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<th>Study, Year (Reference)</th>
<th>Type of Trial, Setting, and Standard Drink</th>
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<tr>
<td>Richmond et al., 1995 (61)</td>
<td>Controlled clinical trial in 40 primary care practices involving 119 general practitioners, Australia</td>
<td>378 adults (age, 18–70 y) attending primary care visits who drank &gt;30 drinks/wk (men) or &gt;21 drinks/wk (women)</td>
<td>IG1 (n = 93) had alcohol assessment results placed on the chart for their visit with their usual PCP. IG2 (n = 96) received results of the assessment and brief (5 min) in-visit physician advice and a self-help manual. Intervention included advice and assistance. Delivery: Not assessed for IG1 or IG2. IG3 (n = 96) received the same brief advice intervention with 4 additional 15- to 20-min provider visits at 1 wk, 1 mo, 3 mo, and 5 mo. Delivery: 51% got only single visit (IG2 protocol). CG (n = 93) assessment results not put on chart. Not followed at 12 mo.</td>
<td>Note: For IG1 and IG2 only because intervention delivery inadequate for IG3. Mean drinks/wk* Women: IG1: 21.5 IG2: 24.2 Men: IG1: 36.2 IG2: 39.3 Binge/heavy drinking episodes: NR Not exceeding recommendations—≤28 units for men; ≤14 units for women (calculated from intention-to-treat analysis): IG1: 21.5% IG2: 22.9% (P = NS)</td>
<td>Broadly includes heavier drinkers (one third “moderately dependent”) attending primary care. Excludes persons with severely dependent/severe alcohol-related problems, persons with previous or current alcohol treatment, or those for whom any alcohol consumption was contraindicated. Systems support: Usual care providers “trained.” Receptionist or research assistant screened patients and prompted physician. No incentives.</td>
<td>Fair quality: Nonrandom assignment to study conditions could have allowed manipulation. True control condition follow-up not assessed. Possible contamination between IG1 and IG2. Delivery of IG3 inadequate to differentiate it from IG2. Baseline and follow-up noncomparability of groups on several measures, not controlled in all analyses. Very brief intervention (IG2) and assessment only (IG1) reduced consumption at 12 mo with no significant differences between conditions.</td>
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<td>WHO Brief Intervention Study Group, 1996 (58)</td>
<td>RCT in various outpatient medical settings, 8 countries including United States</td>
<td>1559 adults (age, 18–70 y) who drank &gt;50 g ETOH/d (men) or 32 g ETOH/d (women) OR 6 or more drinks/occasion</td>
<td>IG1 (n = 503) received 5 min of health advice from a “health advisor” (46% RNs, 18% MD, 35% other) as part of a routine primary care visit. Intervention included feedback, advice, goal-setting. Delivery: NR. IG2 (n = 565) received 15 min of brief counseling from health advisor who also addressed behavioral techniques as part of the routine visit. Some sites offered 3 follow-up visits. Intervention included feedback, advice, goal-setting, assistance, follow-up (for some subsets). Delivery: NR. CG (n = 491) received assessment only.</td>
<td>Outcomes assessed at 6–19 mo (mean, 9 mo) Average cl. of alcohol/d Men: IG1: 5.29 IG2: 5.18 CG: 6.29 (P = 0.001) Women: IG1: 2.99 IG2: 3.39 CG: 3.80 (P = NS) Average cl. of alcohol per drinking occasion: Men: IG1: 10.16 IG2: 10.01 CG: 11.23 (P = 0.01) Women: IG1: 9.96 IG2: 6.27 CG: 6.83 (P = NS) Mean drinks/wk: NR Binge/heavy episodes: NR Reporting drinking within recommend- ed weekly limits (no more than 24 cl. of ETOH/wk for men or 13.3 cl. of ETOH/wk for women): Men: IG1: 43% IG2: 43% CG: 35% (P = 0.05) Women: IG1: 43% IG2: 39% CG: 35% (P = NS)</td>
<td>Broadly includes multicultural, heavier-drinking primary care patients, many of whom may have been help-seeking. Excludes known or suspected alcoholics or very high daily consumers, those with prior liver disease or alcohol dependence treatment, and those warned by MD or other health professional to abstain. Systems support: Some provider training reported. No incentives reported.</td>
<td>Fair quality: Limited information with which to evaluate study quality regarding baseline comparability of groups and maintenance of comparable groups. Potential for contamination exists since different interventions were delivered by same interventionists. Very brief and brief interventions reduced daily alcohol consumption in men at an average of 9-mo follow-up compared with assessment only. Some interventions could have been brief multi-contact. Among women, all groups significantly reduced consumption at follow-up without between-group differences.</td>
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Appendix Table 3—Continued

