

Work Related Health Among California Veterinarians:

{ Cumulative Trauma
{ Disorders and Skin Cancer

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Cumulative Trauma Disorders (CTDs)

“Have you ever experienced cumulative trauma disorders related to your job (repetitive and forceful motions or prolonged uncomfortable positions) that required treatment or restricted your usual occupational activities?”

Practice types:

1. No animal

2. Large (sum of dairy, beef, equine, small ruminant, or swine >80%)

3. Mixed (large animal between 20-80%)

4. Small animal (small animal >80%)

	Men (n=866)	Women (n=487)	All (n=1353)
Full-time, %	92	86	90
Mean age, yr	50	38	46
Mean yrs practice	23	10	18
Practice (%)			
Small (n=988)	69	82	74
Large (n=208)	19	9	15
Mixed (n=85)	7	6	7
No animal (n=61)	5	3	4

Characteristics of the study population

CTDs by practice (%)	Small (n=937)	Mixed (n=136)	Large (n=215)	No animal (n=69)	All (n=1357)
Total	20	28	47	25	25***
Treatment or meds	16	23	39	19	21***
Unable/rest ricted	6.0	8.8	13	8.7	7.4***
Continuous problems	14	24	30	13	17***

Cumulative Trauma Disorders by Practice Type

Injuries by practice (%)	Small (n=937)	Mixed (n=136)	Large (n=215)	No animal (n=69)	All (n=1357)
Back	11	12	17	7.2	12 NS
Shoulders	4.1	13	22	5.8	7.9***
Forearms	4.1	11	13	8.7	6.3***
Elbows	3.0	6.6	19	5.8	6.1***
Hands	4.2	6.6	13	5.8	6.0***
Neck	3.4	2.9	5.6	4.4	3.8 NS
Knees	2.0	4.4	7.9	0.0	3.1***

Feet, hips, legs all NS

Cumulative Trauma Disorders by Practice Type

CTD by cause of injury and practice type

Practice type	Small (n=186)	Mixed (n=38)	Large (n=100)	All (n=340)
Causes:				
Lifting	54	53	25	44***
Rectal palpation	10	39	64	31***
Holding instruments	28	16	2.0	19***
Calving manipulations	5.4	24	30	15***
Surgery or standing	12	2.6	2.0	7.9**
Equine dental work	1.1	2.6	20	7.1***

