| Author, year  Quality | Setting | Risk | N  rand | Population  (mean age, y) | STI History | Outcome | F/U (m) | IG  Results | CG  Results | Between Group Difference: Point Estimate (95% CI) or P-value |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Low-intensity (<30 minutes)** | | | | | | | | | | |
| Proude, 200476  Fair | Australia, primary care | General | 312 | Adults ages 18 to 25 y (NR) | NR | % used condom in first sex with new partner | 3 | 73 | 77 | p=0.813 |
| Scholes, 200383  Fair | WA and NC, primary care | General | 1210 | Sexually active nonmonogamous women ages 18 to 24 y (21) | Lifetime STI: 27% | % consistent use of condoms in past 3 mo with all partners | 6 | 36.8 | 33.5 | Adjusted OR, 1.24 (0.89 to 1.73) |
| % any use of condoms in the past 3 mo with any partner | BL | 71 | 73 | NSD |
| 6 | 72.8 | 63.0 | Adjusted OR, 1.86 (1.32 to 2.65) |
| Average % of time condoms used with any partner | BL | 54 | 55 | NSD |
| 6 | 52.7 | 47.9 | Adjusted OR, 5.2 (0.4 to 10.4) |
| Carey (low IG) 201084,157,158  Fair | Syracuse, NY, STI clinic | Increased | 496 | Adults age ≥18 y with high-risk behavior in past 3 mo (29.2) | BL STI: 18.1% | Number of unprotected sex episodes in past 3  mo, mean (SD) | BL | IG1: 16.5 (20.1) | 16.4 (21.3) | NSD |
| 3 | IG1: 10.6 (15.4) | 10.5 (15.1) | NSD |
| 6 | IG1: 14.2 (19.9) | 10.6 (15.2) | NSD |
| 12 | IG1: 14 (19.7) | 11.6 (17.9) | NSD |
| Peipert, 200872,159  Fair | Providence, RI, primary care and Planned Parenthood | Increased | 542 | Women ages 13 to 35 y at high risk for STI or unplanned pregnancy due to age, behavior, history of STI, or pregnancy (median, 22) | Lifetime STI: 47% | % consistent condom use | 24 | 46 | 46 | Adjusted HRR, 1.26 (0.88 to 1.79) |
| Jemmott (low IG), 200779,160  Fair | Newark, NJ, primary care | Increased | 322 | African American women ages 18 to 45 y (27.2) | BL STI: 20.3% | Condom use during last intercourse in the past 3 mo, adjusted mean proportion (SE) | 3 | IG3: 0.52 (0.02)  IG4: 0.51 (0.02) | 0.39 (0.03) | IG1/IG3 vs. CG: p=0.05  IG1/IG3 vs. IG2/IG4: p=0.92 |
| 6 | IG3: 0.46 (0.02)  IG4: 0.59 (0.02) | 0.51 (0.03) | IG1/IG3 vs. CG: p=0.89  IG1/IG3 vs. IG2/IG4: p=0.69 |
| 12 | IG3: 0.55 (0.02)  IG4: 0.52 (0.02) | 0.40 (0.03) | IG1/IG3 vs. CG: p=0.03  IG1/IG3 vs. IG2/IG4: p=0.01 |
| Unprotected sexual intercourse in past 3 mo, during last sexual intercourse in past 3 mo, adjusted mean frequency (SE) | 3 | IG3: 3.08 (0.46)  IG4: 5.40 (0.42) | 8.2 (1.62) | IG1/IG3 vs. CG: p=0.02  IG1/IG3 vs. IG2/IG4: p=0.01 |
| 6 | IG3: 3.38 (0.51)  IG4: 5.58 (0.34) | 6.90 (1.47) | IG1/IG3 vs. CG: p=0.59  IG1/IG3 vs. IG2/IG4: p=0.16 |
| 12 | IG3: 3.60 (0.64)  IG4: 5.12 (0.24) | 8.34 (1.90) | IG1/IG3 vs. CG: p=0.18  IG1/IG3 vs. IG2/IG4: p=0.02 |
| Cortes-Bordoy 201086  Fair | Spain, gynecology clinic | Prior STI | 211 | Women age ≥18 y with vulvoperineal warts (30.2) | Lifetime STI: 100% | % reporting condom use in past 3 mo | BL | 66.1 | 77.2 | p=0.115 |
