

Table 2.6. Nutrient and/or food intake surveys in pregnant or breastfeeding populations

Reference/ Survey Name	Study Population	Diet Assessment Method	Objective and Design Overview	Nutrients and Outcomes Assessed
<b>FOOD RECORDS (FR)</b>				
Turner et al., 2003 (56)	<u>Pregnant women</u> 63 low-risk women  Followed longitudinally from 1st trimester  19-39 yrs.; 94% white; 90% college education; middle to upper income HH; 67% response rate  Gainesville, FL	3d Estimated FR completed monthly until delivery  2 weekdays and 1 weekend day	<u>Objective:</u> To determine whether nutrient intake from food alone was adequate across trimesters in middle and upper income pregnant women and whether food intake exceeded the tolerable upper intake level for any nutrient. <u>Design:</u> From July 1995 to July 1998, women recruited at first prenatal visit to an obstetrics office in a university community. Participants first completed a questionnaire about dietary habits and work schedule. Then completed 3d estimated FR every month until delivery. FR returned by mail. Follow-up reminder telephone calls made. <u>Supplement Intake:</u> Not specified; intake from food only reported <u>Instrument Selection Rationale:</u> Not specified	Maternal weight; self- reported infant birth weight; energy, protein; thiamin, riboflavin, niacin; Vitamins B-6, B-12, and C; magnesium, iron, zinc, selenium
Giddens et al., 2000 (47)  Calcium for Preeclampsia Prevention (CPEP Trial)	<u>Pregnant Adolescent and Adult Women</u>  Followed longitudinally @ 19-21 wks. and 29- 31 wks.  59 adolescents: 13- 18 yrs.; 27% black; 19% BMI >29  97 adults: 19-40 yrs.; 43% black; 30% BMI >29  Ohio	7d Estimated FR completed twice  FR1 @ 19-21 wks. FR 2 @ 29-31 wks.	<u>Objective:</u> To examine dietary intake of pregnant adolescents during the 2nd and 3rd trimester. <u>Design:</u> Two 7d estimated FR were completed; the first at enrollment into CPEP Trial after nausea of pregnancy subsided and the second in the third trimester. Instructions given by registered dietitian. Subjects given a gift certificate incentive, food guide with 2-dimensional models, and a checklist by food category. Reminder postcards mailed and subjects contacted by telephone to review recording and answer questions. 86% return rate for FR in adolescents and 89% in adults. <u>Supplement Intake:</u> Supplement prescribed as part of clinical trial. <u>Instrument Selection Rationale:</u> 7d FR has been shown to better reflect variability in intake of a free-living population than a 24HR or food logs of a shorter duration.	Energy, protein, fat, CHO, dietary fiber, cholesterol, Vitamins A, C, E, D, B-6. and B-12, calcium, iron, zinc, copper, selenium, thiamin, riboflavin, niacin, folate, phosphorus, and magnesium.  There was no difference between mean intakes in second and third trimester.

Table 2.6. Nutrient and/or food intake surveys in pregnant or breastfeeding populations, continued

Reference/ Survey Name	Study Population	Diet Assessment Method	Objective and Design Overview	Nutrients and Outcomes Assessed
<b>FOOD RECORDS (FR), CONTINUED</b>				
Mackey et al., 1998 (53)	<p><u>Lactating women</u> 52</p> <p>Followed longitudinally at 3 and 6 mo. pp</p> <p>Mean age 33 yrs.; apparently healthy; term pregnancy without complications; non smokers; normal BMI; planning to nurse at least 6 mo.</p> <p>State College, PA</p>	<p>2d Estimated FR completed twice</p> <p>FR1 @ 3 mo. FR2 @ 6 mo.</p>	<p><u>Objective:</u> To assess longitudinally nutrient intakes of lactating women during the postpartum period.</p> <p><u>Design:</u> Successfully lactating women kept 2d estimated FRs at 3 and 6 mo. Infant growth assessed. 2-dimensional Food Portion Visual provided to aid portion size estimation.</p> <p><u>Supplement Intake:</u> All subjects were part of a randomized, double-blind study examining folate status during lactation. Subjects discontinued usual supplements and were randomized into experimental protocol which provided specific supplements.</p> <p><u>Instrument Selection Rational:</u> Not specified</p>	<p>Milk intake from 3d infant test weighing; infant weight, length, head circumference; intake of energy, protein, fat, cholesterol, CHO, fiber, calcium, iron, magnesium, phosphorus, zinc, copper, selenium, thiamin, riboflavin, niacin, folate, and , vitamins A, C, E, D, B-6, and B-12.</p>
Reynolds et al., 1984 (52)	<p><u>Pregnant and lactating women</u> 36</p> <p>Followed longitudinally @ 37 wks. of pregnancy and @ 1, 3, and 6 mo. pp</p> <p>18-36 yrs.; 15 yrs. mean education; upper middle class</p> <p>Beltsville, MD.</p>	<p>3d Weighed FR and 3d duplicate diet</p> <p>completed @ 37 wks. and @ 1, 3, and 6 mo. pp</p>	<p><u>Objective:</u> To more accurately determine the vitamin B6 intakes of lactating women,</p> <p><u>Design:</u> Women kept 3d FR and duplicate diet at 37 wk. and 1, 3, and 6-mo. pp.</p> <p><u>Supplement Intake:</u> Women recorded their intake of supplements.</p> <p><u>Instrument Selection Rational:</u> The duplicate diet method eliminates errors associated with incomplete or inaccurate record keeping and incomplete databases.</p>	<p>Energy, protein, and iron intake calculated from FR; B6, zinc, copper, and magnesium analyzed in composites of duplicate diet.</p>

