Axial Fat Relationship with Development of Pathologic Metabolic Disease

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Background: Increasing BMI is related to development of pathologic metabolic syndromes including insulin resistance, type 2 diabetes mellitus, and non-alcoholic fatty liver disease. The present study aims to provide a review on the current data in literature assessing the relationship between axial fat and development of metabolic disease states while also exploring the long-term effects of liposuction.

Methods: We conducted a literature search using OVID, PubMed, Google Scholar, and Plastic and Reconstructive Surgery using search terms including “axial fat” and “truncal fat” in combination with disease states of interest including “insulin resistance,” “diabetes,” and “non-alcoholic fatty liver disease.”

Results: Literature demonstrates that adipose tissue distribution has an impact on systemic metabolism. There is a relationship between fat distribution with higher concentrations in the subcutaneous abdominal region is related to type 2 diabetes mellitus. Additionally, both subcutaneous and visceral adipose tissues have an association with insulin resistance. Finally, the incidence of abdominal obesity is shown to correlate to the degree of non-alcoholic fatty liver disease.

Conclusion: There is sufficient evidence that there is a relationship between axial fat and development of metabolic disease. We would like to base an future study on the information we discovered in regard to redistributing axial fat to other areas of the body for augmentation (i.e. breasts during breast reconstruction, glutes, face) and evaluate change in the person’s baseline metabolic disease state with the concomitant reduction of axial fat, but not total body fat.