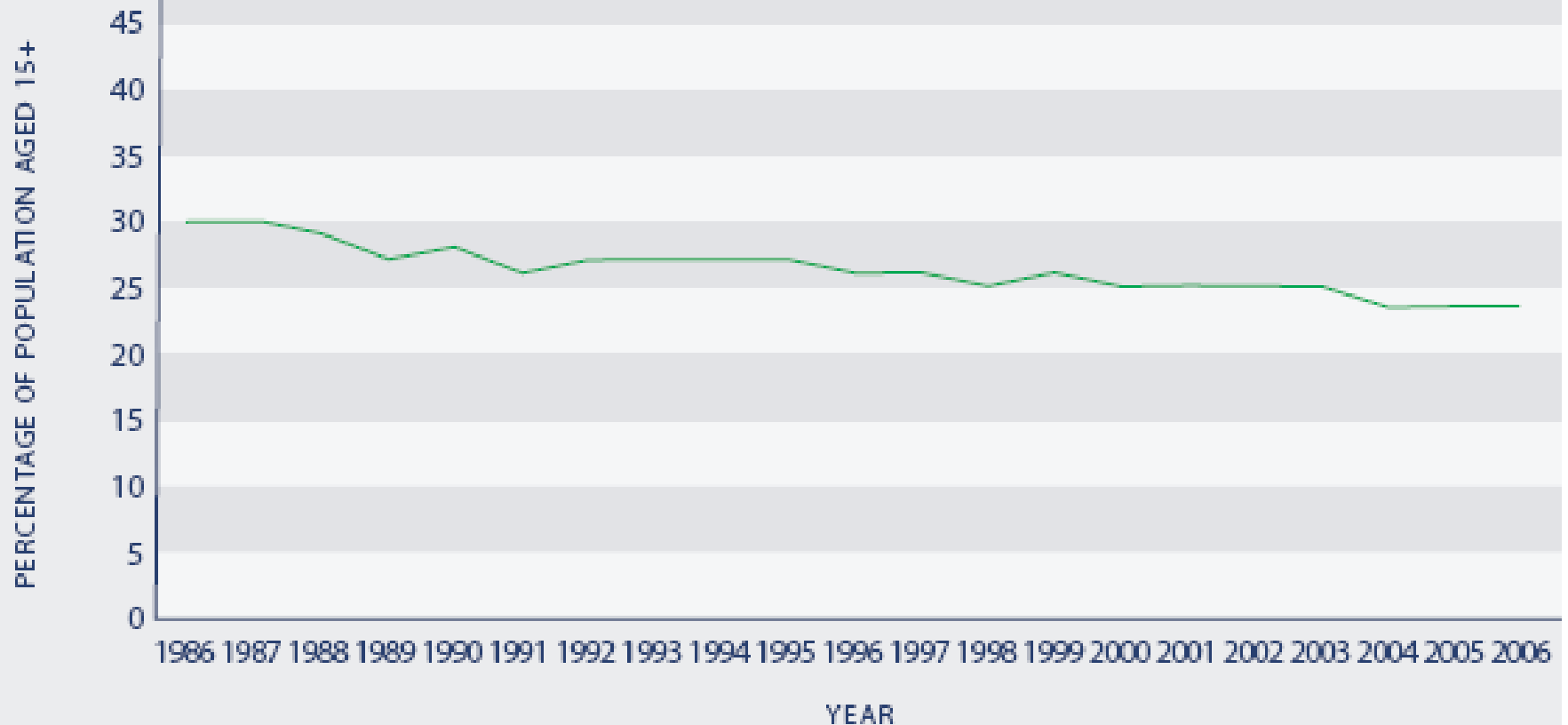
It may be possible...