Table 2.6. Nutrient and/or food intake surveys in pregnant or breastfeeding populations, continued

Reference/ Survey Name	Study Population	Diet Assessment Method	Objective and Design Overview	Nutrients and Outcomes Assessed
<b>FOOD RECORDS (FR), CONTINUED</b>				
Song et al., 1984 (55)	<p><u>Lactating women:</u> 26 with full term infants</p> <p>17 with pre term infants (28-34 wk. gestation)</p> <p>Followed longitudinally @ 2 and 12 wks. pp</p> <p>20 to 35 yrs.; Caucasian; middle SES</p> <p>Utah</p>	2d Weighed FR @ 2 wk. and 12 wk. pp.	<p><u>Objective:</u> To evaluate the pantothenic acid status of lactating mothers; to determine and compare pantothenate content of both fore and hind samples of term and preterm human milk; to correlate human maternal status with milk pantothenate content.</p> <p><u>Design:</u> Mothers of term infants kept 2DFR at 2 and 12 wks. pp and collected 2 24h urine samples on days of 12 wk. FR. All mothers took sample of for and hind milk from first feeding on day fasting blood sample drawn.</p> <p><u>Supplement Intake:</u> Assume FR since data analysis separated supplement users from non-users.</p> <p><u>Instrument Selection Rational:</u> Not specified</p>	Pantothenic acid
<b>24-HOUR RECALL (24HR)</b>				
Giammarioli et al., 2002 (45)	<p><u>Lactating women</u> 125</p> <p>27-36 yrs.; healthy, mean BMI of 24.0; 56% 9-13 yrs. education; 11.2% &gt; 14 yrs. education</p> <p>Italy</p>	Written 24HR  (Mother recalled intake and portion sizes for 2 days and recorded on form at pediatric clinic)	<p><u>Objective:</u> To assess the energy and macronutrient intakes of exclusively breastfeeding Italian women.</p> <p><u>Design:</u> Healthy lactating women were recruited from three major geographical areas in Italy. At visit to pediatric center mother asked to record all food and drink consumed in previous 24hrs. Photographs of serving sizes and household measures aided portion size recall. Records with incomplete portion sizes or details on food rejected. 210 recalls collected; 125 accepted.</p> <p><u>Supplement Intake:</u> Not specified</p> <p><u>Instrument Selection Rational:</u> Not specified</p>	24h test weighing of infant BM intake; infant growth; maternal meal patterns; maternal energy and nutrient intake.

Table 2.6. Nutrient and/or food intake surveys in pregnant or breastfeeding populations, continued

