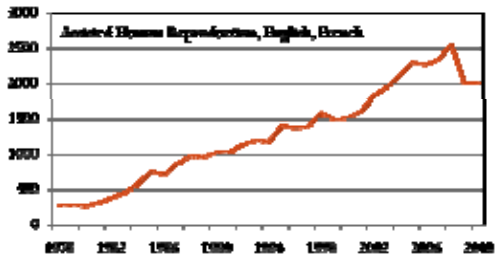
How to write a meeting abstract

Research – Theory and Practice
Brussels, Belgium
March 4-5, 2010

Annual publications on assisted reproductive technology



2009 may not be complete, March 1 2010

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ART in the publishing world

Articles 2000-9	World
All AHR articles	22,466
Reviews	1,840
RCTs	710
All citations 2009	838,592

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Why is the abstract so important?

- Improving abstracts should be a primary goal
  - for authors
  - for editors
- Few browsers read more than the abstract.
- Your abstract should be interesting enough to entice browsers to read the whole paper.

The Role of the Abstract

The abstract needs to provide sufficient information for both critical and non-critical readers.

Non critical readers (browsers and the average clinical and scientific reader) comprise the majority of readers, and their total need for information can be satisfied in many cases by a good abstract.

Critical readers include teachers, referees and fellow investigators, and while their interest can be aroused by the abstract, their critical needs require examination of the full text

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Who reads the whole paper?

1. Clinicians with current problems
2. Scientists interested in similar work

…and the youngest author's mother

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What Should a Reviewer Look for in the Abstract?

1. The question should be stated explicitly in the objectives.
2. The abstract methods should describe the setting and patients, the methods for allocation and concealment of the sequence, the nature of the intervention, the sample size statement and the analysis method for the primary outcome.

What Should a Reviewer Look for in the Abstract?

3. The results section of the abstract should include the primary outcome with confidence intervals, expressed wherever possible as absolute numbers and rate differences with numbers needed to treat or harm.
4. The conclusion statement should include the authors' inferences about the findings and a major shortcoming or limitation of the study.

Was the Primary Outcome Specified in the Abstract?

	1996	2006
Dichotomous outcome RCTs	19	14
Primary Outcome in the abstract	5	5
	(26%)	(36%)
Relative rate	1.4 (0.5, 3.8)	
P value (corrected Chi Sq)	0.85	

Obstet-Gynecol, 1996, 2006.

Does primary outcome in the abstract correlate with good methods in the paper?

	PO in Abstract	
	No	Yes
RCTs	23	10
POPS mean (SD)	5.0 (2.2)	6.5 (1.3)
t value (dof)	2.07 (31)	
P value	0.047	

10 Obstet-Gynecol, 1996, 2006.

Structured abstract: clinical

Background: State the objective, or using a PICO question, the patients, intervention and **primary outcome**

Methods: study design, (patients, setting, intervention, primary outcome if not in Background), type of analysis.

Results: Give number of subjects & outcomes. Report measurements with confidence intervals. Use **absolute numbers,** rate differences and NNT where possible.

Conclusions: focus on clinical implications of primary outcome, primary study weakness (AIM).

Example of a good meeting abstract. Bhattacharya et al, 2006. Revised from 391 to 249 words.

OBJECTIVE: To compare the effectiveness of expectant management, clomifene and intrauterine insemination in the treatment of infertility. DESIGN: **Parallel group three arm multi-centre randomised controlled trial**. MATERIALS AND METHODS: We recruited couples from 5 centres in Scotland (United Kingdom), with **infertility ≥ 2 years**, with confirmed ovulation, patent fallopian tubes and motile sperm. Women were **randomised** to receive one of three options for a period of 6 months: **expectant management** (N =193), **50 mg clomifene** from days 2-6 of a cycle (N = 194), or **unstimulated intra-uterine insemination** (IUI] (N =193). Assuming a live birth rate of 10% in the expectant group, we aimed to recruit 190 women in each arm in order to provide 80% power at the 5% level of significance for the following comparisons: **absolute difference of 11 %** (OR of 2.4) for clomifene vs expectant management and an absolute difference of **21% (OR of 4.0)** for IUI vs expectant management. RESULTS: The three groups (expectant vs clomifene vs IUI) were comparable. At six months post randomisation, **follow up data were available on 562** (97%) women. The **numbers of ongoing pregnancies (>7 weeks)** in the three groups were as follows: expectant = 32 (17%), clomifene = 28 (14%). IUI = 41 (21%). Compared to expectant management, the relative risk of ongoing pregnancy **with clomifene was 0.87, 95% CI (0.55, 1.39)**, and **with IUI 1.28, 95% CI (0.84, 1.94)**. CONCLUSION: Empirical clomifene and unstimulated IUI do not appear to offer higher rates of ongoing pregnancy in comparison with expectant management of unexplained infertility.

