2.96). Forty sex percent of twin sets had 10% discordance. Results showed that same-sex twins tend to have more similar birth weights (OR = 0.745, 95%CI 0.629-0.883). In conclusion, the effect of sex-discordance and birth weight discordance on fetal and maternal outcomes is a fascinating study that needs further investigation.

OUTCOME OF MULTIPLE GESTATION WITH ADVANCED MATERNAL AGE

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The rate of multiple-gestation pregnancies has grown exponentially over the last few decades. The aim of this study is to present pregnancy and perinatal outcomes of twin gestations with advanced maternal age. We conducted a retrospective study of twin pregnancies in our department. The women were classified into two groups by maternal age: 56 women of age 35 years and older (study group,) and 70 women less than 35 years (control group) Spontaneous conceptions were significantly higher in the control group ($P < 0.001$), while pregnancies after in vitro fertilization (IVF) were significantly higher in study group ($P < 0.001$). The Cesarean rate for study group was significantly greater compared to control group. There were no differences in rates of adverse outcomes including gestational hypertension, pre-eclampsia, gestational diabetes, suspected fetal growth restriction, preterm birth, low birth weight.

GOOD BEGINNING TO PARENTING MULTIPLES PROJECT (2009-2011)

M. Kaihovaara

The underlying reason for the project 'Good Beginning to Parenting Multiples' was the need to obtain up-to-date information from Finnish society on how families with twins/triplets find themselves in Finland and how the well-being of these families can be promoted. The project aimed on (1) renewing a guide for parents preparing for having twins/triplets and (2) on special family training for multiple birth families. The project produced two studies: Hyväluoma (2010) and Vauhkonen (2011). The project is administered by the Finnish Multiple Births Association and funded by non-profit organizations: Finland Slot Machine Association (RAY) and Alli Paasikivi Foundation. The anxiety over the pregnancy and the wellbeing of the babies is stressing and pressing feeling. Having the fear of too early delivery is constantly present. Parents don't' always have the courage to become attached and build their relationship to their babies, because they fear the loss of the children so much. In Finland almost half of the mothers have their multiples as their firstborn children. Twins are born at the weeks 37-38, triplets at 33 on average. The news about becoming a family with multiples can be everything between severe shock to an exceptionally happy surprise. Multiple pregnancies are always a risk both in psychically and mentally for the parents. One target of the project was to renew a Guide for parents preparing for having twins and triplets. This guide is an initial-Information-Guide for parents expecting twins/triplets. Families will receive this free booklet from their Municipal Maternal Care Unit. Some of the topics of this booklet are; expecting the multiple children, delivery, parenthood, supporting the individuality, relationship matters, letting them to differ or to guide them similar? Second target was to have the Public Sector responsible for organizing appropriate training for families expecting twins/triplets. The main objective is that the regional public health care official will carry out the multiple birth family training for families expecting multiples in co-operation with volunteers from the multiple birth association. Family Coaching is already being organized by the government nationwide for parents waiting for one baby. Special training is needed for families for the unique situation the family will face when more than one child is being delivered. When building the training model, three main topics raised up; multiple pregnancy and birth, the everyday life with multiples, and peer meeting of parents after the birth of multiples. The gestation time and delivery topic should be mainly held by a professional nurse or a midwife and the topic how to survive with twins/triplets and everyday life by the peers on Regional Associations for Multiple Families. Very important value was also on the group meetings for mothers and fathers. Main topics on mothers group are how to breastfeed twins/triplets and how to help mother to manage. In fathers groups, the topics are siblings relationships and relations towards twins/triplets.

HERITABILITY OF SALT INTAKE USING HALF-DAY URINE SAMPLES: THE HEALTHY TWIN STUDY

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Salt is essential for both life and diet, but excess consumption of salt is an established risk factor of hypertension. Historically, salt intake has increased along with civilization, and the traditional Korean diet, although generally considered to be healthier than westernized one, has been reported to contain high level of salt. Whether there is a genetic predisposition toward sodium intake level is a basic but interesting question to ponder in the Korean population. A half-day urine (HU) samples were collected for all participants of the Healthy Twin Study. HU collection starts around 7 pm of the day before visit, after completely voiding when time record starts. All the urine after then was collected in a bag until the next day visit for health examination. On site, in the morning, remaining urine was further voided and the time was recorded as final. The duration of collection ranged 2
24 hours, and we selected samples collected more than 8 hours. Among 3079 participants of the Healthy Twin Study, 1312 (143 pairs of MZ twins, 31 pairs of DZ twins and 961 singletons) were

included in the analyses. Heritability of 24 hour sodium intake was estimated using a variance components model (SOLAR). After adjustment for age, sex, income and province effects, the heritability was 0.30±0.1. Shared environments did not account significant contribution. We concluded that although salt intake is mediated through diet and meals are shared among families, genetic predisposition will play an important role in controlling salt intake.