Reference/ Survey Name	Study Population	Diet Assessment Method	Objective and Design Overview	Nutrients and Outcomes Assessed
<b>24-HOUR RECALL (24HR), CONTINUED</b>				
Doran and Evers, 1997 (43)  Better Beginnings, Better Futures Initiative	<u>Lactating women</u> 183 @ 3 mo. pp  Mean age 28.9 yrs.; healthy; low income; 24% <HS education; ethnically diverse  Ontario, Canada	24HR and interviewer administered questionnaire on demographic, personal, social and cultural factors related to infant feeding	<u>Objective:</u> To assess the energy and nutrient intakes of women who are breastfeeding in relation to the RDAs for energy and nutrients during lactation. <u>Design:</u> Data collected in home within 2 wks. of child's 3 mo. birthday. 24HR on mothers still breastfeeding. <u>Supplement Intake:</u> Use of supplements noted in 24HR <u>Instrument Selection Rationale:</u> A 24HR provides a good estimate of the average dietary intake of a group.	Maternal energy intake and intake of protein, fat, niacin, riboflavin, thiamin, folate, calcium, iron, zinc, and vitamin A and C.
Levine et al., 1996, 1997 (65;66)  Calcium for Preeclampsia Prevention (CPEP Trial)	<u>Pregnant women</u> 4,589  Enrolled @ 13-21 wks. and followed longitudinally  Healthy; nulliparous; no hypertension; negative proteinuria; no medications  5 university medical centers in US	24HR 1 @ 91-153d  24HR 2 @ 32-34 wks.	<u>Objective:</u> To determine if calcium supplementation (2000 mg) in 4 chewable tablets in healthy pregnant nulliparous women reduced the incidence of preeclampsia <u>Design:</u> Double blind randomized clinical trial launched in 1992. Women received either a 2g calcium supplement daily until term or placebo. 24HR at randomization and 32-34 wks. gestation. Serum and urine specimens collected at baseline, 26-29 wks. and 36 wks. <u>Supplement Intake:</u> Questionnaire on supplement compliance and return of blister packs. <u>Instrument Selection Rationale:</u> Purpose of 24HR was to determine the amount of calcium obtained from sources besides CPEP study tablets. Rationale for selection of 24HR not discussed.	Pregnancy Associated Hypertension (PAH); Pregnancy-associated. Proteinuria (PAP); preeclampsia; eclampsia; HELLP syndrome; placental abruption, cerebral hemorrhage or thrombosis, elevated liver enzymes; acute renal failure; disseminated intravascular coagulation; calcium intake from diet and supplements.

Table 2.6. Nutrient and/or food intake surveys in pregnant or breastfeeding populations, continued

Reference/ Survey Name	Study Population	Diet Assessment Method	Objective and Design Overview	Nutrients and Outcomes Assessed
<b>24-HOUR RECALL (24HR), CONTINUED</b>				
Todd et al., 1994 (44)	<u>Lactating women</u> 73 exclusively BF @ 3 mo. pp  Mean age 30 yrs.; 41% with tertiary education; mainly European origin  New Zealand	24HR 2x, separated by 2 wks.  2nd 24HR sometimes by telephone	<u>Objective:</u> To assess the adequacy of dietary intakes of a group of healthy women exclusively breastfeeding for 3mo. <u>Design:</u> Demographic data and two 24HR taken 2 wks. apart collected. <u>Supplement Intake:</u> Not specified <u>Instrument Selection Rational:</u> Not specified	Energy; protein; carbohydrate; fat; PUFA; dietary fiber; sodium; calcium; iron; zinc; niacin; vitamins A, B6, B12, C; and folate
Rush et al., 1988 (38)  National WIC Evaluation	<u>Pregnant women:</u> 3,967 in 1st or 2nd trimester  75% random subsample of new registrants to WIC in 1st two trimesters; 48.7% white; 13.6% white Hispanic; 34.9% black; and 2.7% other for participants with known perinatal outcomes  US	24HR 2x  24HR 1 @ enrollment  24HR 2 @ approx. 36 wks.	<u>Objective:</u> This paper describes the methodology for the National WIC Evaluation. The goals of the longitudinal study of pregnant women, the study of children, and the food expenditure survey in this survey were to assess the impact of the WIC program on participants. <u>Design:</u> National probability sample of WIC participants in 174 WIC clinics in 58 areas in 48 states, and in 55 low-income prenatal clinics without WIC programs. Pregnant women completed 2 24HRs, histories of food expenditures, health care utilization, health and sociodemographic status, and anthropometric assessment. Birth outcome abstracted from medical records for 3863 WIC and 1057 control women. <u>Supplement Intake:</u> Not specified <u>Instrument Selection Rational:</u> Not specified	Birth outcomes; dietary intake (analysis not specified)

Table 2.6. Nutrient and/or food intake surveys in pregnant or breastfeeding populations, continued