Bending on waist, driving, computer work, bending on knees NS

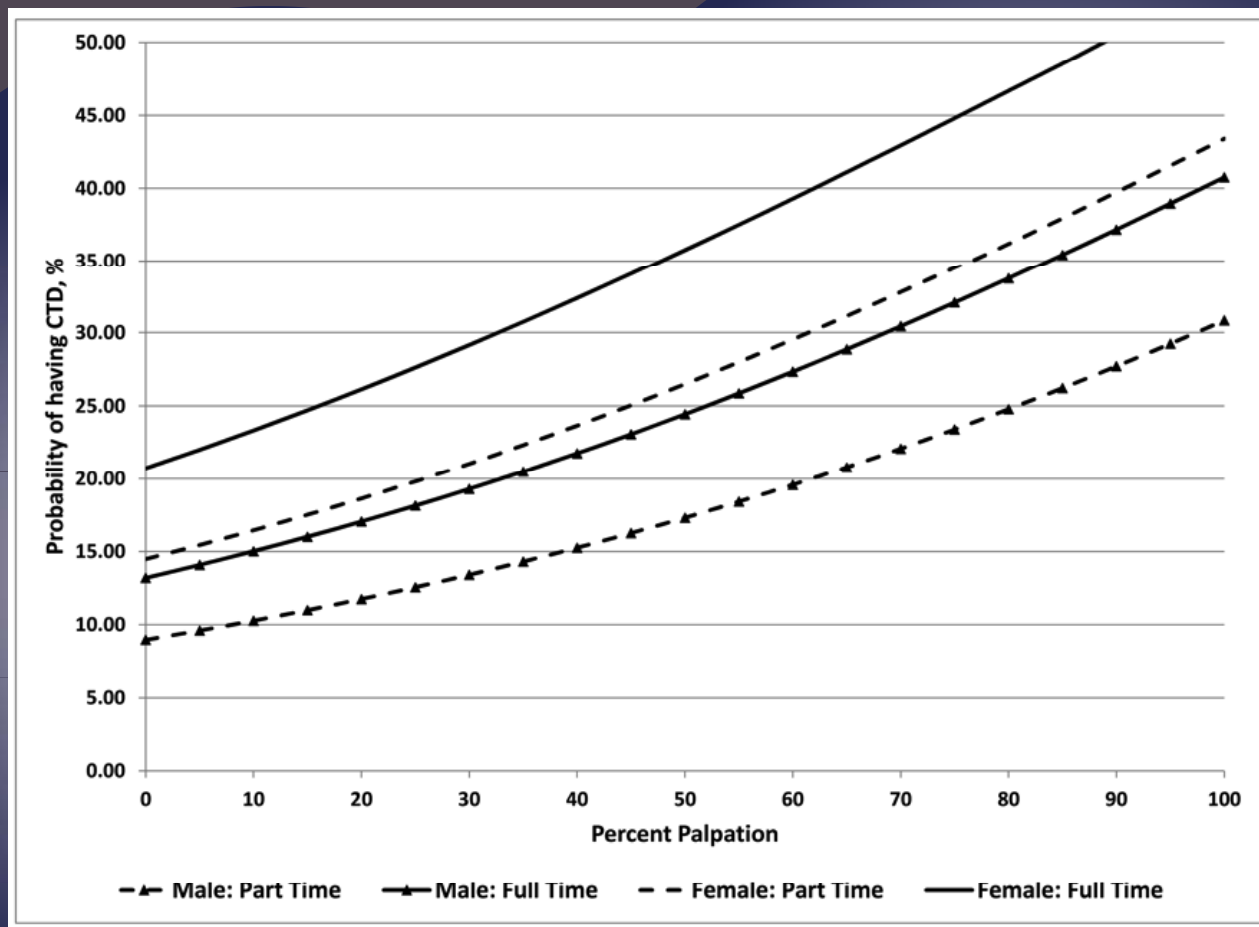
Treatment	%
Required treatment	80
Self	38
MD (GP or Specialist)	54
Hospital	5.0
Other (chiropractor, physical therapy, etc)	19

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Treatment for CTDs (n=340)

Effect	OR
Sex (female vs. male)	1.72
Full vs. part-time	1.54
% rectal palpation	1.02
% large animal practice	1.01
Work miles (1,000 driven/yr.)	1.02

Significant odds ratio estimates



Probability of CTD



Rectal palpation

⌘ Have you ever been diagnosed with any type of skin cancer?

⌘ What type of skin cancer was it and when was it diagnosed?

Skin cancer prevalence

	Men	Women	All
Any	13	4.3	10***
Basal cell	9.5	2.5	7.0***
Squamous cell	3.7	0.4	2.5***
Melanoma	1.2	0.6	1.0

Skin cancer prevalence

Age group, yrs.	N	Melanoma	Squamous cell	Basal cell
≤ 35	246	0	0	0
35-45	414	0.5	0.5	3.1
45-55	402	1.5	3.5	8.5
≥ 55	291	1.7	6.2	16
		*	***	***

Prevalences for women were somewhat lower than for men

Skin cancer by age group

Future analyses

- ⌘ Odds ratios by:
 - ⌘ Practice type
 - ⌘ Sex
 - ⌘ Full vs. part-time
 - ⌘ Practice activities
- ⌘ Speculate that practice types with more outside activities will have higher prevalence
- ⌘ A major confounder would be types of leisure activities and historic UV exposure

Advice for preventing on-the-job injuries (rank)

- **More caution and insight when handling animals**
- More adequately trained people to help
- Avoiding haste, more time for rest
- More ergonomic work conditions
- Better equipment of animal restraint
- Using protective devices
- Better medications for animal restraint
- More information about occupational hazards in veterinary schools



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