Visceral fat is thought to be more harmful than subcutaneous fat. 1,2 In fact, subcutaneous fat has even been held as protective against cardiovascular risk. African American children have much less visceral fat than children of other races. 1 Arterial stiffness predicts cardiac events and death in adults.

**Objective**

- We compared the associations of visceral adipose tissue (VAT) and subcutaneous abdominal adipose tissue (SAAT) with arterial stiffness in overweight and obese children who were predominantly African American.

**Methods**

- Data were collected from 111 children (8-11 yrs, BMI ≥ 85th percentile) of which 94% were African American and 59% were female.
- VAT and SAAT measurement were assessed from MRI images.
- Pulse wave velocity (PWV), the speed at which a BP wave travels along the artery, was measured using applanation tonometry (SphygmoCor) to evaluate arterial stiffness.
- Partial correlation and regression determined the relative influence of VAT and SAAT on PWV.

**Results**

- SAAT (r=0.34) and VAT (r=0.26) each correlated with PWV when age, sex, and race were adjusted.
- When additionally adjusted for VAT, SAAT was related to PWV (r=0.23, P=0.01).
- When adjusted for SAAT, VAT was no longer associated with PWV (r=0.02).
- Only SAAT predicted PWV in a stepwise regression including age, sex, race and VAT.

**Conclusions**

- Rather than being protective, subcutaneous fat is more closely related than visceral fat to arteriosclerosis risk in this sample.
- Interventions that reduce subcutaneous fat but not visceral fat in African American children may be more valuable than previously thought.

**Bibliography**


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