



# Megacolon in Rabbits

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# Biography

HRS Educator and fosterer  
since 2003

Ran the Cape Fear House  
Rabbit Society in Wilmington,  
NC for 12 years

Currently serve as a board  
member, lead HRS Educator,  
and fosterer for Triangle  
Rabbits

Shared my home with four  
rabbits with megacolon



# What is megacolon?

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Megacolon, according to Fontanesi et al. 2014, is a "marked dilatation of the colon due to a severe dysmotility affecting the large bowel"

Two types of megacolon rabbits:  
genetic and acquired







# Who is likely to have megacolon?

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Bunnies with megacolon:

- Are frequently mostly white with some coat color, usually around the eyes, ears and along the back
- May have a broken mustache

Congenital condition present at birth:

- Symptoms generally start around age three and worsen with age

# Symptoms and signs

## Fecals:

- Large and oval shaped compared to the perfectly round normal rabbit droppings
- May be normal consistency or very wet and even mucousy
- Present from birth regardless of diet

## Cecals:

- Usually larger and smellier than normal rabbit cecals





# Genetics

- In 2010 scientists in Italy found the KIT gene, also known as the English Spotting Gene
- KIT gene is tied to both color spotting and a reduction in the number of nerves supplied to the GI system
- The En allele on the KIT gene controls color
- En/en heterozygous rabbits have the classic English Spot appearance and en/en rabbits are heavily spotted or nearly all color



# Expression of En gene in spotted rabbits



en/en Rabbit



En/en Rabbit



En/En Rabbits

# Genetics

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## Parents

**% of kit  
inheriting  
En/En**

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Charlie (En/En) x Charlie  
(En/En)

100

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Broken (En/en) x Charlie  
(En/En)

50

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Broken (En/en) x Broken  
(En/en)

25

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Solid (en/en) x Broken  
(En/en)

0

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Solid (en/en) x Charlie  
(En/En)

0

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Solid (en/en) x Solid  
(en/en)

0

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# What is the impact of all this on the rabbit?

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Lack the proper number of nerve cells enervating the cecum and large bowel

- Slower movement of the colon
- Irregular contractions
- Longer, slower flow of contents toward the anus
- Stools are larger and misshapen

Rabbit is more vulnerable to GI slowdown and ultimate shutdown



# What is the impact of all this on the rabbit?

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Irregular liquid absorption through the intestinal wall

- Stool tends to be too loose or too dry
- All these abnormalities may cause noticeable distention of the abdomen

Intestinal absorption is not normal so mc rabbits need extra nutrition





# What can I do?

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- ✓ Recognize this congenital condition
- ✓ Remember megacolon is manageable
- ✓ Get connected with the most rabbit savvy vet you can find







## First steps for management

- No incidents of runny stool or GI stasis
- Examine your bunny's diet
  - Extruded alfalfa pellets
  - Lots of hay
  - Green vegetables with emphasis on herbs







# If you suspect megacolon:

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- Discuss your concerns with your vet
- Do your homework and bring articles
- Rule out bacterial infection
- Discuss gut motility and pain medications with your vet





