Childhood Obesity and its Role in Pelvic Floor Dysfunction: Food for Thought

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The systemic effects of obesity, as well as some factors contributing to obesity, have the potential to influence the pelvic health of children. The prevalence of childhood obesity in Canada reached a peak in the early 2000's. Most recently we have seen an improvement in the weight of Canadian children, with 27% having a body mass index classifying them as overweight or obese.[1] This still represents a significant portion of the population, and the role that obesity might have on the pelvic floor of children should be considered for physiotherapy management.

In populations of children with obesity, 21-23% demonstrate symptoms of functional constipation.[2,3] When we examine populations of children with functional constipation, we find 24-25% fall within the parameters for obesity.[4,5] Both of these are significantly higher than case-controls or the general pediatric population. However, this relationship is murky, insufficiently studied and no consensus can be made by the experts.

There is also evidence to suggest a relationship between childhood obesity and fecal incontinence. Of children diagnosed with excessive weight, between 15-29% of them suffered with fecal incontinence.[6,2] While some of this may be constipation related encopresis, there are some who theorize that additional weight on the pelvic floor could be contributing to mechanical or neuromuscular dysfunction of the pelvic floormuscles.[7]

Certainly, diets high in calories and low in fiber can be seen as a risk factor for constipation.[8] Some evidence suggests that decreased levels of physical activity are a risk factor for constipation throughout the early childhood years.[9] Still others suggest that altered hormones could be an underlying factor in both obesity and constipation, as motilin and pancreatic polypeptide production are altered in both of these diagnoses in adults.[10,11,12] It certainly starts to highlight the importance of general healthy behaviours, such as diet and exercise, and their far-reaching effects.

There might also be a role of obesity on childhood lower urinary tract disorders. Given the relationship between obesity and constipation, critics of previous research claim that without excluding constipation related urinary incontinence one cannot identify the role of obesity in pediatric urinary dysfunction. Fraga et al[12], evaluated overweight and obese children (5-17 years) and after excluding the confounding factor of constipation, found that obesity significantly contributed to urinary incontinence and urinary urgency. The authors postulate that since obesity, constipation, and overactive bladder syndrome all affect activation in similar areas of the brain (prefrontal cortex, anterior cingulate gyrus, insula), this might be an explanation for the strong association between all three diagnoses.

It is my belief that pelvic health physiotherapy is truly an integrative practise. If pediatric pelvic floor dysfunction is being affected by obesity, and conservative strategies for weight-loss management in children include physical activity, then who better to address this than a physiotherapist? We have the skills to both promote safe exercise and treat pelvic floor conditions. It might be time for pelvic floor physiotherapists to brush up on their 'exercise for weight-loss' skills and to add them to their tool-box for pelvic floor dysfunction in the pediatric population.

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