



Title	Routine Ultrasound in Pregnancy
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Aim

To evaluate the clinical effect and the diagnostic value of routine ultrasound in the first, second, and third trimester of pregnancy.

Conclusions and results

Our review of the literature does not show any important differences between ultrasound in the first or second trimester with respect to term estimation. Regarding twin pregnancies, ultrasound in the first trimester will provide added information about mono- or dichorionic placentas. Ultrasound with measurement of nuchal translucency (NT) in week 11+0 to 13+6 supplied with maternal blood tests (CUB) is effective in finding fetuses at increased risk of Down syndrome and is associated with a higher sensitivity than ultrasound in the second trimester, or risk assessment based on maternal age. Severe structural abnormalities (with normal chromosomes) are more effectively detected in the second trimester. Regarding health outcomes, we did not find evidence favoring *routine* ultrasound in the third trimester of pregnancy as an addition to ultrasound in the first and/or second trimester.

Based on the literature included, screening programs in the first or second trimester do not seem to increase levels of anxiety or worry. However, the anxiety level increases in women who experience positive findings (increased risk for abnormalities). Although further investigations or diagnostic tests indicate that the finding was *false positive*, these women will continue to suffer from a higher level of anxiety than other pregnant women throughout the pregnancy. Newer studies indicate that women are well informed about routine ultrasound in pregnancy, but there are challenges when informing about NT and serum markers.

Ultrasound is part of routine antenatal care in Norway and is offered from the 17th to the 19th week of pregnancy. Norwegian clinicians do not define routine ultrasound as a screening test (Consensus report, 1995), but the international literature often does. The offer of

routine ultrasound is based on women's choice. When clinicians and health authorities discuss the option of introducing more routine ultrasound scans in routine practice, they might consider the extension program in view of requirements that are important in population screening programs. These include documentation of diagnostic precision, effect of interventions, and information about the screening test and how findings are handled.

Methods

We searched for reports, systematic reviews, and new research papers in June 2006 and November 2007. The following databases were searched: DARE, MEDLINE, Ovid, EMBASE, The Cochrane Library, HTA CRD. We hand searched Guidelines Finder (helsebiblioteket.no) for reports and guidelines.

Further research/reviews required

There is a lack of randomized trials with adequate statistical power to evaluate the effect of routine ultrasound in the third trimester of pregnancy. More research is needed on how women and their partners can make well-informed choices about ultrasound and screening tests in pregnancy.