

# **Best Evidence Summaries of Topics in Mental Healthcare**

## **BEST** in MH clinical question-answering service

## Question

"In adults with dementia, how effective are group exercise interventions, compared to any other intervention, in improving patient outcomes?"

#### **Clarification of question using PICO structure**

Patients: Adults with dementia Intervention: Group exercise interventions Comparator: Any other intervention Outcome: Improving patient outcomes

Email: awp.BESTinMH@nhs.net Phone: 0117 378 4232/4233/4335



#### **Clinical and research implications**

There is some weak evidence, from one systematic review and one additional randomised controlled trial (RCT), that exercise interventions may have a small beneficial effect on cognition and ability to perform activities of daily living in people with dementia. The results of a second RCT indicated that exercise may significantly slow decline in physical function, but only where an intensive, tailored home-based exercise intervention was used. Studies included in the systematic review, and additional RCTs, were conducted in populations with differing severities of dementia, evaluated exercise programs with differing content, intensity and duration, and used different measurement scales to assess outcomes. Further research is needed on the effectiveness of exercise programs for patients with dementia; future studies should aim to standardise key intervention characteristics and should investigate possible variation in effectiveness according to severity of disease.

#### What does the evidence say?

#### Number of included studies/reviews (number of participants)

We identified one systematic review,<sup>1</sup> and two additional randomised controlled trials (RCTs),<sup>2,3</sup> which reported data relevant to this evidence summary. The systematic review included RCTs that compared exercise programs (any combination of aerobic, balance, and strength training )of any duration to usual care or a social contact intervention, in people with any type and severity of dementia.<sup>1</sup> Both additional RCTs were three arm trials.<sup>2,3</sup> One compared and exercise intervention (tai chi) to a cognitive intervention (mahjong) or a control (simple handicrafts); most (84%) of participants in this trial had very mild or mild dementia.<sup>2</sup> The second RCT compared a group exercise intervention to a tailored home-based exercise intervention or a control (usual community care); the majority (67%) of participants in this study had moderate or severe Alzheimer's disease (AD).<sup>3</sup>

#### Main Findings

The systematic review found evidence of a borderline significant treatment effect, in favour of the exercise intervention, for measures of cognition (standard mean difference (SMD) 0.55 (95% CI: 0.02 to 1.09)) and measures of activities of daily living (ADL) (SMD 0.68 (95% CI: 0.08 to 1.27)), but no significant effect on measures of depression or challenging behaviour.<sup>1</sup> However, studies used to generate these summary estimates were conducted in populations with differing severities of dementia, evaluated exercise programs with differing content, intensity and duration, and used different measurement scales to assess outcomes.<sup>1</sup> The RCT that compared mahjong, tai chi and a control handicraft activity found significant differences in MMSE score between the mahjong and control groups and between the tai chi and control groups, at 6 and 9 months.<sup>2</sup> Over the 9-month period of the study, the control group dropped 2.9 points (95% CI: -4.2 to -1.7) on the MMSE, whereas the mahjong and tai chi groups gained 1.5 (95% CI: 0.0 to 3.0) and 1.3 (95% CI: 0.0 to 2.5) points, respectively.<sup>2</sup> The RCT that compared group exercise, tailored home-based exercise and a usual care control found that physical functioning on the Functional Independence Measure (FIM) declined less, over 12 months, in the exercise groups than in the control group.<sup>3</sup> However, the difference at 12 months was only significant for the tailored home-based exercise intervention.<sup>3</sup> Neither intervention showed a significant effect on Short Physical Performance Battery (SPPB) scores.<sup>3</sup>

#### Authors Conclusions

On systematic review concluded that there is promising evidence that exercise programs can have a significant impact in improving ability to perform ADLs and possibly in improving cognition in people with dementia, although some caution is advised in interpreting these findings. The review also concluded that there was no evidence of a significant effect on challenging behaviours or depression and a lack of data for other outcomes of interest. One additional RCT concluded that mahjong and tai chi can preserve functioning or delay decline in some cognitive domains. A second RCT concluded that an intensive and long-term exercise program had beneficial effects on the physical functioning of patients with AD.