ANTENATAL CARE FOR TWIN AND TRIPLET PREGNANCIES: SUMMARY OF NICE GUIDANCE IN THE UNITED KINGDOM

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NICE recommendations are based on systematic reviews of best available evidence and explicit consideration of cost effectiveness. When minimal evidence is available, recommendations are based on the Guideline Development Group's experience and opinion of what constitutes good practice.

The National Guidance published in September 2011[1] for the UK includes recommendations on care to:
Determine gestational age and chorionicity.

Screening for fetal anomalies and chromosomal anomalies.

Screening for TTTS and management of monochorionic twin and monochorionic/dichorionic triplet pregnancies.

Monitoring for preterm birth and intrauterine growth restriction.

Indications for referral to a tertiary Fetal Medicine Centre.

Timing of Birth.

[1]Visintin, C., et al. (2011). Antenatal care for twin and triplet pregnancies: summary of NICE guidance. BMJ, 343, d5714.

CO-TWIN PROGNOSIS AFTER SINGLE FETAL DEATH: A SYSTEMATIC REVIEW AND META-ANALYSIS

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Objective: To perform a systematic review and meta-analysis of the effects on the surviving twin of single fetal death comparing monochorionic to dichorionic twins to report the rates of co-twin death, preterm delivery, and neurologic morbidity in the surviving fetus.Data Sources: MEDLINE (inception-December 2010), EMBASE (inception-December 2010), The Cochrane library (inception-December 2010), Web of Science (inception-December 2010), and British Nursing Index (inception-December 2010) were searched electronically. Methods of Study Selection: Selected studies had more than five cases of single fetal death with reports of co-twin death, neurologic morbidity, or both co-twin death and neurologic morbidity. They also must have defined the gestational age of single fetal death and chorionicity. Tabulation, integration and *Results:* The search yielded 1,386 citations. Full manuscripts were retrieved for 204 and 22 were included in the review and meta-analysis. Twenty manuscripts were used to calculate overall summary statistics for monochorionic and dichorionic twins showing rates of co-twin death after single fetal death (15% compared with 3%), rates of preterm delivery after single fetal death (68% compared with 54%), the rate of abnormal postnatal cranial imaging after single fetal death (34% compared with 16%), and the rate of neurodevelopmental impairment after single fetal death (26% compared with 2%). Odds ratios (ORs) were calculated from 16 manuscripts. There was no significant difference reported between preterm delivery of monochorionic or dichorionic twins (OR 1.1, 95% confidence interval [CI] 0.34–3.51, P = .9). After single fetal death, monochorionic twins had higher odds of an abnormal cranial imaging after delivery, this was not significant (OR 3.25, 95% CI 0.66-16.1, P = .12). After single fetal death, monochorionic twins were 4.81-times more likely to have neurodevelopmental morbidity (95% CI 1.39-16.6, P<.05). *Conclusion:* Monochorionic twins are at significantly increased odds of co-twin demise and neurodevelopmental morbidity after single fetal death.

LINKAGE DISEQUILIBRIUM INFORMATION WITHIN MONOZYGOTIC TWIN PAIRS - A RATIONALE FOR GENOTYPING TWINS

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Recently genome-wide association studies have become a standard gene mapping method, but MZs have been either considered to be redundant or treated as unrelated individuals after randomly selecting one cotwin. It has been a common sense in academia that monozygotic twin (MZ) pairs, although they have unique strengths in detecting non-genomic etiology, do not contribute to gene mapping studies. It is indeed true for linkage analysis, but resemblance of phenotypes between MZ cotwins does include information about linkage disequilibrium (LD) between the genetic markers and postulated disease-susceptibility loci (DSL) when the concordance/discordance rates are compared across genotypes. The authors attempted to formulate a method to detect association and suggest several ways of applying the information using triglyceride and hypertriglyceridemia as a model phenotype. Genome-wide association test findings from the Healthy Twin Study, Korea which do not utilize MZ concordance information were compared with the tests of MZ concordance only from 493 MZs with genetic markers It is natural to assume that if allele D (wild type allele is +) is in LD with true DSL, MZ twins with genotype DD or D+ should have more diseases, and thus concordance rate than those with ++ genotype. Numerically, the observed concordance rate of MZ twins will exceed the expected concordance rate under null hypothesis of non-association (Equation 1) where "A*A"—the proportion of MZ with both affected, "U*U"—the proportion of MZ with both unaffected,