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Prophylactic Therapy of Respiratory Syncytial Virus (RSV) Infection of Rhesus Monkeys with Monoclonal IgA Antibody to RSV

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Respiratory syncytial virus (RSV) infection of young children is the most important cause of lower respiratory infection frequently requiring hospitalization. Hospitals serve as a potential source of RSV infection in infants and young children hospitalized for other conditions. Prophylactic treatment of these children may prevent severe RSV infection during this critical period. We have employed the rhesus monkey inoculated intranasally with the Long strain of RSV to determine the effect of intranasally administered monoclonal IgA antibody to RSV upon virus shedding from the nose and throat as well as upon virus titers in lung lavages from infected monkeys. Monoclonal IgA antibody to RSV administered intranasally at doses of 2.5 or 0.25 mg per monkey one hour before inoculation with RSV and once daily for the following four days was equally effective in reducing virus titers in the nose, throat, and lung lavages from the monkeys. Investigations of various dosing regimens indicate that once daily treatment is as effective as treatment given twice or three times daily. It was also shown that extending the interval between antibody treatment and RSV infection to as long as 12 hours does not reduce the efficacy of monoclonal antibody prophylaxis.