The final abstract- 236 words.

Objective: To compare the effectiveness of clomifene citrate and unstimulated intrauterine insemination with expectant management for the treatment of unexplained infertility.
Design: Three arm parallel group, pragmatic randomised controlled trial.
Setting: Four teaching hospitals and a district general hospital in Scotland.
Participants: Couples with infertility for over two years, confirmed ovulation, patent fallopian tubes, and motile sperm.
Intervention: Expectant management, oral clomifene citrate, and unstimulated intrauterine insemination.
Main outcome measures: The primary outcome was live birth. Secondary outcome measures included clinical pregnancy, multiple pregnancy, miscarriage, and acceptability. (87 words)

Bhattacharya et al, 2008. BMJ337:716-23.

Results and conclusions of a good abstract

Results: 580 women were randomised to expectant management (n=193), oral clomifene citrate (n=194), or unstimulated intrauterine insemination (n=193) for six months. The three randomised groups were comparable in terms of age, body mass index, duration of infertility, sperm concentration, and motility. Live birth rates were 32/193 (17%), 26/192 (14%), and 43/191 (23%), respectively. Compared with expectant management, the odds ratio for a live birth was 0.79 (95% confidence interval 0.45 to 1.38) after clomifene citrate and 1.46 (0.88 to 2.43) after unstimulated intrauterine insemination. More women randomised to clomifene citrate (159/170, 94%) and unstimulated intrauterine insemination (155/162, 96%) found the process of treatment acceptable than those randomised to expectant management (123/153, 80%) (P=0.001 and P<0.001, respectively). Conclusion: In couples with unexplained infertility existing treatments such as empirical clomifene and unstimulated intrauterine insemination are unlikely to offer superior live birth rates compared with expectant management. (148 words)

Bhattacharya et al, 2008. BMJ337:716-23.

It Could Be So Easy! The PICO Approach.

OBJECTIVE: To compare the efficacy of multidose medroxyprogesterone acetate and a multidose monophasic combined oral contraceptive (OC) for hemodynamically stable women with non-gestational, acute uterine bleeding. (26 words)

OBJECTIVE: **Among** hemodynamically stable women with non-gestational acute uterine bleeding, **does** multidose medroxyprogesterone acetate **compared** with multidose monophasic combined oral contraceptive (OC) increase **the likelihood that bleeding will stop in 28 days**? (32 words)

[A 20% difference was defined as equivalence, and the stated primary outcome was avoidance of unscheduled surgery in the 28-day follow-up.]

Munro et al 2006. Oral medroxyprogesterone acetate and combination oral contraceptives for acute uterine bleeding: an RCT. Obstet Gynecol. 108:924-9.

What to do

Decide what is missing or needed
Edit the title and the abstract
Stand up and say your piece

Working with abstracts

- The following examples may have different faults:
  miss important information
  be too long, or
  lack appropriate numbers.
- The examples are from a variety of reproductive medicine journals.

Abstract checklist

1. PICO question or objective

Methods

2. Study design
3. statistical analysis

Results

4. Sample size
5. Primary outcome
6. Absolute numbers
7. 95% CI

Conclusions

8. Warranted by results
9. One shortcoming of the study

Effect of acupuncture on the outcome of in vitro fertilization and intracytoplasmic sperm injection: a randomized, prospective, controlled clinical study

Stefan Dieterle, M.D.,[a] Gao Ying, M.D.,[a,b] Wolfgang Hatzmann, M.D.,[a] and Andreas Neuer, M.D.[a]

[a]Division of Reproductive Endocrinology and Infertility, Department of Obstetrics and Gynecology, University of Witten Herdecke, Dortmund, Germany; and [b]Department of Obstetrics and Gynecology, Union Hospital, Tongji Medical College, Huazhong University of Science and Technology, Wuhan, China

Objective: To determine the effect of luteal-phase acupuncture on the outcome of IVF/intracytoplasmic sperm injection (ICSI).
Design: Randomized, prospective, controlled clinical study.
Setting: University IVF center.
Patient(s): Two hundred twenty-five infertile patients undergoing IVF/ICSI.
Intervention(s): In group I, 116 patients received luteal-phase acupuncture according to the principles of traditional Chinese medicine. In group II, 109 patients received placebo acupuncture.
Main Outcome Measure(s): Clinical and ongoing pregnancy rates.
Result(s): In group I, the clinical pregnancy rate and ongoing pregnancy rate (33.6% and 28.4%, respectively) were significantly higher than in group II (15.6% and 13.8%).
Conclusion(s): Luteal-phase acupuncture has a positive effect on the outcome of IVF/ICSI. (Fertil Steril® 2006; 85:1347–51. ©2006 by American Society for Reproductive Medicine.)