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<th>Study Authors and Year</th>
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<td>Anderson and Scott, 1992</td>
<td>RCT conducted in 8 community-based primary care group practices</td>
<td>England</td>
<td>194 male patients (age, 17-49 y) registered with practices who exceeded 35 drinks/wk</td>
<td>Mean age: 45.1 y</td>
<td>IG (n = 80) received 10-min face-to-face visit with usual PCP at special visit scheduled after assessment. Intervention included advice and feedback.</td>
<td>Change in mean drinks/wk: IG: –15.7; CG: –9.2 (P = 0.06)</td>
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<td>Maisto et al., 2001</td>
<td>RCT in 12 primary care clinics</td>
<td>United States</td>
<td>301 patients of primary care practices age ≥21 y with AUDIT score ≥8 OR ≥16 drinks/wk (men) or ≥12 drinks/wk (women)</td>
<td>Mean age: 49.5 y</td>
<td>IG1 (n = 100) immediately after assessment received 10- to 15-min “brief advice” from research staff, which intentionally limited patient input. Intervention included feedback, advice, goal-setting. Delivery: NR.</td>
<td>Change in mean drinks/drink: IG1: –8.3; IG2: –5.5; CG: –3.6 (P = NS)</td>
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<td>Nilssen, 1991</td>
<td>RCT conducted within The Tromso Study</td>
<td>Norway</td>
<td>338 community-dwelling adults who met high-risk alcohol use criteria (drinking ≥1 bottle of wine or equivalent per occasion 1-2 times per mo OR drinking alcohol 2-3 times weekly) AND elevated GGT levels (45–200 U/L)</td>
<td>Mean age: 62 y</td>
<td>IG1 (n = 113) invited by letter to re-examination for “elevated blood test”; received information on causes of elevated GGT level (including alcohol) and had GGT redrawn. Mailed repeated GGT results and invited to re-screen at 1 y. Interventions included feedback assistance and letter follow-up. IG2 (n = 113) also invited by same letter to re-examination; intervention focused on further assessing and addressing alcohol consumption. GGT redrawn and repeated visits with laboratory tests offered until GGT level normalized.</td>
<td>Mean alcohol consumption, g/d: IG1: 15.6; IG2: 13.5; CG: 39.2 (P = 0.001)</td>
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<tr>
<td>Scott and Anderson, 1990</td>
<td>RCT in 8 community-based primary care practices</td>
<td>England</td>
<td>72 women (age, 17-69 y) registered with the practices who consumed 21–71 units of alcohol/wk</td>
<td>Mean age: 44 y</td>
<td>IG (n = 33) received 10-min face-to-face visit with usual PCP at special visit scheduled after assessment. Interventions included feedback and advice. Delivery: NR.</td>
<td>Change in mean drinks/wk: IG: –11.6; CG: –10.0 (P = NS)</td>
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<td>Curti et al., 2003 (50)</td>
<td>RCT conducted in HMO-based primary care practices with patients of 23 clinicians Washington</td>
<td>307 adults with AUDIT score ≤15 and risky use in past month: ≥7 mean drinks/d OR ≥2 occasions of ≥5 drinks OR driving after ≥3 drinks, who kept primary care appointments</td>
<td>IG (n = 151) received very brief (1–5 min) motivational message from their PCPs and self-help manual at routine visit, plus up to 3 telephone counseling calls from research health educator. Intervention included feedback, advice, goal-setting, assistance, targeting, and follow-up contact. Delivery: 99% got provider intervention and materials; 87% got at least 1 call. CG (n = 156) received usual care after assessment.</td>
<td>Mean drinks/wk: IG: 10.6 CG: 19.6 (P = 0.1) Reporting no bingeing: IG: 95% CG: 81% (P = 0.02) Reporting no at-risk drinking pattern (outcomes adjusted for missing data at follow-up): IG: 57% CG: 43% (P = 0.048)</td>
<td>Broadly includes broadly defined risky/harmful adult drinkers with advance primary care appointments. Excludes persons with AUDIT score &gt;15 and known alcoholics. Systems support: Provider training (15–60 min); research staff put intervention materials on chart and conducted assessment and follow-up. Good quality: Although high differential loss to follow-up (IG, 34%; CG, 22%), replacement of missing values using multiple imputation procedures in analysis. Otherwise, met overall good-quality criteria. Brief, multicontact intervention with minimal provider burden and multiple follow-up contacts was clearly delivered and reduced at-risk drinking patterns at 12 mo. No effects on average consumption.</td>
