

# MILK CONSUMPTION IN 5-11-YEAR-OLD CHILDREN AND ASSOCIATED HEALTH BENEFITS



DEPARTMENT OF SPORT, EXERCISE AND REHABILITATION, FACULTY OF HEALTH AND LIFE SCIENCES,  
NORTHUMBRIA UNIVERSITY  
NEWCASTLE-UPON-TYNE UK

CONTRIBUTORS:

Dr Benjamin P. Green

Dr Penny L.S. Rumbold

\*Please note: the work presented throughout this resource is still subject to peer-review.

# Executive Summary

By Dr Benjamin P. Green & Dr Penny L.S. Rumbold

This resource presents an accurate, evidence-informed evaluation of the potential nutritional and health-related benefits of milk consumption in children. This was facilitated following an extensive review of the available scientific literature. In particular, the resource centres around children aged 5-11 years (primary school-age), a significant phase in human life characterised by growth and maturation preceding the onset of puberty. Focusing on key areas related to nutrition and health, the resource reports on the variety of benefits milk purportedly offers to children including nutritional status, cognitive function, hydration, dental and bone health, physical stature, body composition, metabolic syndrome and appetite control.

Based on these key areas, findings from the literature highlight:

**Nutritional Status** – Cross-sectional data suggests regular milk intake improves the overall dietary quality of children's diets.

**Cognitive Function** – Early findings from intervention studies suggest that milk may have a beneficial effect on cognitive function in children, although further work is needed.

**Hydration** – Early findings suggest milk helps improve the hydration status of children, however more school-based intervention studies are required.

**Dental Health** – Cross-sectional data suggests milk may offer protection against the development of dental caries (tooth decay) and support dental health in children.

**Bone Health** – Milk contains multiple nutritional properties that support childhood growth, development and thus bone health, however study methods are diverse and therefore further research is required.

**Physical Stature** – Intervention, prospective and cross-sectional data suggest increased milk consumption increases physical stature in children.

**Body Composition** – Cross-sectional and intervention data suggest that milk may have a beneficial role in body mass control and body composition in children.

**Metabolic Syndrome** – Cross-sectional and intervention data suggest milk may provide protection against the development of cardiometabolic conditions associated with the metabolic syndrome, however findings are equivocal for some parameters.

**Appetite Regulation** – Intervention data suggest that milk may represent a beneficial snack option to attenuate feeding behaviour in overweight/obese and normal weight children, however more research is required.

Given the evidence presented in this resource, milk contains a unique package of essential nutrients that appear to offer an impressive catalogue of health benefits and should continue to be promoted as a healthy beverage for children. As a result, we believe milk and milk product consumption should continue to be promoted for children in and out of the school environment. Nonetheless, due to the methodological approach of many of the studies included throughout this report, the conclusions must be taken cautiously and highlight a serious need for more robust intervention studies.