| 3 | 83.2 | 75.8 | p=0.250 |
| 6 | 76.1 | 68.7 | p=0.301 |
| 9 | 67.5 | 65.1 | p=0.899 |
| 12 | 65.4 | 69.3 | p=0.752 |
| **Moderate-intensity (30 to 120 min)** | | | | | | | | | | |
| Petersen, 200770  Fair | Chapel Hill, NC, primary care | General | 764 | Women ages 16 to 44 y at risk for unintended pregnancy (no IUD or sterilization) (NR) | NR | Proportion reporting consistent condom use (among those who use condoms) over past 12 mo | 12 | NR | NR | NSD |
| Wenger, 199277  Fair | Los Angeles, CA, primary care | General | 435 | University students age ≥18 y (23) | Lifetime STI: 23% | % with unprotected intercourse with last sex partner | BL | IG1: 72  IG2: 70 | 63 | NSD |
| 6 | IG1: 69  IG2: 63 | 61 | NSD |
| Metsch, 201390  Good | 7 states and Washington, DC, STI clinic | Increased | 5012 | Adults age ≥18 y seeking services at an STI clinic (NR) | BL STI: 44.3% | Number of unprotected sex acts, predicted mean (95% CI) | BL | 23.9 (22.1 to 25.9) | 22.6 (20.9 to 24.4) | NSD |
| 6 | 17.4 (15.5 to 19.4) | 18.3 (16.4 to 20.5) | Adjusted risk ratio, 0.98 (0.86 to 1.13) |
| Berenson (mod IG), 201271  Fair | Southeast TX, reproductive health clinic | Increased | 771 | Sexually active women ages 16 to 24 y (19.9) | Lifetime STI: 26.1% | % condom use at last intercourse | BL | IG1: 47 | 48.2 | p=0.56 (3-way) |
| 3 | IG1: 19.6 | 21.1 | p=0.08 (3-way) |
| 6 | IG1: 12 | 13.1 | p=0.45 (3-way)  IG1 vs. CG: OR, 1.12 (0.87 to 1.45) |
| Kershaw, 200959  Fair | Atlanta, GA, and New Haven, CT, primary care | Increased | 1047 | Pregnant women age <25 y (20.4) | Lifetime STI: “more than half” | Number of acts of unprotected intercourse, mean (SE) | BL | 5.26 (6.8) | CG1: 6.45 (8.3)  CG2: 5.66 (7.6) | NR |
| 3rd tri | 4.47 (6.9) | CG1: 5.05 (7.2)  CG2: 4.14 (6.6) | F-test: 0.49; p=0.49 |
| 6 | 3.81 (6.5) | CG1: 4.84 (7.2)  CG2: 4.72 (7.0) | F-test: 1.79; p=0.18 |
| 12 | 3.89 (6.5) | CG1: 5.69 (7.9)  CG2: 5.26 (7.8) | F-test: 3.78; p=0.04 |
| % condom use, mean (SD) | BL | 39.29 (37.7) | CG1: 35.54 (37.0)  CG2: 35.93 (38.1) | NR |
| 3rd tri | 34.67 (39.2) | CG1: 31.35 (37.9)  CG2: 29.01 (39.3) | F-test: 1.06; p=0.3 |
| 6 | 51.03 (40.6) | CG1: 42.74 (39.5)  CG2: 40.67 (40.1) | F-test: 7.45; p=0.007 |
| 12 | 49.76 (41.4) | CG1: 41.88 (41.3)  CG2: 44.11 (40.8) | F-test: 3.93; p=0.04 |
| Kamb (mod IG), 199858,144-147  Fair | 5 US cities, STI clinic | Increased | 2890 | Adults and adolescents age ≥14 y (median, 25) | BL STI: 32% | % no unprotected intercourse in past 3 mo | BL | IG2: 13 | 13 | NR |
| 3 | IG2: 44 | 38 | IG2 vs. CG: adjusted RR, 1.15  (1.03 to 1.27) |
| 6 | IG2: 39 | 34 | IG2 vs. CG: adjusted RR, 1.12  (1.00 to 1.25) |
| 9 | IG2: 43 | 42 | NR |
| 12 | IG2: 41 | 41 | NR |
| % reporting any condom use in past 3 mo | BL | IG2: 61 | 62 | NR |
| 3 | IG2: 79 | 76 | NR |
| 6 | IG2: 73 | 73 | NR |