Smoking



% Adults who Smoke in NZ



Cigarette Smoking and Male Fertility

- In males smoking affects sperm production, motility, morphology and increases DNA damage
- Child born to a father who smokes has 4 X risk of childhood cancer



Smoking and Female Fertility

- Cotinine and cadmium detectable in follicular fluid
- Menopause occurs 1 to 4 years earlier
- Zona pellucida thicker



Implications of Smoking in ART Population

- 9 studies OR 0.66 (95%CI 0.49-0.88) for pregnancy per number of IVF cycles
- Male smoking significantly reduced ICSI and IVF success rates
- Female smoking doubles risk of early pregnancy loss

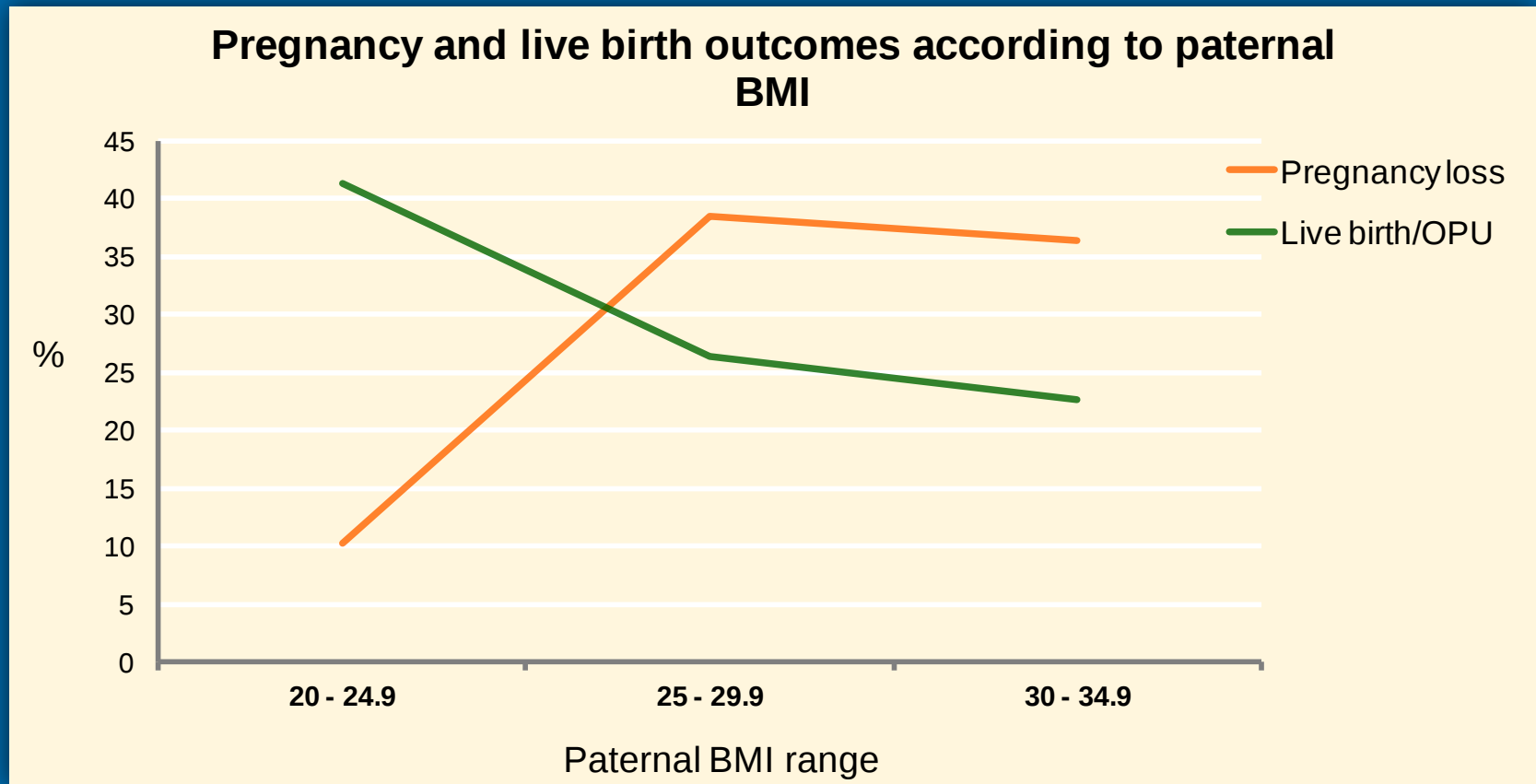


Weight





Impact of BMI on Male Fertility



Bakos et al., 2011, *Paternal Obesity and ART Pregnancy*

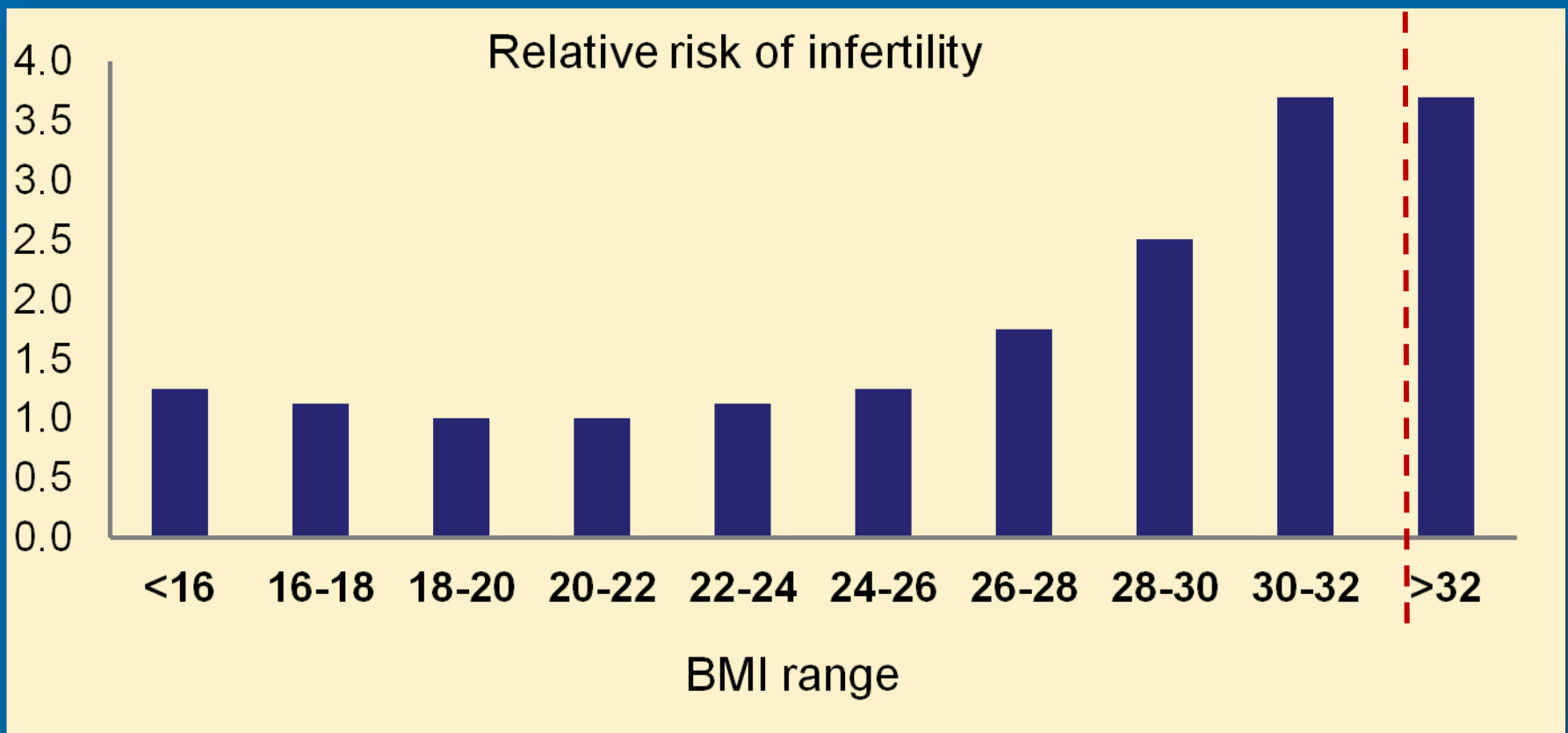
Male BMI

- Obese men have sperm counts on average 22% lower
- Why
 - ?? Heat via DNA damage, ?? Hormonal



