Supplementary File S3

Creatine Supplementation in Endurance and Mixed-Sport Contexts: A Scoping Review of Performance, Recovery, and Body Composition

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Descriptive Methodological Characteristics of Included Studies

Study	Randomization reported	Blinding	Allocation concealment reported	Attrition/dropouts reported	Washout adequacy for crossover studies
Yamaguchi et al., 2025 [12]	Yes; participants were randomly assigned to creatine or placebo, stratified by age and maximal muscle strength	Double-blind	Not reported	Yes; withdrawals/exclusions reported, with 40 participants included in the final analysis	Not applicable; parallel-group trial
Meixner et al., 2025 [16]	No; nonrandomized sequential crossover design	Participants blinded only	Not reported	Yes; 5 participants could not finish all required trials and 25 were included in the analysis	No washout between placebo and creatine conditions; authors state this was due to the relatively long washout period of creatine
Fernández-Landa et al., 2020 [21]	Yes; randomized to four groups by an independent statistician using a stratified block design	Double-blind	Not reported	Yes; no dropouts reported	Not applicable; parallel-group trial
Crisafulli et al., 2018 [24]	Yes; participants were randomly assigned to creatine-electrolyte or placebo groups	Double-blind	Not reported	Yes; 2 participants dropped out, 1 from each group	Not applicable; parallel-group trial
Wang et al., 2018 [25]	Yes; double-blind randomized matched-pair assignment to creatine or placebo groups	Double-blind	Not reported	Not reported; n = 15 per group reported throughout	Not applicable; parallel-group trial
Dalton et al., 2017 [19]	Yes; randomized, counterbalanced crossover design	Double-blind	Not reported	Yes; 6 participants did not complete the study; 28 were analyzed	Yes; 7-day washout between treatment periods
Wang et al., 2017 [34]	Yes; randomized assignment to creatine or placebo groups	Double-blind	Not reported	Not reported; 17 participants included and analyzed	Not applicable; parallel-group trial
Roberts et al., 2016 [20]	Yes; participants were randomly assigned to creatine or placebo groups	Not reported	Not reported	Not reported; 14 participants completed study procedures as reported	Not applicable; parallel-group trial

De Andrade Nemezio et al., 2015 [35]	Yes; participants were randomly allocated to creatine or placebo groups	Double-blind	Not reported	Yes; 5 participants did not complete all trials and were excluded from analysis	Not applicable; parallel-group trial
Dabidi Roshan et al., 2013 [31]	Yes; swimmers were randomly assigned to creatine or placebo groups	Not reported	Not reported	Not reported; 16 participants reported, 8 per group	Not applicable; parallel-group trial
Deminice et al., 2013 [30]	Yes; participants were randomly assigned to creatine or placebo groups	Double-blind	Not reported	Not reported; 25 participants reported, with 13 in creatine and 12 in placebo groups	Not applicable; parallel-group trial
Atashak & Jafari, 2012 [45]	Yes; participants were randomized into creatine and placebo groups	Double-blind	Not reported	Not reported; 18 participants reported, 9 per group	Not applicable; parallel-group trial
Juhász et al., 2009 [17]	Yes; participants were randomly assigned to creatine or placebo groups	Double-blind	Not reported	Yes; no side effects reported, but dropouts/attrition not explicitly reported	Not applicable; parallel-group trial
Bassit et al., 2008 [46]	Yes; athletes were randomly divided into creatine and control/placebo groups	Double-blind	Not reported	Not reported; 11 athletes reported, with 5 in creatine and 6 in control/placebo groups	Not applicable; parallel-group trial
Branch et al., 2007 [28]	Yes; randomized, counterbalanced crossover design	Double-blind	Not reported	Not reported; 7 participants completed all conditions as reported	Yes; 28-day washout between creatine and placebo conditions
Silva et al., 2007 [11]	Yes; participants were randomly assigned to creatine or placebo groups	Double-blind	Not reported	Not reported; 16 participants reported, 8 per group	Not applicable; parallel-group trial
Perret et al., 2006 [23]	Yes; randomized crossover design	Double-blind	Not reported	Not reported; 6 participants completed both treatment conditions as reported	Yes; ≥28-day / 4-week washout between supplementation periods
Cornish et al., 2006 [36]	Yes; participants were randomized to creatine or placebo groups	Double-blind	Not reported	Yes; 3 participants did not complete post-supplementation skating testing, and 2 did not complete post-supplementation knee extension/flexion testing	Not applicable; parallel-group trial
Shi, 2005 [47]	Not clearly reported; 20 athletes were divided into four groups using an orthogonal L4 design	Not reported	Not reported	Not reported; 20 participants reported, 5 per group	Not applicable; parallel-group trial
Mendes et al., 2004 [37]	Yes; swimmers were randomly divided	Double-blind	Not reported	Not reported; 18 participants reported, 9 per group	Not applicable; parallel-group trial