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<td>Fleming et al., 1997 (53)</td>
<td>RCT conducted in 17 community-based primary care practices (64 physicians) in practice-based research network Wisconsin</td>
<td>774 adults, age 18–65 y with routine primary care visits who met “problem drinking” criteria: ≥2/4 CAGE questions OR men &gt;14 drinks/wk OR ≥5 drinks/occasion; women ≥11 drinks/wk or ≥4 drinks/occasion Mean age: NR</td>
<td>IG (n = 392) had 2 brief visits; scheduled 1 mo apart with usual PCP plus a call from clinic nurse 2 wk after each visit. Intervention included feedback, goal-setting, assistance, and follow-up. Delivery: 76% completed the protocol and received both physicans visits.</td>
<td>Mean drinks/wk: All participants: IG: 11.48 CG: 15.46 (P = 0.001) Women: IG: 11.46 CG: 13.20 (P = 0.001)</td>
<td>Broadly includes lower-level risky/harmful drinkers visiting primary care. Excludes heavier users (&gt;50 drinks/wk) and those with alcohol treatment or symptoms of withdrawal in previous year or who recently been in treatment. Systems support: Provider training (15–30 min); research staff conducted all alcohol consumption assessment outside clinic. Good quality: Low levels (≥10%) slightly differential loss to follow-up, but intention-to-treat with replacement of missing values. Other good-quality criteria met. Brief, multicontact intervention by the usual care PCP.</td>
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<td>Senft et al., 1997 (56)</td>
<td>RCT conducted in 3 large primary care HMO group primary care practices (47 clinicians) Oregon and Washington Standard drink = 0.5 oz ETOH</td>
<td>516 adults age ≥21 y attending primary care visits with AUDIT score 8–21 OR 2 AUDIT Q/F item scores ≥5 OR ≥6 drinks/occasion at least weekly</td>
<td>IG (n = 260) received 30 s of advice from their usual PCP during the visit, immediately followed by a 15-min motivational interviewing–based session with a research health counselor. Intervention included advice, goal setting, and assistance. Delivery: 70% received advice and MI session. CG (n = 256) received usual care after assessment.</td>
<td>Mean drinks/wk (calculated from total drinks in prior 3 mo): All participants: IG: 14.7 CG: 17.5 (P = 0.08) Reporting no binge drinking: IG: 77% CG: 77% (P = NS) Reporting no more than 3 drinks/d for men and 2 drinks/d for women: IG: 80% CG: 73.1% (P = 0.07)</td>
<td>Broadly includes risky/harmful adult drinkers in primary care. Excludes dependent drinkers, those with AUDIT score &gt;21. Systems support: Providers prompted with script to give advice only; research staff delivered assessment and most of intervention. No incentives. Good quality: Although loss to follow-up of 20% overall (and potentially greater in IG) with dropouts less educated, missing values replaced in sensitivity analysis with no impact on reported results. Otherwise, overall good-quality criteria met. Brief intervention with no effects on average consumption or bingeing; modest intervention effects, primarily on total drinking days for women at 12 mo. Mean drinks were reduced at 6 mo (P = 0.04) but not at 12 mo (P = 0.13); IG tended toward more benefit (drinking within recommended limits) at 12 mo. Screening, recruitment, and intervention all occurred at a single primary care visit.</td>
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#### Women: 38%
Nonwhite: 6% to 12% (approximately)
Smokers: 95% (approximately)
Baseline alcohol consumption: 19.1 mean drinks/wk
Binge drinking: 85%
Alcohol assessment: Self-administered Health Screening Survey (embedding CAGE and alcohol Q/F questions) in waiting room. If results were "positive," then 30-min face-to-face lifestyle interview (including 7-d TLFB alcohol review) by research personnel.
CG (n = 382) received usual care after assessment.

