

Dog Impulsivity Assessment Scale (DIAS)

(Wright, Mills & Pollux, 2011)

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Blank DIAS (2 pages):

For each of the statements below please place a cross in the box that most accurately describes your level of agreement: The answer should reflect the *general personality of the dog*, so for example if a statement applies to your dog in some situations but not others, please make a judgement as to how much you agree

		Strongly agree	Mainly agree	Partly agree, partly disagree	Mainly disagree	Strongly disagree	Don't know / not applicable
1	My dog shows extreme physical signs when excited (e.g. drooling, panting, raising hackles, urination, licking lips, widening of eyes)						
2	When my dog gets very excited it can lead to fixed repetitive behaviour (i.e. an action that is repeated in the same way over and over again), such as tail chasing or spinning around in circles						
3	I would consider my dog to be very impulsive (i.e. has sudden, strong urges to act; acts without forethought; acts without considering effects of actions)						
4	My dog doesn't like to be approached or hugged						
5	My dog becomes aggressive (e.g. growl, snarl, snap, bite) when excited						
6	My dog <u>appears</u> to be 'sorry' after it has done something wrong						
7	My dog does not think before it acts (e.g. would steal food without first looking to see if someone is watching)						
8	My dog can be very persistent (e.g. will continue to do something even if it knows it will get punished or told off)						
9	My dog may become aggressive (e.g. growl, snarl, snap, bite) if frustrated with something						
10	My dog is easy to train						

		Strongly agree	Mainly agree	Partly agree, partly disagree	Mainly disagree	Strongly disagree	Don't know / not applicable
11	My dog is not keen to go into new situations						
12	My dog takes a long time to lose interest in new things						
13	My dog calms down very quickly after being excited						
14	My dog appears to have a lot of control over how it responds						
15	My dog is very interested in new things and new places						
16	My dog reacts very quickly						
17	My dog is not very patient (e.g. gets agitated waiting for its food, or waiting to go out for a walk)						
18	My dog seems to get excited for no reason						

Blank DIAS scoring sheet (2 pages):

Scoring: 5=strongly agree, 4=mainly agree, 3=partly/partly, 2=mainly disagree, 1=strongly disagree.

(R) = Reverse the score (i.e., 4 becomes 2; 3 stays as 3; 1 becomes 5)

Overall Questionnaire Score (OQS):

1	
2	
3	
4	
5	
6	
7	
8	
9	
15	
16	
17	
18	
(R) 10	
(R) 11	
(R) 12	
(R) 13	
(R) 14	
Total / (number of questions answered*5)	

Calculation explained:

(Sum of scores)

DIVIDED BY

[Number of items answered (i.e. don't know, not applicable counts as unanswered)
MULTIPLIED BY 5 (i.e. the maximum possible score for a single item)]

Factor 1 (Behavioural Regulation) Score:

1	
2	
3	
7	
8	
17	
18	
(R) 13	
(R) 14	
(R) 10	
Total / (number of questions answered*5)	

Factor 2 (Aggression / Response to Novelty) Score:

4	
5	
9	
11	
(R) 15	
Total / (number of questions answered*5)	

Factor 3 (Responsiveness) Score:

6	
10	
12	
16	
15	
Total / (number of questions answered*5)	

DIAS (completed example A, no missing data)

		Scores 5	Scores 4	Scores 3	Scores 2	Scores 1	Not scored (missing data)
	Example of scoring:	Strongly agree	Mainly agree	Partly agree, partly disagree	Mainly disagree	Strongly disagree	Don't know / not applicable
1	My dog shows extreme physical signs when excited (e.g. drooling, panting, raising hackles, urination, licking lips, widening of eyes)		x				
2	When my dog gets very excited it can lead to fixed repetitive behaviour (i.e. an action that is repeated in the same way over and over again), such as tail chasing or spinning around in circles				x		
3	I would consider my dog to be very impulsive (i.e. has sudden, strong urges to act; acts without forethought; acts without considering effects of actions)		x				
4	My dog doesn't like to be approached or hugged		x				
5	My dog becomes aggressive (e.g. growl, snarl, snap, bite) when excited			x			
6	My dog <u>appears</u> to be 'sorry' after it has done something wrong		x				
7	My dog does not think before it acts (e.g. would steal food without first looking to see if someone is watching)			x			

		Scores 5	Scores 4	Scores 3	Scores 2	Scores 1	Not scored (missing data)
	Example of scoring:	Strongly agree	Mainly agree	Partly agree, partly disagree	Mainly disagree	Strongly disagree	Don't know / not applicable
8	My dog can be very persistent (e.g. will continue to do something even if it knows it will get punished, told off or not rewarded)		x				
9	My dog may become aggressive (e.g. growl, snarl, snap, bite) if frustrated with something			x			
10	My dog is easy to train		x				
11	My dog is not keen to go into new situations				x		
12	My dog takes a long time to lose interest in new things				x		
13	My dog calms down very quickly after being excited		x				
14	My dog appears to have a lot of control over how it responds		x				
15	My dog is very interested in new things and new places		x				
16	My dog reacts very quickly	x					
17	My dog is not very patient (e.g. gets agitated waiting for its food, or waiting to go out for a walk)			x			
18	My dog seems to get excited for no reason					x	

DIAS (example calculation A, no missing data)

Scoring from questionnaire: 5=strongly agree, 4=mainly agree, 3=partly/partly, 2=mainly disagree, 1=strongly disagree.