| Crosby, 200987  Fair | Southern US, STI clinic | Prior STI | 266 | African American men ages 18 to 29 y with newly diagnosed STI and recent experience with condoms (23.2) | BL STI: 100% | % used condom at last intercourse | BL | 52.5 | 42.4 | NSD |
| 3 | 72.4 | 53.9 | Adjusted OR, 2.2 (1.08 to 4.48) |
| Number of unprotected intercourse episodes in past 3 mo, mean (SD) | BL | 16.0 (47.3) | 14.3 (21.0) | NSD |
| 3 | 12.3 (25.8) | 29.4 (79.3) | OR, -13.4 (-35.6 to 8.8) |
| **High-intensity (>120 min)** | | | | | | | | | | |
| Berenson (high IG), 201271  Fair | Southeast TX, reproductive health clinic | Increased | 772 | Sexually active women ages 16 to 24 y (19.9) | Lifetime STI: 26.1% | % condom use at last intercourse | BL | IG2: 50.8 | 48.2 | p=0.56 (3-way) |
| 3 | IG2: 26 | 21.1 | p=0.08 (3-way) |
| 6 | IG2: 15.1 | 13.1 | p=0.45 (3-way)  IG2 vs. CG: OR, 1.32 (1.03 to 1.70) |
| Cianelli, 201275  Fair | Chile, primary care | Increased | 496 | Chilean women ages 18 to 49 y(32.5) | NR | % any condom use in past 3 mo | BL | 22.22 | 18.32 | NR |
| 3 | 28.66 | 21.78 | NSD |
| Carey (high IG), 201084,157, 158  Fair | Syracuse, NY, STI  clinic | Increased | 1235 | Adults age ≥18 y with high-risk behavior in past 3 mo (29.2) | BL STI: 18.1% | Number of unprotected sex episodes in past 3 mo, mean (SD) | BL | IG2: 15.3 (19.2)  IG3: 16.7 (21.1)  IG4: 20.4 (24.2)  IG5: 18.6 (21.3) | 16.4 (21.3) | NSD |
| 3 | IG2: 12.1 (16.6)  IG3: 12.3 (17.0)  IG4: 12 (16.6)  IG5: 12.5 (17.2) | 10.5 (15.1) | NSD |
| 6 | IG2: 11.3 (16.3)  IG3: 14.4 (19.2)  IG4: 15.1 (20.3)  IG5: 14.1 (19.8) | 10.6 (15.2) | NSD |
| 12 | IG2: 13.1 (17.8)  IG3: 15.7 (22.1)  IG4: 13.9 (19.6)  IG5: 15 (20.8) | 11.6 (17.9) | NSD |
| Berkman, 200782  Good | NY, psychiatric clinic | Increased | 149 | Adult males ages 18 to 59 y with severe mental illness (38.6) | NR | % of time condoms used during sex among sexually active at BL in past 3 mo | BL | 81.6 | 70.7 | t-test: 0.98; p=0.33 |
| 6 | 93.4 | 75.8 | t-test: 1.95; p=0.06 |
| 12 | 82.9 | 76.5 | t-test: 0.57; p=0.57 |
| Jemmott (high IG), 200779,160  Fair | Newark, NJ, primary care | Increased | 323 | African American women ages 18 to 45 y (27.2) | BL STI: 20.3% | Condom use during  last intercourse in the past 3 mo, adjusted mean proportion (SE) | 3 | IG1: 0.52 (0.02)  IG2: 0.51 (0.02) | 0.39 (0.03) | IG1/IG3 vs. CG: p=0.05  IG1/IG3 vs. IG2/IG4: p=0.92 |
| 6 | IG1: 0.6 (0.02)  IG2: 0.46 (0.02) | 0.51 (0.03) | IG1/IG3 vs. CG: p=0.89  IG1/IG3 vs. IG2/IG4: p=0.69 |
| 12 | IG1: 0.59 (0.02)  IG2: 0.36 (0.02) | 0.40 (0.03) | IG1/IG3 vs. CG: p=0.03  IG1/IG3 vs. IG2/IG4: p=0.01 |
| Unprotected sexual intercourse in the past 3 mo, during last  sexual intercourse in past 3 mo, adjusted mean frequency (SE) | 3 | IG1: 4.49 (0.73)  IG2: 5.32 (0.54) | 8.2 (1.62) | IG1/IG3 vs. CG: p=0.02  IG1/IG3 vs. IG2/IG4: p=0.01 |
| 6 | IG1: 4.93 (0.73)  IG2: 3.77 (0.34) | 6.90 (1.47) | IG1/IG3 vs. CG: p=0.59  IG1/IG3 vs. IG2/IG4: p=0.16 |
