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A comparison of the physical properties and yolk cholesterol contents of different types of poultry eggs

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The consumption of poultry eggs and the raising of chicken for eggs are less restricted by entho-religious taboos. Despite the widespread popularity of chicken eggs, the eggs of a range of other avian species are also used as table eggs. High cholesterol content of poultry eggs has become a great concern to the consumers. The physical properties and the levels of egg cholesterol contents of poultry eggs depend on many factors including the species. The objective of this study was to compare the physical properties and yolk cholesterol contents of some important poultry species. Eggs of Chinese goose, Asil chicken, duck, turkey, white leghorn pullets, village chicken, brown leghorn pullets, mature white leghorns and mature brown leghorns were analyzed for the properties such as the weight of the egg, yolk, albumin, shell, shell thickness, shape index and the yolk cholesterol contents. The percentage of shell weight and the shape index were not significantly different between different types of eggs. The egg weight varied from 160 g for Chinese goose to 40 g for white leghorn pullets. The percentages of shell, albumin and yolk ranged from 8.7% for white leghorn pullets to 10.5% for turkey, 50% for ducks to 69% for white leghorn pullets and 21% for brown leghorn pullets to 39% for ducks, respectively. The yolk cholesterol contents of the eggs were as high as 1144 mg/yolk for Chinese goose and 521mg/yolk for ducks. The yolk cholesterol content of village chicken (197mg/yolk) was significantly lower than those of mature white leghorn (306 mg/yolk) and mature brown leghorn chicken (287mg/yolk). The egg yolk cholesterol contents of brown and white leghorns were not significantly different. Pullet eggs contained significantly less yolk cholesterol content than the eggs of mature birds. It was concluded that the physical properties and the yolk cholesterol contents of the various poultry species vary widely depending on the species and the maturity of the birds.