(R) = Reverse the score (i.e., 4 becomes 2; 3 stays as 3; 1 becomes 5)

Overall Questionnaire Score:

1	4
2	2
3	4
4	4
5	3
6	4
7	3
8	4
9	3
15	4
16	5
17	3
18	1
(R) 10	2
(R) 11	4
(R) 12	4
(R) 13	2
(R) 14	2
Total / (number of questions answered*5)	=58/(18*5) =58/90 = 0.64

Factor 1 (Behavioural Regulation) Score:

1	4
2	2
3	4
7	3
8	4
17	3
18	1
(R) 13	2
(R) 14	2
(R) 10	2
Total / (number of questions answered*5)	$=27/(10*5)$ $=27/50$ =0.54

Factor 2 (Aggression / Response to Novelty) Score:

4	4
5	3
9	3
11	2
(R) 15	2
Total / (number of questions answered*5)	$=14/(5*5)$ $=14/25$ =0.56

Factor 3 (Responsiveness) Score:

6	4
10	4
12	2
16	5
15	4
Total / (number of questions answered*5)	$=19/(5*5)$ $=19/25$ =0.76

DIAS (completed example B, missing data)

		Scores 5	Scores 4	Scores 3	Scores 2	Scores 1	Not scored (missing data)
	Example of scoring:	Strongly agree	Mainly agree	Partly agree, partly disagree	Mainly disagree	Strongly disagree	Don't know / not applicable
1	My dog shows extreme physical signs when excited (e.g. drooling, panting, raising hackles, urination, licking lips, widening of eyes)		x				
2	When my dog gets very excited it can lead to fixed repetitive behaviour (i.e. an action that is repeated in the same way over and over again), such as tail chasing or spinning around in circles						x
3	I would consider my dog to be very impulsive (i.e. has sudden, strong urges to act; acts without forethought; acts without considering effects of actions)		x				
4	My dog doesn't like to be approached or hugged		x				
5	My dog becomes aggressive (e.g. growl, snarl, snap, bite) when excited			x			
6	My dog <u>appears</u> to be 'sorry' after it has done something wrong						x
7	My dog does not think before it acts (e.g. would steal food without first looking to see if someone is watching)			x			

		Scores 5	Scores 4	Scores 3	Scores 2	Scores 1	Not scored (missing data)
	Example of scoring:	Strongly agree	Mainly agree	Partly agree, partly disagree	Mainly disagree	Strongly disagree	Don't know / not applicable
8	My dog can be very persistent (e.g. will continue to do something even if it knows it will get punished, told off or not rewarded)		X				
9	My dog may become aggressive (e.g. growl, snarl, snap, bite) if frustrated with something						X
10	My dog is easy to train		X				
11	My dog is not keen to go into new situations				X		
12	My dog takes a long time to lose interest in new things				X		
13	My dog calms down very quickly after being excited		X				
14	My dog appears to have a lot of control over how it responds		X				
15	My dog is very interested in new things and new places						X
16	My dog reacts very quickly	X					
17	My dog is not very patient (e.g. gets agitated waiting for its food, or waiting to go out for a walk)			X			
18	My dog seems to get excited for no reason					X	

DIAS (example calculation B, missing data)

Scoring from questionnaire: 5=strongly agree, 4=mainly agree, 3=partly/partly, 2=mainly disagree, 1=strongly disagree.

(R) = Reverse the score (i.e., 4 becomes 2; 3 stays as 3; 1 becomes 5)

Overall Questionnaire Score:

1	4
2	missing data
3	4
4	4
5	3
6	missing data
7	3
8	4
9	missing data
15	missing data
16	5
17	3
18	1
(R) 10	2
(R) 11	4
(R) 12	4
(R) 13	2
(R) 14	2
Total / (number of questions answered*5)	$45/(14*5)$ $= 45/70$ $= \mathbf{0.64}$

Factor 1 (Behavioural Regulation) Score:

1	4
2	missing data
3	4
7	3
8	4
17	3
18	1
(R) 13	2
(R) 14	2
(R) 10	2
Total / (number of questions answered*5)	$=25/(9*5)$ $=25/45$ =0.56

Factor 2 (Aggression / Response to Novelty) Score:

4	4
5	3
9	missing data
11	2
(R) 15	missing data
Total / (number of questions answered*5)	$=9/(3*5)$ $=9/15$ =0.60

Factor 3 (Responsiveness) Score:

6	missing data
10	4
12	2
16	5
15	missing data
Total / (number of questions answered*5)	$=11/(3*5)$ $=11/15$ =0.73

Further information:

DIAS score interpretation:

Overall Questionnaire Score (OQS)

Higher score = higher impulsivity

Factor 1 (Behavioural Regulation)

Higher score = lower behavioural regulation (i.e. higher impulsivity)

Factor 2 (Aggression & Response to Novelty)

Higher score = higher aggression / negative responses to novelty

Factor 3 (Responsiveness)

Higher score = higher responsiveness

Distribution of DIAS scores: Wright et al, 2011 (n=560):

	mean ± Std.Dev
Overall Questionnaire Score (OQS)	0.5169 ± (0.1001)
Factor 1 (Behavioural Regulation)	0.4713 ± (0.1550)
Factor 2 (Aggression & Response to Novelty)	0.3662 ± (0.1468)
Factor 3 (Responsiveness)	0.6990 ± (0.1302)

References:

Wright, H, F., Mills, D.S., Pollux, P.M.J. (2011) Development and validation of a psychometric tool for assessing Impulsivity in the Domestic Dog (*Canis familiaris*). *International Journal of Comparative Psychology* **24**:210-255.

Wright, H, F., Mills, D.S., Pollux, P.M.J. (2012) Behavioural and physiological correlates of impulsivity in the domestic dog (*Canis familiaris*). *Physiology & Behavior* **105**:676-682.

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