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<th>Title</th>
<th>Instructions for use of the preweaning period in Thoroughbred (Equus caballus) in relation to spatial and nearest neighbor relations, and day-time budgets.</th>
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might be possible to predict the time of parturi-
tion in does by detecting an increase in the fecal
testosterone concentrations. It is suggested
that the feces must be preserved with ethanol or
antibiotics to prevent an increase in the testos-
ron activity concentrations during the preservation
period if feces are to be kept at room tempera-
ture for a prolonged period.

Behavioral development of foals during the preweaning period in
Thoroughbred (Equus caballus): spatial and nearest neighbor
relations, and day-time time-budgets

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The aim of this study was to examine the
developmental changes of the foal’s behavior in
Thoroughbreds. Nine colts, 13 fillies and their
mares were observed from May to October in
1995. Foals were delivered between May 2 and
June 6, and weaned by the end of October. Data
on the distance between the foal and mare, the
foal’s nearest neighbor, and daytime time-
budgets were recorded by scan sampling for 2
hours per week. The results are as follows:

(1) During the first 2 weeks: Foals remained
very close to their mares and had little contact
with other horses. The amount of time foals
spent on nursing, recumbency rest and solitary-
play peaked during this period.

(2) During the first 2 months of life: As foals
matured, they spent more time at greater dis-
tances from their mares, and had contact with
other horses, especially with other foals. Nurs-
ing time decreased sharply and feeding time
increased. Mutual-grooming and social-play
with other foals increased while solitary-play
decreased. Recumbency rest decreased and
upright rest increased, although recumbency rest
was more popular than upright rest.

(3) During the third month of life: Develop-
mental changes of foals were interrupted in
spatial relation, feeding time and recumbency
rest time. Foals engaged in upright rest longer
than in earlier months, although recumbency rest
was still more popular. Mutual-grooming
peaked during this period.

(4) During the fourth and fifth months: Foals
spent more time at greater distances from their
mares. Feeding time increased and recumbency
rest time further decreased. Mutual-grooming
and upright rest time decreased.

(5) Colts spent more time in social-play than
fillies. There were no prominent differences in
other behavior between the sexes.

(6) Mares didn’t exhibit the recumbency
response. Namely, mares were closer to their
foals when foals were upright than when they
were recumbent during the first 2 months of foal
life.

In summary, behavior of foals changed
evidently during the first 2 months, and between
the fourth and fifth month of life. During the
third month of life (July-August), the behavioral
change was interrupted.