#### Men:
IG: 13.62
CG: 16.86
(P < 0.005)
No bingeing in past 30 days:
All participants:
IG: 52.04%
CG: 31.68%
(P < 0.001)
Women:
IG: 52.7%
CG: 34.7%
(P < 0.025)
Men:
IG: 51.6%
CG: 29.8%
(P < 0.001)

| Not drinking excessively: All participants: IG: 84.7% CG: 68.9% (P < 0.001)
| Not bingeing: IG: 69.2% CG: 51.6% (P < 0.001)
| Not drinking excessively: All participants: IG: 84.6% CG: 65.7% (P < 0.005)

Fleming et al., 1999 (51) RCT conducted in 24 community-based primary care practices with 43 MDs in practice-based research network in Wisconsin

Standard drink: 12-14 g ETOH

158 adults age ≥65 y with scheduled visits who met hazardous drinking criteria: ≥2/4 CAGE questions OR men ≥11 drinks/wk or ≥4 drinks/occasion; women ≥8 drinks/wk or ≥3 drinks/occasion
Age range: 65-75 y
Women: 34%
Nonwhite: NR
Smokers: 10%
Baseline alcohol consumption: 16 mean drinks/wk
Binge drinking: 49%
Alcohol assessment: 2-step alcohol and lifestyle assessment by research staff: if results on self-administered modified Health Screening Survey (including CAGE and alcohol Q/F questions) were "positive," then 30-min face-to-face lifestyle interview (including 7-d TLFB alcohol review).
IG (n = 71) had 2 brief 10- to 15-min visits scheduled 1 mo apart with usual PCP plus calls from clinic nurse 2 wk after each visit.
Intervention included feedback, goal setting, assistance, and follow-up. Delivery: 94% received at least 1 physician visit.
CG (n = 87) received a general health booklet after assessment.

Mean drinks/wk at 12 mo:
IG: 8.9
CG: 16.3
(P < 0.001)
Binge episodes in previous 30 d:
IG: 1.8
CG: 5.4
(P < 0.005)
Not bingeing:
IG: 69.2%
CG: 50.8%
(P < 0.025)
Not drinking excessively:
IG: 84.6%
CG: 65.7%
(P < 0.005)

| IG: 1.8
| Not bingeing: IG: 69.2% CG: 50.8% (P < 0.025)
| Not drinking excessively: IG: 84.6% CG: 65.7% (P < 0.005)

Ockene et al., 1999 (52) RCT conducted in 4 primary care academic medical sites with 46 MDs and 47 NPs in Massachusetts

Standard drink = 12.8 g ETOH

530 adults seeking routine primary care who screened as "high-risk drinker" (=2/4 CAGE questions OR men ≥12 drinks/wk OR ≥5 drinks/occasion in past mo; women ≥9 drinks/wk OR ≥4 drinks/occasion in past mo), and who made a primary care visit
Age range: 21-70 y
Women: 32%
Nonwhite: 4.3%
Smokers: 33.6%
Baseline alcohol consumption: 18.9 mean drinks/wk
Binge drinking: 70%
Alcohol assessment: 2-step alcohol and lifestyle assessment by research staff:
IG (n = 274) received brief (5-10 min) face-to-face intervention tailored to patients' problem alcohol use from usual MD/NP at routine visit and were asked to make a follow-up appointment.
Intervention included advice, goal setting, assistance, tailoring, and follow-up. Delivery: 99% reported provider discussion and 59% had follow-up visit within 6 mo.
CG (n = 256) received general health pamphlet after assessment.

