

COVID-19 lockdown: friend or foe? A systematic literature review of its impacts on eating patterns, physical activity, body weight and food security

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COVID-19 lockdowns have triggered changes in nutritional and lifestyle patterns in populations around the world. We intended to assess the impacts of lockdowns on eating patterns, physical activity, body weight and food security in populations around the world, across periods before, during and after lockdowns. We conducted a systematic literature review following the PRISMA-P methodology. Three literature databases, Web of Science, PubMed and Scopus, were searched. The search was completed between 14 May 2021 to 5 July 2021 and updated on 9 February 2022. Twenty-two studies (18/22 cross-sectional) were included. Dietary patterns were reported in 21/22 studies. Increases and decreases of the intakes of the main food groups were found when comparing before to during lockdown phase. However, butter/oil and sweets consumption increased consistently during these periods.⁽¹⁾ Supplement intake was reported in 5/22 studies. Decreased supplement intake was found during the lockdown compared to before lockdowns and post lockdown to during lockdowns, while still taking multivitamins in higher amounts.⁽¹⁾ The intakes of macronutrients and micronutrients were reported in 3/22 studies. Increased intakes for all macronutrients and micronutrients except vitamin C and iodine during lockdowns when compared to before lockdowns were found with increased protein intakes during lockdowns when compared to before lockdowns.⁽²⁾ Post lockdown data was absent. Food security was reported in 8/22 studies. Reduced purchase of fruits and vegetables was reported during lockdown. Food security status was found to correlate with dietary habits post-lockdown. Total food purchases increased during lockdowns accompanied with decreases in household food waste and impulse buying as compared to before lockdown phase.⁽³⁾ Physical activity was reported in 13/22 studies. Decreased physical activity during lockdowns compared to before it was found, followed by an increased physical activity post lockdown compared to during lockdowns.⁽¹⁾ BMI and/or body weights were reported in 15/22 studies. An average of 32.4% of participants reported weight gain in 10/15 studies. This weight gain continued post lockdown in 38% of participants. 2/15 studies reported no change in body weight during lockdowns compared to before lockdown. BMI was reported as descriptive cross-sectional data only in 7/15 of the studies. 1/15 study reported increases in BMI during lockdowns as compared to before it, but it remained within the normal range. 3/15 studies reported increases in overweight and obese percentages during lockdowns as compared to before it.⁽⁴⁾ Future studies can examine longer-term effects of COVID-19 lockdowns on nutritional status and lifestyle behaviours. Findings may be used to develop and implement interventions in both public and private sectors. Interventions can comprise medical nutritional therapies, governmental policies and strategic plans and food industry business plans.

References

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