| 12 | IG1: 5.14 (0.89)  IG2: 5.94 (0.62) | 8.34 (1.90) | IG1/IG3 vs. CG: p=0.18  IG1/IG3 vs. IG2/IG4: p=0.02 |
| Carey, 200464  Fair | Syracuse, NY, psychiatric clinic | Increased | 408 | Adults age ≥18 y with a mood or thought disorder and alcohol or drug use in past year (36.5) | Lifetime STI: 38% | Number of unprotected intercourse acts in past 3 mo, mean (SD) | BL | 14 (31.2) | CG: 10.8 (22.1)  CG2: 11.6 (25.9) | NSD |
| 5w | 8.7 (14.5) | CG1: 9.4 (22.9)  CG2: 12.1 (25.6) | NR |
| 3 | 9.5 (23.1) | CG1: 8.1 (20.3)  CG2: 10 (21.1) | NR |
| 6 | 7.2 (14.5) | CG1: 8.8 (20.2)  CG2: 8.0 (17.9) | Condition x time interaction, IG vs. CG1: p=0.001  Condition x time interaction, IG vs. CG2: p=0.004 |
| Ehrhardt, 200281,105,163-  166  Good | Brooklyn, NY, Planned Parenthood | Increased | 360 | Women ages 18 to 30 y (22.26) | Past 3- mo STI: 16.9% | Number of unprotected intercourse occasions | 1 | NR | NR | IG1 vs. CG: 3.5; p=0.09  IG2 vs. CG: 2; p=0.2 |
| 12 | NR | NR | IG1 vs. CG: 4; p=0.00  IG2 vs. CG: NR; NSD |
| Kamb (high IG), 199858,144-147  Fair | 5 US cities, STI clinic | Increased | 2881 | Adults and adolescents age ≥14 y (25 median) | BL STI: 32% | % no unprotected intercourse in past 3 mo | BL | IG1: 16 | 13 | NR |
| 3 | IG1: 46 | 38 | IG1 vs. CG: adjusted RR, 1.21 (1.09 to 1.35) |
| 6 | IG1: 39 | 34 | IG1 vs. CG: adjusted RR, 1.14 (1.01 to 1.28) |
| 9 | IG1: 44 | 42 | NR |
| 12 | IG1: 42 | 41 | NR |
| % reporting any condom use in past 3 mo | BL | IG1: 63 | 62 | NR |
| 3 | IG1: 83 (IG2: 79) | 76 | IG1 vs. CG: p<0.05  IG1 vs. IG2: p<0.05 |
| 6 | IG1: 78 (IG2: 73) | 73 | IG1 vs. CG: p<0.05  IG1 vs. IG2: p<0.05 |
| Shain, 200473, 167  Fair | San Antonio, TX, STI  clinic | Prior STI | 775 | Mexican American and African American women ages 15 to 45 y with 1 of 4 STIs (21.0) | BL STI:  100% | % unprotected sex with untreated or  incompletely treated partner | 12 | IG1: 7.8  IG2: 10.2 | 18.1 | IG1 vs. CG: p=0.001  IG2 vs. CG: p=0.01 |
| Shain, 199957, 154-156  Fair | San Antonio, TX, research clinic | Prior STI | 313 (sub-group) | Mexican American and African American women ages 19 to 45 y with a nonviral STI (21.6) | BL STI: 100% | % unsafe sex | BL | 42.7 | 35.2 | p=0.18 |
| 6 | 19.9 | 28.2 | p=0.04 |
| 12 | 25.7 | 42.3 | p<0.001 |
| Boyer, 199788  Fair | San Francisco, CA, STI clinic | Prior STI | 393 | Heterosexual adults ages 18 to 35 y with previous STI, STI symptoms, or known exposure to STI (NR) | Lifetime STI: 61.8% | % no sexual encounters without condom | BL | 11.7 | 15.7 | NR |
| 3 | 40.5 | 31.1 | NR |
| 5 | 39.1 | 30.7 | NR |

**Abbreviations:** BL = baseline; BV = bacterial vaginosis; C = chlamydia; CG = control group; CI = confidence interval; F/U = followup; G = gonorrhea; HIV = human immunodeficiency virus; HR = hazard ratio; HRR = hazard rate ratio; IG = intervention group; NR = not reported; NSD = no significant difference; OR = odds ratio; rand = randomized; STI = sexually transmitted infection; T = trichomoniasis.