	into creatine or placebo groups				
Mero et al., 2004 [15]	Yes; randomized, balanced crossover order	Double-blind	Not reported	Not reported; 16 participants completed both treatments as reported	Yes; ≥30-day washout between treatments
Santos et al., 2004 [48]	Not reported	Double-blind	Not reported	Not reported; 34 participants reported, with 18 in creatine and 16 in placebo/control groups	Not applicable; parallel-group trial
van Loon et al., 2003 [22]	Not clearly reported; subjects were group-matched and assigned to creatine or placebo groups	Double-blind	Not reported	Yes; one creatine-group participant was classified as a non-responder and excluded from statistical analyses	Not applicable; parallel-group trial
Chwalbińska-Moneta, 2003 [18]	Yes; participants were randomly assigned to creatine or placebo groups	Double-blind	Not reported	Not reported; 16 participants reported, 8 per group	Not applicable; parallel-group trial
van Schuylenbergh et al., 2003 [33]	Yes; participants were randomly assigned to creatine-pyruvate or placebo groups	Double-blind	Not reported	Not reported; 14 participants reported, 7 per group	Not applicable; parallel-group trial
Dawson et al., 2002 [38]	Yes; matched pairs by gender and 50-m swim time were randomly assigned to creatine or placebo groups	Single-blind	Not reported	Not reported; 20 participants reported, 10 per group	Not applicable; parallel-group trial
Romer et al., 2001 [26]	Yes; randomized, counterbalanced crossover design	Double-blind	Not reported	Yes; 1 participant was removed from analyses for non-adherence to preparation guidelines	Yes; 4-week washout between treatments
Finn et al., 2001 [49]	Yes; matched pairs were randomly allocated to creatine or placebo groups	Double-blind	Not reported	Not reported; 16 participants reported, with 8 per group	Not applicable; parallel-group trial
Preen et al., 2001 [32]	Not reported	Double-blind	Not reported	Not reported; 14 participants reported, 7 per group	Not applicable; parallel-group trial
Bellinger et al., 2000 [39]	Yes; creatine and placebo packages were randomly assigned numbers and then given to participants	Double-blind	Not reported	Not reported; 20 participants reported, 10 per group	Not applicable; parallel-group trial
McNaughton et al., 1998 [40]	Yes; participants were randomly assigned to creatine or placebo first, then crossed over	Not reported	Not reported	Not reported; 16 participants completed the repeated testing protocol as reported	Yes; 4-week washout between treatment periods

Peyrebrune et al., 1998 [41]	Yes; participants were randomly assigned to creatine or control/placebo groups	Double-blind	Not reported	Not reported; 14 participants reported, 7 per group	Not applicable; parallel-group trial
Vanakoski et al., 1998 [14]	Yes; randomized, balanced crossover design	Double-blind	Not reported	Yes; 8 participants enrolled, but 1 was excluded from analysis because of poor compliance with exercise protocols	Yes; ≥1-week washout between treatment sessions
Vandebuerie et al., 1998 [29]	Yes; randomized-order crossover design	Double-blind	Not reported	Yes; 1 participant was withdrawn because of severe diarrhoea and was excluded from analyses	Yes; 5-week washout between experimental conditions
Lawrence et al., 1997 [42]	Not clearly reported; participants were matched by sex and body mass, with one member of each pair assigned to creatine and the other to placebo	Double-blind	Not reported	Not reported; 20 participants reported, 10 per group	Not applicable; parallel-group trial
Grindstaff et al., 1997 [13]	Yes; participants were randomly assigned to creatine or placebo groups	Double-blind	Not reported	Not reported; 18 participants reported, 9 per group	Not applicable; parallel-group trial
Terrillion et al., 1997 [43]	Not clearly reported; matched-pair allocation to creatine or placebo groups	Double-blind	Not reported	Not reported; 12 participants reported, 6 per group	Not applicable; parallel-group trial
Burke et al., 1996 [44]	Yes; matched groups were randomly assigned to creatine or placebo	Double-blind	Not reported	Not reported; 32 participants reported, 16 per group	Not applicable; parallel-group trial