Key Words: Acupuncture, assisted reproduction, pregnancy rate, IVF, ICSI

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Hum Reprod. 2010 Jan 18. [Epub ahead of print]

Effect of in vitro culture of human embryos on birthweight of newborns.

Dumoulin JC, Land JA, Van Montfoort AP, Nelissen EC, Coonen E, Derhaag JG, Schreurs IL, Dunselman GA, Kester AD, Geraedts JP, Evers JL. Center for Reproductive Medicine, Department of Obstetrics and Gynaecology, Maastricht University Medical Centre, Maastricht,The Netherlands.

BACKGROUND In animal models, in vitro culture of preimplantation embryos has been shown to be a risk factor for abnormal fetal outcome, including high and low birthweight. In the human, mean birthweight of singletons after in vitro fertilization (IVF) is considerably lower than after natural conception, but it is not known whether culture conditions play a role in this. METHODS We compared pregnancy rates and perinatal outcomes from singleton pregnancies resulting from a total of 826 first IVF treatment cycles in which oocytes and embryos were randomly allocated to culture in either of two commercially available sequential media systems. RESULTS When the 110 live born singletons in the Vitrolife group were compared with the 78 singletons in the Cook group, birthweight + / - SEM (3453 + / - 53 versus 3208 + / - 61 g, P = 0.003), and birthweight adjusted for gestational age and gender (mean z-score + / - SEM: 0.13 + / - 0.09 versus -0.31 + / - 0.10, P = 0.001) were both significantly higher in the Vitrolife group. When analyzed by multiple linear regression together with several other variables that could possibly affect birthweight as covariates, the type of culture medium was significantly (P = 0.01) associated with birthweight. CONCLUSIONS In vitro culture of human embryos can affect birthweight of live born singletons.

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Hum Reprod Update. 2009 Dec 4. [Epub ahead of print]

Maternal metabolism and obesity: modifiable determinants of pregnancy outcome.

Nelson SM, Matthews P, Poston L. Division of Developmental Medicine, Reproductive and Maternal Medicine, Faculty of Medicine, University of Glasgow, Glasgow, UK.

BACKGROUND Obesity among pregnant women is highly prevalent worldwide and is associated in a linear manner with markedly increased risk of adverse outcome for mother and infant. Obesity in the mother may also independently confer risk of obesity to her child. The role of maternal metabolism in determining these outcomes and the potential for lifestyle modification are largely unknown. METHODS Relevant studies were identified by searching PubMed, the metaRegister of clinical trials and Google Scholar without limitations. Sensitive search strategies were combined with relevant medical subject headings and text words. RESULTS Maternal obesity and gestational weight gain have a significant impact on maternal metabolism and offspring development. Insulin resistance, glucose homeostasis, fat oxidation and amino acid synthesis are all disrupted by maternal obesity and contribute to adverse outcomes. Modification of lifestyle is an effective intervention strategy for improvement of maternal metabolism and the prevention of type 2 diabetes and, potentially, gestational diabetes. CONCLUSIONS Maternal obesity requires the development of effective interventions to improve pregnancy outcome. Strategies that incorporate a detailed understanding of the maternal metabolic environment and its consequences for the health of the mother and the growth of the child are likely to identify the best approach.

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Hum Reprod Update. 2009 Nov 4. [Epub ahead of print]

The impact of body mass index on semen parameters and reproductive hormones in human males: a systematic review with meta-analysis.

Macdonald AA, Herbison GP, Showell M, Farquhar CM. School of Medicine, Faculty of Medical and Health Sciences, University of Auckland, Auckland 1142, New Zealand.

BACKGROUND It has been suggested that body mass index (BMI), especially obesity, is associated with subfertility in men. Semen parameters are central to male fertility and reproductive hormones also play a role in spermatogenesis. This review aimed to investigate the association of BMI with semen parameters and reproductive hormones in men of reproductive age. METHODS MEDLINE, EMBASE, Biological Abstracts, PsycINFO and CINAHL databases and references from relevant articles were searched in January and February 2009. Outcomes included for semen parameters were sperm concentration, total sperm count, semen volume, motility and morphology. Reproductive hormones included were testosterone, free testosterone, estradiol, FSH, LH, inhibin B and sex hormone binding globulin (SHBG). A meta-analysis was conducted to investigate sperm concentration and total sperm count. RESULTS In total, 31 studies were included. Five studies were suitable for pooling and the meta-analysis found no evidence for a relationship between BMI and sperm concentration or total sperm count. Overall review of all studies similarly revealed little evidence for a relationship with semen parameters and increased BMI. There was strong evidence of a negative relationship for testosterone, SHBG and free testosterone with increased BMI. CONCLUSIONS This systematic review with meta-analysis has not found evidence of an association between increased BMI and semen parameters. The main limitation of this review is that data from most studies could not be aggregated for meta-analysis. Population-based studies with larger sample sizes and longitudinal studies are required.