Reference/ Survey Name	Study Population	Diet Assessment Method	Objective and Design Overview	Nutrients and Outcomes Assessed
<b>FOOD FREQUENCY QUESTIONNAIRE (FFQ)</b>				
Oken et al., 2003 (40)  Project Viva	<u>Pregnant women</u> 2,235 @ various stages of pregnancy  67% white; 89% > HS education  Eastern Massachusetts	Harvard FFQ modified for use in pregnancy  1st trim. = intake since last menstrual period  2nd trim. = intake for previous 3 mo.  3rd trim. = fish intake in month before delivery.  Self-administered	<u>Objective:</u> Estimate extent pregnant women changed fish consumption habits after federal advisory recommended limiting consumption during pregnancy. <u>Design:</u> Interrupted time series analysis of semi-quantitative FFQ completed by women visiting obstetric group practice between April 1999 through December 2000 and April 2001 through February 2002. Subjects completed one FFQ each trimester. Subjects completing at least one FFQ included. <u>Supplement Intake:</u> Not specified. <u>Instrument Selection Rational:</u> Well-validated FFQ selected and calibrated with first trimester red blood cell concentrations of long-chain omega-3 fatty acids (Rifas-Shiman SL, Fawzi W, Rich-Edwards JW, Willett WC, Gillman MW. <i>Validity of semi-quantitative food frequency questionnaire (SFFQ) during pregnancy.</i> Paediatr Perinat Epidemiol 2000;14(4):A25-6.) (21)	Consumption of total fish and of four fish types: canned tuna, dark meat fish, shellfish, and white meat fish.
Thompson et al., 2003 (50)	<u>Postpartum women</u> 179 mothers of infant with neural tube defect (NTD) 288 case matched controls with healthy infant  <u>Cases:</u> 79% white; 82% > HS education <u>Controls:</u> 69% white, 84% > HS education  South Carolina	Harvard FFQ  Questionnaire on supplement intake  Intake for past 3 month period	<u>Objective:</u> Investigated whether multivitamin folic acid supplementation, dietary folate, or total folate in the periconceptional period reduces risk of having a first occurrence NTD affected pregnancy. <u>Design:</u> Population based case-control study. Women with first 1st occurrence, singleton, isolated NTD infant in SC 1992-97 and matched controls. Women completed HFFQ retrospectively for the period 3 mo. before conception and through the 1st 3 mo. of pregnancy. Women interviewed in person. <u>Supplement Intake:</u> Questionnaire on supplement intake adapted from CDC Birth Defect Risk Factor Surveillance Mother's Questionnaire. Multivitamin supplement types, brand name, period of use, quantity, and frequency of use per day, week or month from 3 mo. before conception to delivery. <u>Instrument Selection Rational:</u> Not specified	Dietary folate; supplement folate; and total folate intake in periconceptional period

Table 2.6. Nutrient and/or food intake surveys in pregnant or breastfeeding populations, continued

Reference/ Survey Name	Study Population	Diet Assessment Method	Objective and Design Overview	Nutrients and Outcomes Assessed
<b>FOOD FREQUENCY QUESTIONNAIRE (FFQ), CONTINUED</b>				
Ferguson et al., 2002 (51)	<u>Pregnant women</u> 46 with PROM between 23 and 35-36 wks.  46 without PROM matched to cases for gestational age and vitamin supplementation  Ontario, Canada	NCI-Block HHHQ  Intake period not specified;	<u>Objective:</u> To estimate if there were dietary or socioeconomic factors associated with premature rupture of the membranes (PROM). <u>Design:</u> Case-control study. Cases identified on admission to 3 hospitals. Fasting blood taken for homocysteine, complete blood count, red blood cell folate, B12, albumin and creatinine. At delivery fetal homocysteine analyzed from umbilical artery and vein blood. Cases and controls completed HHHQ at time of study enrollment. <u>Supplement Intake:</u> Not specified but cases and controls matched on supplement intake. <u>Instrument Selection Rational:</u> Not specified	Kcal, % kcal from protein, CHO, and fat, calcium, thiamin, riboflavin, niacin, vitamins C, E, B6, folate and alpha or beta carotene.
Olsen et al., 2001 (36)  Danish National Birth Cohort (Better Health for Mother and Child)	<u>Pregnant women and their infants</u> 100,000  (60,000 pregnant women enrolled by August 2000)  Denmark	300-item FFQ @ 25 wks.  Self-administered; 77% completion rate;  Past month intake	<u>Objective:</u> To study pregnancy complications and diseases in offspring as a function of factors operating in early life, fetal growth, and its determinants. Plan to follow cohort for 20 years. <u>Design:</u> Pregnant women recruited by general practitioner (GP) or midwife at first prenatal visit. GP takes blood sample twice during pregnancy and blood from umbilical cord shortly after birth. Mother participated in computer-assisted telephone interview twice during pregnancy (12 and 30 wks.) and when infant is 6 and 18 mo. old. All women complete FFQ by mail. Have permission to follow cohort for 20 yrs., but protocol for followup after 18 mo. not described. <u>Supplement Intake:</u> FFQ includes questions on vitamin and food supplements. <u>Instrument Selection Rational:</u> Not specified	Food, nutrient, and chemical exposures (article describes design of study and initial recruitment results and not results of FFQ or interviews).

