Advances in Canine Neonatology
What you need to know in the 1st 4 weeks

Dr Allan Corber Dipl. ABVP (canine/feline)
Who are some of the special individuals in my life
APEX
GRIMACE
APPEARANCE
PULSE
ACTIVITY
RESPIRATION
APGAR SCORING

• APPEARANCE – Skin and mucous membrane (gum) colour

• PULSE – pulse rate

• GRIMACE – how newborn responds to stimulus

• ACTIVITY – can the arms and legs do proper flexion

• RESPIRATION – respiratory rate
An Apgar scoring system for routine assessment of newborn puppy viability and short-term survival prognosis

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Problem when APGAR SCORE < 7 *
So what then......

• Clear the airway with a suction device,

• rub the newborn’s rib cage to stimulate respiration.

• Remember that we don’t recommend swinging puppies anymore
So what then......

• Potential neurological consequences, we do speak about “Shaking Puppy Syndrome”.

• 0-3 – need medical attention

• Tricky ones are between 4-7 – THESE ARE THE TOUGIES
Detect LOW BIRTH WEIGHT
81.1\%
AVERAGE BIRTH
WEIGHT

Small dogs: 100-200g
Medium dogs: 250-350g
Large dogs: 400-500g
Giant dogs: 625+ g
<table>
<thead>
<tr>
<th>BREED SIZE</th>
<th>LOW BIRTH WEIGHT</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;15kg Adult Bodyweight</td>
<td>&lt; 151g</td>
</tr>
<tr>
<td>15-25kg Adult Bodyweight</td>
<td>&lt; 225g</td>
</tr>
<tr>
<td>&gt;25kg Adult Bodyweight</td>
<td>&lt; 330g</td>
</tr>
<tr>
<td>BREED SIZE</td>
<td>LITTER SIZE</td>
</tr>
<tr>
<td>----------------------------</td>
<td>--------------</td>
</tr>
<tr>
<td>&lt;33lb Adult Bodyweight</td>
<td>&lt;4 small 4-5 medium &gt;5 large</td>
</tr>
<tr>
<td>33-55lb Adult Bodyweight</td>
<td>&lt;5 small 5-6 medium 6-9 large</td>
</tr>
<tr>
<td>&gt;55lb Adult Bodyweight</td>
<td>&lt; 6 small 6-9 medium &gt;9 large</td>
</tr>
</tbody>
</table>
NeoCare

Check-Points

APGAR Scores
Weight

Birth 8 hours 24 hours
38 – 39.3 °C
<table>
<thead>
<tr>
<th>Infrared Temperature (°C)</th>
<th>Corresponding Rectal Temperature</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td><strong>Day 0</strong></td>
</tr>
<tr>
<td>35</td>
<td>31.0</td>
</tr>
<tr>
<td>36</td>
<td>32.8</td>
</tr>
<tr>
<td>37</td>
<td>34.5</td>
</tr>
<tr>
<td>38</td>
<td>36.2</td>
</tr>
<tr>
<td>39</td>
<td>38.0</td>
</tr>
<tr>
<td>40</td>
<td>39.7</td>
</tr>
<tr>
<td>41</td>
<td>41.5</td>
</tr>
</tbody>
</table>
HYPOTHERMIA

DEHYDRATION

HYPOGLYCEMIA
if < 5 mmol/L x 4
NeoCare Check-Points

- APGAR Scores
- Weight

- Temperature
- Glycemia

Birth 8 hours 24 hours 48 hours
Risk x 8 for all 3 of them
EARLY GROWTH RATE

$(\text{Weight at D}_2 - \text{Weight at birth})$

Weight at birth
RISK if $x_8 \leq -4\%$
Weight at $D_2$ – Weight at birth \(336g - 350g = -14g\)

\[\underline{-14} \quad \text{Weight at birth}\]

\[-0.04 = -4\%\]
Check-Points

- APGAR Scores
- Weight
- Temperature
- Glycemia
- Early Growth Rate

Birth 8 hours 24 hours 48 hours
42 ± 32.1%
Did they get it... OR NOT???
4.9%

44.4%
Interest of early energy supplementation in puppies to control the risk of neonatal mortality
Le Gal, A., Mila, H., Grellet, A., Chastant-Maillard, S.

a Reproduction, Toulouse National Veterinary School, UMR INRA/ENVT 1225 IHAP, Université de Toulouse, INP-ENVT, Toulouse, France; b Royal Canin, Aimargues, France
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MALTODEXTRIN
EVERY 6H , FROM 12 to 48H
Interest of early energy supplementation in puppies to control the risk of neonatal mortality
Le Gal, A.\textsuperscript{a}, Mila, H.\textsuperscript{a}, Grellet, A.\textsuperscript{a,b}, Chastant-Maillard, S.\textsuperscript{a}
\textsuperscript{a} Reproduction, Toulouse National Veterinary School, UMR INRA/ENVT 1225 IHAP, Université
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MALTODEXTRIN

\textbf{EVERY 6H , FROM 12 to 48H}

\(\uparrow\) growth rate, \(\downarrow\) puppies at risk
“The perfect hyper-immune solution should provide the newborns not only with specific passive immunity but also with nutrients & energy.”
ROYAL CANIN PROTECH PUPPY / CHIOT COLOSTRUM + MILK LAIT

- Neonatal milk for puppies
- Lait néonatal pour chiots
- Leche neonatal para cachorros
- Заменитель сухого молока для щенков

NET WEIGHT / POIDS NET / PESO NETO / MACCA HETTO: 2.6 lb (1.2 kg/kr)
Thank you for your attention!

http://royalcaninshelterprogram.ning.com

http://royalcaninbreedersclub.ning.com

https://www.researchgate.net/publication/303474554_NeoCare_-_5_years_of_science_to_improve_the_health_of_newborn_puppies