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Hum Reprod. 2010 Jan 29. [Epub ahead of print]

Differences in outcome between twins and singletons born very preterm: results from a population-based European cohort. Papiernik E, Zeitlin J, Delmas D, Blondel B, Künzel W, Cuttini M, Weber T, Petrou S, Gortner L, Kollée L, Draper ES; on behalf of The MOSAIC Group. Université Paris V Réné Descartes et Maternité de Port-Royal, Assistance-Publique Hôpitaux de Paris, Paris, France.

BACKGROUND About 10% of twins are born before 32 weeks of gestation and very preterm birth rates are increasing. Preterm twins tend to have more favourable outcomes than singletons of the same gestational age, but fewer data are available for very preterm infants. This study aims to determine whether outcomes differ between very preterm twins and singletons. METHOD This study was of a population-based cohort of very preterm babies in 10 European regions in 2003. Mortality and morbidity to discharge from hospital were compared for twins and singletons between 24 and 31 weeks of gestation, who were alive at the onset of labour and without lethal congenital anomalies. Clinical characteristics, pregnancy complications and healthcare factors were taken into consideration. RESULTS Between 28 and 31 weeks of gestation, mortality and oxygen dependency at 36 corrected weeks of gestation were lower for twins than singletons (3.9 versus 6.5% and 7.1 versus 10.4%, respectively), but this advantage disappeared after controlling for medical and healthcare factors. Hypertension, growth restriction and haemorrhaging were less frequent complications of twin birth and more twins received antenatal corticosteroids and were born in level III units. In contrast, between 24 and 27 weeks of gestation, twins had higher adjusted risks of mortality and Grade III/IV intraventricular haemorrhaging [adjusted ORs 1.5 (95% CI 1.1-2.2) and 1.5 (1.0-2.1)]. These adverse outcomes were concentrated among twins from same sex pairs with discordant birthweights. CONCLUSIONS Between 24 and 27 weeks of gestation, risks of mortality and severe cranial haemorrhaging were higher for twins than singletons if they were from same sex pairs with discordant birthweights.

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Hum Reprod. 2010 Jan 19. [Epub ahead of print]

Parental age at childbirth and age of menarche in the offspring. Shrestha A, Nohr EA, Bech BH, Ramlau-Hansen CH, Olsen J. Department of Epidemiology, School of Public Health, UCLA, Box 951772, Los Angeles, CA 90095-1772, USA.

BACKGROUND Early age of menarche (AOM) is associated with serious health problems including breast cancer and heart disease. Rising parental age at childbirth is associated with some adverse health outcomes in the offspring, but whether early menarche is one of them is not known. METHODS We studied a Danish cohort of singleton females (n = 3168) born in 1984-1987. Prenatal data were collected from mothers around 36th week of pregnancy (self-administered questionnaire), although the menarcheal age was collected from daughters aged 17-21 years in 2005 (Web-based questionnaire). We assessed each parental age association in separate linear regression models adjusted for covariates (socioeconomic status, parity, maternal pre-pregnancy BMI, marital status, maternal smoking and daughter's self-reported BMI), then included both ages in a third model. RESULTS Each year increase in maternal age showed a 9 day earlier onset of menarche in daughters [95% confidence interval (CI): -15.98, -2.90] and a 5 day earlier onset for each year increase in paternal age [95% CI: -10.85, 0.00], after adjusting for covariates. However, these associations attenuated when adjusted for the other parent [change in AOM in days: (i) maternal: -8.49 (95% CI: -17.09, 0.12), (ii) paternal: -1.14 (95% CI: -8.13, 5.84)]. CONCLUSIONS We found no significant association between parental age and AOM, but the small sample of advance aged parents (over 30 years) limits the information we have. Future studies with a larger sample or a sample with over-representation of older parents will be of value.

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How to write a meeting abstract 1

- Put in as much information as you can
- Follow the rules set by the meeting organizers
  but use up every bit of the word or space allowance
- If your words do not fill the space, use a table or figure
- Show the data and avoid saying “we will show…”
- If structure is not required, use BMRC sections anyway

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How to write a meeting abstract 2

Background. Why did you do it? Is it novel? PICO if relevant.
Methods. Setting, patients, main analyses
Results. absolute numbers
  of patients, of groups, of outcomes within groups
  confidence intervals rather than P values
Conclusions. What is important. What was weak. What should be done.

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