Table 2.6. Nutrient and/or food intake surveys in pregnant or breastfeeding populations, continued

Reference/ Survey Name	Study Population	Diet Assessment Method	Objective and Design Overview	Nutrients and Outcomes Assessed
<b>FOOD FREQUENCY QUESTIONNAIRE (FFQ), CONTINUED</b>				
<p>Siega-Riz et al., 2001; Bodnar and Siega-Riz, 2002 (39;67)</p> <p>Pregnancy, Infection, and Nutrition (PIN) study</p>	<p><u>Pregnant women</u> 2,065 @ 24 to 29 wks. gestation</p> <p>15-35 yrs.; lower to middle income; 51% white; 21% no high school; 54% single mothers</p> <p>North Carolina</p>	<p>120-item modified NCI-Block HHHQ</p> <p>Modified to focus on 3 mo. time period; to be specific for pregnancy; to include local foods; to include the latest recommendations for improving diet quality; and to add question on usual meal pattern.</p>	<p><u>Objective:</u> To characterize meal patterns of pregnant women and to examine the relation between these meal patterns and both early and late preterm delivery as well as the clinical presentations leading to prematurity.</p> <p><u>Design:</u> Women recruited from August 1995 to December 1998 completed FFQ and other study questionnaires at recruitment. Follow-up telephone interview collected demographic, medical history and health habits. Blood and urine collected at recruitment (24-29 wks. gestation).</p> <p><u>Supplement Intake:</u> Women asked about supplement use in follow-up telephone interview</p> <p><u>Instrument Selection Rational:</u> Not specified</p>	<p>Birth outcomes (gestational age, preterm delivery, premature rupture of membranes) from hospital delivery logs</p> <p>Self reported number of meals and snacks</p> <p>In follow-up analysis used a Diet Quality Index for Pregnancy to quantitatively differentiate diets (Bodnar and Siega-Riz, 2002)</p>
<p>Swensen et al., 2001 (46)</p>	<p><u>Pregnant women</u> 95</p> <p>Minneapolis and St. Paul, Minnesota</p>	<p>60-item version of the NCI-Block HHHQ</p> <p>Past month usual intake.</p>	<p><u>Objective:</u> To evaluate nutrient intake from dietary sources for 95 women enrolled in the Special Supplemental Food Program for Women, Infants, and Children (WIC)</p> <p><u>Design:</u> Between January and June of 1999, women less than 20 wks. gestation recruited at 6 WIC clinics. In-person 1-hr. interview included HHHQ, physical activity assessment and height and weight measurements. Venous blood sample for serum ferritin.</p> <p><u>Supplement Intake:</u> Not specified; results reported on intake for food only.</p> <p><u>Instrument Selection Rational:</u> Not specified</p>	<p>Protein, calcium, iron, vitamins A and C, folic acid, and total energy intake.</p>

Table 2.6. Nutrient and/or food intake surveys in pregnant or breastfeeding populations, continued