Impact of BMI on Female Fertility

Public funding cut off



Human Reproduction Update Homan, G.F. et al. Hum Reprod Update 2007 13:209-223; doi:10.1093/humupd/dml056

Lifestyle Modification Programmes

- 87 obese women (BMI>30)
- Weekly programme exercise and diet for 6 months
- Average weight loss 10kg
- 80% women were anovular
 - 90% ovulating at 6 months
 - 78% pregnant
 - 68% live birth

Diet and Exercise



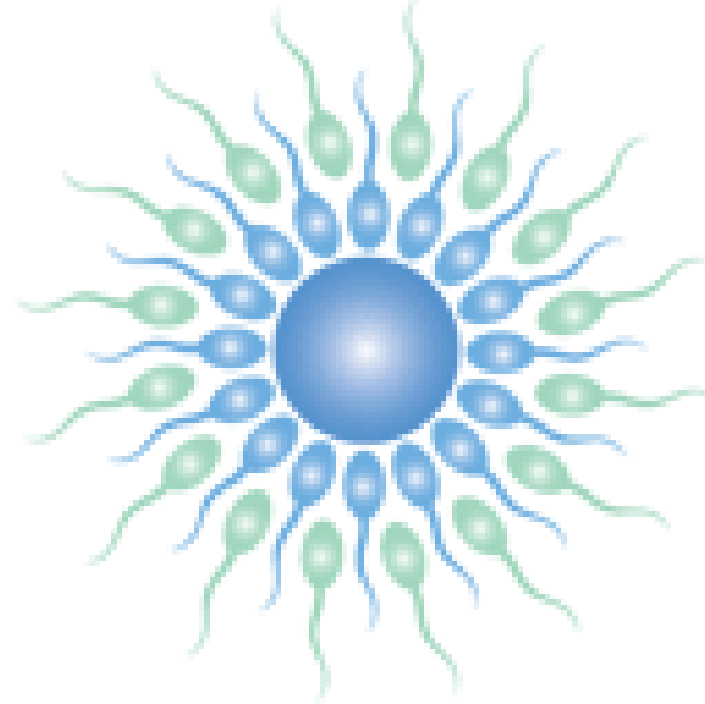
Chicken and Salad a matter of perspective!



Healthy Sperm Diet

- Lots of antioxidants
 - fruit and vegetables, nuts, seeds, dark chocolate, green tea, red wine
- Vitamin C and E
- ? Selenium, Zinc
- ? Folic acid





menevit

DESIGNED FOR MALE FERTILITY

Exercise

- Reasonable to assume that the general health benefits associated with a moderate level of exercise also apply to fertility
- There is a need for studies specifically looking at this area