6-mo outcomes only: Change in mean drinks/wk:
All participants:
IG: −6.0
CG: −3.1
(P = 0.003)
Women:
IG: −6.8
CG: −3.5
(P = 0.003)
Men:
IG: −5.6
CG: −2.9
(P = 0.05)
Not bingeing at 6 mo (calculated):
Includes broadly defined risky/harmful adult drinkers who have recently used primary care.
Excludes those already in alcohol intervention program.
Systems support: Provider training (2.5 h); research staff put intervention materials on chart and provided assessment. No incentives.

| Includes broadly defined risky/harmful adult drinkers who have recently used primary care.
| Excludes those already in alcohol intervention program.
| Systems support: Provider training (2.5 h); research staff put intervention materials on chart and provided assessment. No incentives.

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<td>Wallace et al., 1988 (55)</td>
<td>RCT conducted in 47 group practices in research network England and Scotland Standard drink = 1 unit (not further defined)</td>
<td>909 adults (age, 17–69 y) who were registered primary care patients with self-assessed drinking problems OR drank &gt;24 units/wk (men) or &gt;21 units/wk (women) Mean age: 42 y (approximately) Women: 29.1 % Nonwhite: NR Smokers: NR Baseline mean alcohol consumption: Women: 35.1 drinks/wk Men: 62.2 drinks/wk Alcohol assessment: 2-step alcohol and lifestyle assessment by research staff if findings on self-administered Health Survey Questionnaire at visit were “positive,” then face-to-face structured interview of alcohol use. IG (n = 450) contacted by PCP to schedule at least 1–2 visit(s), with up to 5 visits possible as needed. Intervention included feedback, advice, goal setting, assistance, and follow-up. Delivery: 83% of men and 92% of women completed 1 visit; 57% of men and 65% of women completed 2 visits. CG (n = 459) received general health booklet after assessment and no alcohol advice unless GGT level &gt;150 IU/L or requested by patient.</td>
<td>IG: 31% CG: 26% (P = NS) Reporting safe weekly and non-binge drinking at 6 mo: IG: 38.7% CG: 28.3% (P = 0.05) Reporting safe weekly and non-binge drinking at 12 mo: IG: 42.6% CG: 32.1% (P = 0.05) Mean age: 42 y (approximately) Women: 29.1 % Nonwhite: NR Smokers: NR Baseline mean alcohol consumption: Women: 35.1 drinks/wk Men: 62.2 drinks/wk Alcohol assessment: 2-step alcohol and lifestyle assessment by research staff if findings on self-administered Health Survey Questionnaire at visit were “positive,” then face-to-face structured interview of alcohol use. IG (n = 450) contacted by PCP to schedule at least 1–2 visit(s), with up to 5 visits possible as needed. Intervention included feedback, advice, goal setting, assistance, and follow-up. Delivery: 83% of men and 92% of women completed 1 visit; 57% of men and 65% of women completed 2 visits. CG (n = 459) received general health booklet after assessment and no alcohol advice unless GGT level &gt;150 IU/L or requested by patient.</td>
<td>Good quality: At follow-up, IG lost 17% and CG lost 11%, so missing values were replaced with baseline values in analyses. Otherwise, overall good-quality criteria met. This brief, multicontact intervention by the PCP reduced alcohol consumption by men and women and the proportion drinking excessively at 12 mo compared with no intervention.</td>
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* AUDIT = alcohol use disorders identification test—10-item instrument for risky/harmful use; CAGE = 4-item screening questionnaire to detect alcoholism; CG = control group; ETOH = alcohol; GGT = serum γ-glutamyltransferase; HMO = health maintenance organization; IG = intervention group (numbered 1, 2 if >1 per study); MD = physician; MI = motivational interviewing; NP = nurse practitioner; NR = not reported; NS = not statistically significant (P < 0.05); PCP = primary care provider; Q/F = questions addressing quantity and frequency of alcohol use; RCT = randomized, controlled trial; RN = registered nurse; TLFB = timeline followback procedure; WHO = World Health Organization. † No significant group by time interactions based on repeated-measures analysis.