

**Table G9.A3. Body Composition, Cross-Sectional Studies**

| Reference                      | Subjects  | Results   |
|--------------------------------|---|---|
| Deheeger et al., 1997 (1)      | N=86, 37% F, 10 years                           | No relationship   |
| Guillaume et al., 1997 (2)     | N=1,028, 6-12 years                             | M: small inverse relationship; F: no relationship   |
| Schmidt et al., 1997 (3)       | N=1,681, 6-16 years, 81% Asian                  | Active children have less adiposity than non-active   |
| Ward et al., 1997 (4)          | N=150, 100% F                                   | Significant low correlation   |
| Takada et al., 1998 (5)        | N=457, 45% F, 10 years                          | No relationship   |
| Raudsepp & Pall, 1999 (6)      | N=123, 100% F, 8.2±1.4 years                    | Significant low-moderate correlation  |
| Rowlands et al., 1999 (7)      | N=34, 50% F, 8-10 years                         | Moderate inverse correlation  |
| Dionne et al., 2000 (8)        | N=373, 0% F, 14.5±3.3 years                     | No relationship   |
| Grund et al., 2000 (9)         | N=88, 44% F, 5-11 years                         | No relationship   |
| Kawabe et al., 2000 (10)       | N=264, 0% F, 17-18 years                        | Active children have less adiposity than non-active   |
| LeMura et al., 2000 (11)       | N=54, 52% F, 9.5 years                          | Significant moderate inverse correlation  |
| McMurray et al., 2000 (12)     | N=2,389, 52% F, 10-16 years, 77% white, 23% AA  | M: PA decreases risk of overweight; F: no relationship                                      |
| Ball et al., 2001 (13)         | N=106, 51% F, 7.8±1.9 years                     | Inverse correlation: Males: moderate; Females: low  |
| Dowda et al., 2001 (14)        | N=2,791, 8-16 years                             | Small inverse relationship  |
| Eisenmann et al., 2002 (15)    | N=15,143, 9th-12th graders                      | Small inverse relationship  |
| Klentrou et al., 2003 (16)     | N=256, 51% F, 14.3±0.3 years                    | Active children have less adiposity than non-active   |
| Abbott & Davies, 2004 (17)     | N=40, 53% F, 5-10 years                         | Moderate inverse correlation  |
| Ara et al., 2004 (18)          | N=114, 0% F, 9.4±1.5 years                      | Active children have less adiposity than non-active   |
| Brage et al., 2004 (19)        | N=589, 47% F, 9.6±0.4 years                     | No relationship   |
| Ekelund et al., 2004 (20)      | N=1,292, 51% F, 9-10 years                      | Significant low correlation   |
| Forshee et al., 2004 (21)      | N=2,216, 12-16 years                            | Active children have less adiposity than non-active   |
| Janssen et al., 2004 (22)      | N=5,890, 11-16 years                            | Low PA associated with overweight/obesity   |
| Patrick et al., 2004 (23)      | N=878, 54% F, 11-15 years                       | Low PA associated with overweight/obesity   |
| Raustorp et al., 2004 (24)     | N=871, 49% F, 7-14 years                        | No relationship   |
| Ekelund et al., 2005 (25)      | N=445, 57% F, 17 years                          | M: significant low inverse correlation, F: no relationship                                  |
| Gutin et al., 2005 (26)        | N=421, 53% F, 16.2±1.2 years, 49% white, 51% AA | Moderate inverse correlation  |
| Klein-Platat et al., 2005 (27) | N=2,714, 50% F, 12 years                        | Significant low correlation   |
| Rennie et al., 2005 (28)       | N=100, 40% F, 6-8 years                         | Active energy expenditures and PA level are significant predictors of fat mass in non-obese |
| Treuth et al., 2005 (29)       | N=229, 57% F, 7-19 years                        | Low-moderate correlation  |
| Andersen et al., 2006 (30)     | N=1,732, 53% F, 9 & 15 years                    | No relationship   |
| Guerra et al., 2006 (31)       | N=1,341, 53% F, 8-15 years                      | M: low PA risk for obesity; F: no relationship  |
| Kruger et al., 2006 (32)       | N=1,257, 10-15 years, 15% white, 73% AA         | M: significant low inverse correlation; F: no relationship                                  |

**Table G9.A3. Body Composition, Cross-Sectional Studies (continued)**

| Reference                             | Subjects   | Results  |
|---------------------------------------|--|--|
| Lohman et al., 2006 (33)              | N=1,553, 100% F, 12.0±0.5 years, 45% white, 22% AA, 22% Hispanic | Significant low correlation  |
| Ruiz et al., 2006 (34)                | N=780, 51% F, 9-10 years   | Significant inverse correlation  |
| Dollman & Ridley, 2006 (35)           | N=843, 48% F, 10-11 years  | No relationship  |
| Duncan et al., 2007 (36)              | N=969, 53% F, 5-12 years   | Inverse relationship with percent fat, not body mass index                                 |
| Hussey et al., 2007 (37)              | N=224, 63% F, 7-10 years   | Low-moderate significant inverse correlation   |
| Kelishadi et al., 2007 (38)           | N=4,811, 53% F, 6-18 years                                       | No relationship  |
| Lioret et al., 2007 (39)              | N=1,016, 3-14 years  | Significant inverse relationship in 3-5 year olds  |
| Rizzo et al., 2007 (40)               | N=529, 50% F, 9 & 15 years                                       | Inverse relationship   |
| Saelens et al., 2007 (41)             | N=42, 50% F, 8 years   | Significant low-moderate correlation   |
| Stallmann-Jorgensen et al., 2007 (42) | N=661, 50% F, 14-18 years, 51% white, 49% AA                     | Significant moderate correlation   |
| Stevens et al., 2007 (43)             | N=984, 100% F, 6th and 8th graders, mixed race/ethnicity         | Moderate association of moderate to vigorous PA and risk of overweight/high percent fat    |
| Thavendiranathan et al., 2007 (44)    | N=147, 12.5±3.2 years  | No relationship  |
| Wittmeier et al., 2007 (45)           | N=251, 48% F, 8-11 years   | Low inverse correlation of energy expenditure and PA with fat mass standardized for height |

AA, African American; F, female; M, male; N, number, PA, physical activity

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