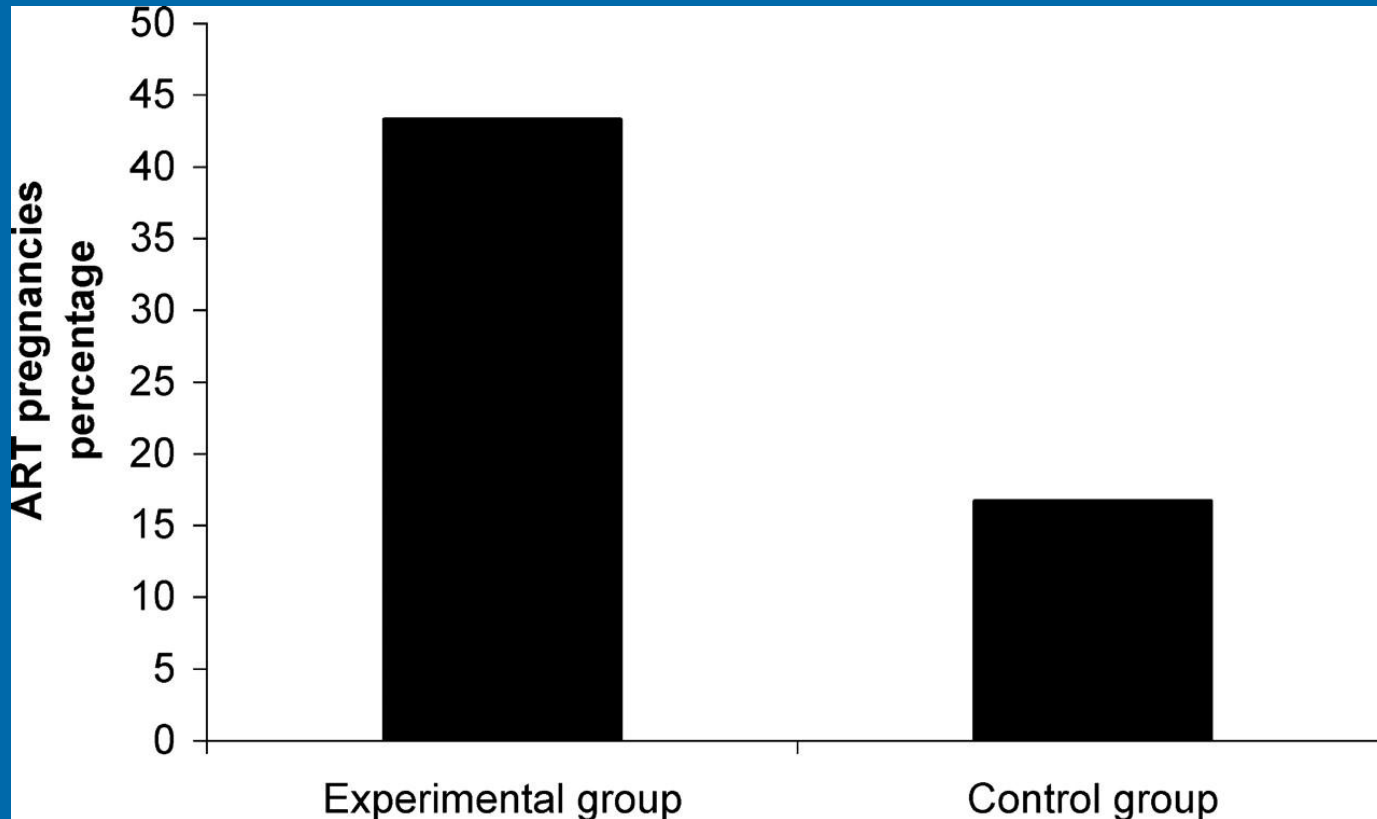
Psychological Stress



Stress

May reduce female reproductive performance through effects on autonomic, endocrine and immune systems

Effects of Counselling and Support on ART Pregnancy Rates



Homan, G.F. et al. Hum Reprod Update 2007 13:209-223;
doi:10.1093/humupd/dml056

Human Reproduction Update

Copyright restrictions may apply.

Caffeine Consumption



Caffeine and IVF

- 221 women (Cohen et al, 2002)
- Caffeine 2-50mg/day compared with nil
OR 3.1(95%CI 1.0-9.7) for no livebirth
- Caffeine>50mg/day OR 3.9(95%CI 1.3-11.6)
- Starbucks grande latte 150mg caffeine

Alcohol Consumption



Alcohol and Fertility

- Known teratogen
- Reduces female fertility
- Increases miscarriage risk
- Unknown safe level during pregnancy
- Men >20 units per week reduced numbers of pregnancies

Reproductive Health Pathway

- Woman diagnosed with anovulation
 - Obese, poor diet, no exercise, lots of stress
- Interventions
 - improve diet, increase exercise, reduce stress
- Male partner
 - smokes, poor diet and no exercise
- Interventions
 - stop smoking, improve diet, increase exercise

Conclusions

- Lifestyle modifications can make a real difference to fertility
- Opportunistic screening for health in a population who use GP services rarely

Thank You