Reference/ Survey Name	Study Population	Diet Assessment Method	Objective and Design Overview	Nutrients and Outcomes Assessed
<b>FOOD FREQUENCY QUESTIONNAIRE (FFQ), CONTINUED</b>				
Brown et al., 2000 (68)	<u>Postpartum women</u> 430  <20 to 40 yrs; 40% >9 grade education  Mexico City	116 item FFQ  Past year intake	<u>Objective:</u> To investigate determinants of bone and blood lead concentrations in lactating Mexican women during the early postpartum period and the contribution of bone lead to blood lead <u>Design:</u> Between April 1994 and June 1995, participants recruited from hospitals in Mexico City. Maternal venous lead measured at delivery and pp.; bone lead concentrations measured pp; and FFQ completed pp. FFQ validated previously in population of non-pregnant women. Other study questionnaire collected data on environmental lead exposure, and demographic characteristics. <u>Supplement Intake:</u> Not specified <u>Instrument Selection Rational:</u> Validated with 4d FR and repeat 24HR for 1 yr. in Mexico City population.	Hb, MCV, serum lead, bone lead measured by K-s ray fluorescence; calcium intake quartile
Rogers and Emmett, 1998 (37)  Avon Longitudinal Study of Pregnancy and Childhood (ALSPAC)	<u>Pregnant women</u> 12,104 @ 32 wks. gestation (86 % response rate)  Mean age 27.9; mean BMI 22.9 (SD 3.8); residents of Avon, England  UK	Non-quantified FFQ  Frequency of consumption (never or rarely, once in 2 wks, 1-3 x/ wk., 4-7 x/wk, and more than once a day) of 43-food groups and food items plus detailed questions on 8 basic foods; questions on alcohol added midway through study.  Past 3 month intake	<u>Objective:</u> ALSPAC is a geographically-based cohort study investigating factors influencing the health and development of infants and children. As part of ALSPAC, this study examined average dietary intake in a group of over 10,000 women. <u>Design:</u> Pregnant women enrolled between April 1991 and Dec. 1992. Information collected from medical records and mailed questionnaires. FFQ mailed to ALSPAC cohort participants when 32 wks. gestation <u>Supplement Intake:</u> FFQ included questions on use of various supplements in previous 3 mo. A previous questionnaire asked about use in early pregnancy, <u>Instrument Selection Rational:</u> FFQ approach chosen because of the large number of subjects and also because, although they do not provide such accurate quantitative information as weighed intakes, they give a reasonable estimate of the habitual diet. The FFQ used was not validated.	<u>Energy Intake:</u> Under-reporting of energy intake based on 120% of calculated BMR (38% of respondents classified as under-reporters) <u>Nutrients from food:</u> Energy, protein, fat, MUFA, PUFA, SFA, sugar, NME sugar, fiber, Ca, total Fe, heme Fe, vegetable Fe, vegetable Zn, total Zn, meat Zn, Mg, K, carotene, folate, retinol equivalents, niacin, riboflavin, thiamin, and vit. B-6, C, and E <u>Nutrients from supplements:</u> Fe, Zn, Ca, folic acid, 'Vitamins,' other.

Table 2.6. Nutrient and/or food intake surveys in pregnant or breastfeeding populations, continued

Reference/ Survey Name	Study Population	Diet Assessment Method	Objective and Design Overview	Nutrients and Outcomes Assessed
<b>FOOD FREQUENCY QUESTIONNAIRE (FFQ), CONTINUED</b>				
Hernandez-Avila et al., 1996, 1997 (48;49)	<u>Lactating women:</u> 95 @ 1 mo pp  Mexico City	128-item FFQ  Past year intake	<u>Objective:</u> Cross-sectional study of the interrelationships between environmental, dietary, and lifestyle histories, blood lead levels, and bone lead levels in postpartum women in Mexico City. <u>Design:</u> Blood samples at delivery for lead and hemoglobin analysis. At 1mo. Pp. FFQ, bone lead measurements (x-ray fluorescence), blood sample, and BM sample. <u>Supplement Intake:</u> Results include Ca supplement intake, but does not specify how collected. <u>Instrument Selection Rational:</u> FFQ validated previously in women of reproductive age in Mexico City.	Milk and cheese consumption; patelia and tibia bone lead.
Suitor and Gardner, 1990 (54); Suitor et al., 1990 (69)	<u>Pregnant women</u> 344 @ various stages of pregnancy  14-43 yrs; low income; 43% white; 25% black; 32% Hispanic and other  Massachusetts	Harvard FFQ modified for pregnancy  3-24HRs on subset of 95 women  Intake period for FFQ not specified in article; supplement intake covered period before pregnancy	<u>Objective:</u> To examine patterns of vitamin/mineral supplement use among several demographic subgroups <u>Design:</u> Pregnant women recruited from 3 health centers serving primarily low-income clientele. HFFQ administered once; 3 24HRs on subset of 95. 89% completed HFFQ independently, 7% were interviewed, and 4% did not complete or return HFFQ. <u>Supplement Intake:</u> HFFQ included 5 items on supplement use, all of which were at the end of the 4-page form. Medical records were reviewed for supplement prescriptions. <u>Instrument Selection Rational:</u> Not specified	Patterns of vitamin/mineral supplement use.