Living with rabbits  
with megacolon

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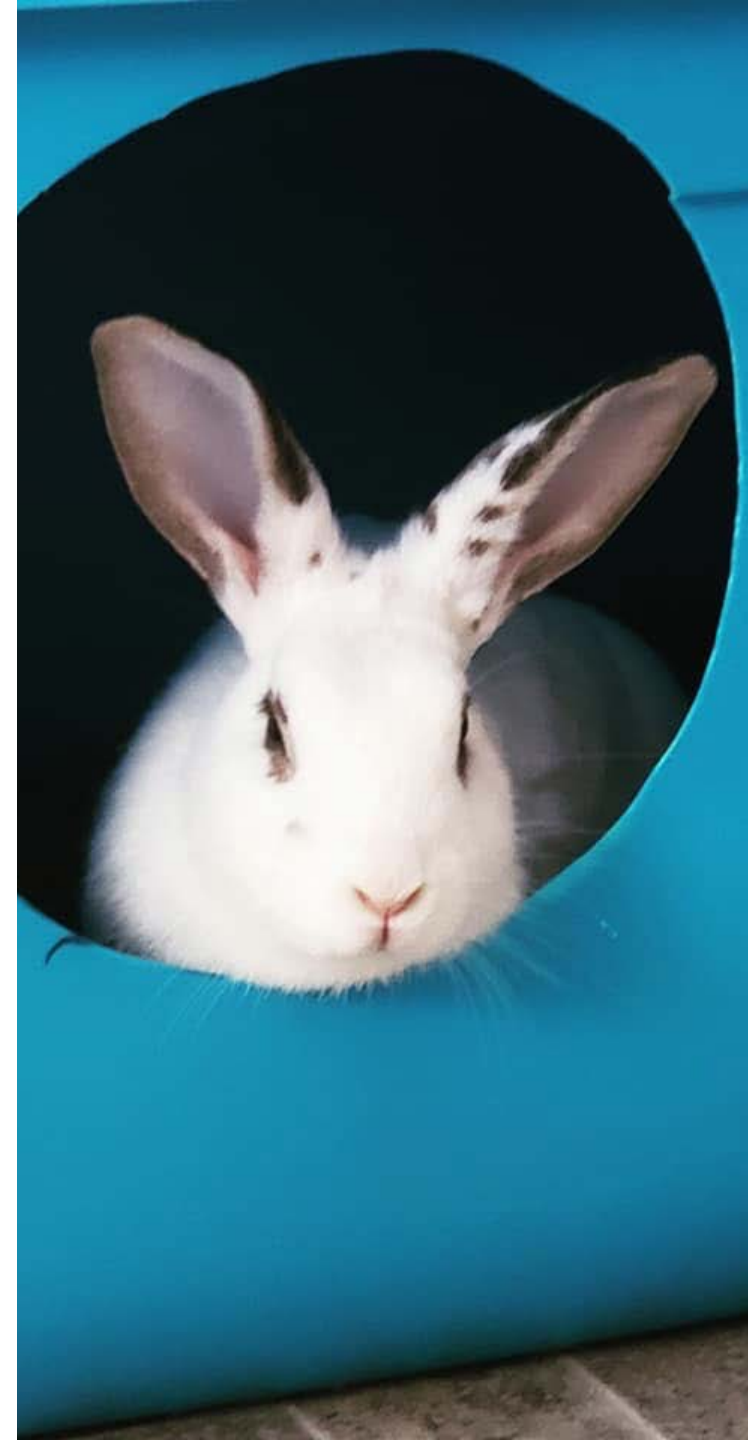
# Summary

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- Be proactive
- Learn to read the signs of GI slowdown
- Talk with your vet about steps you can take at home

# References

- The KIT Gene Is Associated with the English Spotting Coat Color Locus and Congenital Megacolon in Checkered Giant Rabbits (*Oryctolagus cuniculus*). 2014. L Fontanesi, M Vargiolu, E Scotti, R Latorre, MSF Pellegrini, M Mazzone, M Asti, R Chiocchetti, G Romeo, P Clavenzani, R De Giorgi. PLoS ONE 9(4): e93750. DOI: 10.1371/journal.pone.0093750.
- Megacolon - The curse of the 33 spots. Rob Reis. <http://vgr1.com/megacolon>. accessed 23 Feb 2020.
- Megacolon: Why you need to know about this condition that affects many rabbits. Dani Tomlin, Bunny Mad! Magazine, Issue 27, Spring 2017.
- Differential diagnosis for megacolon in rabbits. [http://www.medirabbit.com/EN/GI\\_diseases/Differential/mega\\_differential.htm](http://www.medirabbit.com/EN/GI_diseases/Differential/mega_differential.htm). accessed 23 Feb 2020.
- Megacolon in spotted/checkered rabbits. E van Praag. [http://www.medirabbit.com/EN/GI\\_diseases/Mega/mega\\_en.htm](http://www.medirabbit.com/EN/GI_diseases/Mega/mega_en.htm). accessed 23 Feb 2020.





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Member, HRS Educator,  
Triangle Rabbits



Thank you!

Questions?

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