#### Reliability of conclusions/Strength of evidence

One high quality Cochrane systematic review concluded that there was promising evidence that exercise programs can improve ability to perform ADLs and cognition in people with dementia.<sup>1</sup> However, it should be noted that the summary estimates supporting these conclusions were of borderline statistical significance and were derived from studies conducted in populations with differing severities of dementia, which evaluated exercise programs with differing content, intensity and duration, and used different measurement scales to assess outcomes.<sup>1</sup> One additional RCT, which compared a cognitive intervention (mahjong) to an exercise intervention (tai chi), or a control, found that both interventions were associated with a borderline significant improvement in Mini Mental State Examination (MMSE) score over 9 months, compared to control.<sup>2</sup> It should be noted that this study included mainly people with very mild or mild dementia, was poorly reported with respect to randomisation and allocation procedures, and used un-blinded outcome assessment procedures ( a potential source of bias).<sup>2</sup> The remaining RCT compared a group exercise program, a tailored home-based exercise program and a usual care control and concluded that long-term intensive exercise has beneficial effects on physical functioning in people with AD and had some methodological quality limitations.<sup>3</sup> Treatment effects were only observed for one of the two measures of physical function assessed and the difference between treatment and control, was only statistically significant for the tailored home-based exercise program.<sup>3</sup>

#### What do guidelines say?

SIGN guidelines for the management of people with dementia (CG86, 2006)make the following recommendations regarding group exercise;

"The suggested benefits of exercise programmes for people with dementia include improvements in ambulatory status, walking endurance and urinary continence, but there is a lack of good quality evidence to support this."

"Evidence from patients in residential care suggests that a combination of conversation and exercise on a structured basis may reduce deterioration in mobility in people with dementia but there is no evidence to support the use of either intervention in isolation."

"Overall the clinical impact of physical activities on core or associated symptoms of dementia is minimal."

"For people with dementia, a combination of structured exercise and conversation may

help maintain mobility."

"For people with dementia, a combination of structured exercise and conversation may help maintain mobility."

(pp.11)

"Individualised activities adapted to maximise the person's remaining abilities and based on previous interests may be more beneficial to people with dementia than generic activities." (pp.12)

NICE guidelines (CG42,2006)make the following recommendations regarding exercise but do not specifically comment on 'group' exercise;

"Health and social care staff should aim to promote and maintain the independence, including mobility, of people with dementia. Care plans should address activities of daily living (ADLs) that maximise independent activity, enhance function, adapt and develop skills, and minimise the need for support. When writing care plans, the varying needs of people with different types of dementia should be addressed. Care plans should always include:

physical exercise, with assessment and advice from a physiotherapist when needed." (pp.25)

"A range of tailored interventions, such as reminiscence therapy, multisensory stimulation, animalassisted therapy and exercise, should be available for people with dementia who have depression and/or anxiety."

(pp.36)

The evidence included in this summary is consistent with current guidlines.

Date question received: 13/02/2014 Date searches conducted: 17/02/2014 Date answer completed: 10/03/2014

#### References

#### SRs

1. Forbes, D., Thiessen, E.J., Blake, C.M., Forbes, S.C. and Forbes, S. (2013) Exercise programs for people with dementia. *Cochrane Database of Systematic Reviews*, Issue 12

#### RCTs

- Cheng S-T., Chow P.K., Song Y-Q., Yu E., Chan A.C.M., Lee T.M.C, and Lam J.H.M. (2014) Mental and Physical Activities Delay Cognitive Decline in Older Persons with Dementia. *Am. J. Geriatr. Psychiatry*;22(1):63-74.
- Pitkala K.H., Poysti M.M., Laakkonen M-L., Tilvis R.S., Savikko N., Kautiainen H. and Strandberg T.E. (2013) Effects of the Finnish Alzheimer Disease Exercise Trial (FINALEX). JAMA Internal Med;173(10):894-901.

#### Guidelines

National Institute for Health and Care Excellence (2006) Dementia. Supporting people with dementia and their carers in health and social care. CG42. London: National Institute for Health and Care Excellence.

http://www.nice.org.uk/nicemedia/live/10998/30318/30318.pdf

Scottish Intercollegiate Guidelines Network (2006) Management of patients with dementia. A national clinical guideline. CG86. Edinburgh. Scottish Intercollegiate Guidelines Network. http://www.sign.ac.uk/pdf/sign86.pdf

#### Results

#### Systematic Reviews

Author	Search	Inclusion criteria	Number	Summary of results	Risk of bias
(year)	Date		of		
			included		
			studies		
Forbes et	09/2011,	Participants:	17 data	This systematic review aimed to assess the	Clear research
al. (2013)	08/2012	The majority of participants in trials had to be	sets,	effects of exercise programs for older people	objectives were
	and	adults over 65 years diagnosed as having dementia	from 16	with dementia on cognition, activities of	defined and
	10/2013	using accepted criteria such as DSM-III-R/DSM-IV,	studies	daily living (ADLs), challenging behaviour,	inclusion criteria
		ICD-10 or CERAD-K.	were	depression, healthcare service use and	were reported.
		Intervention:	included	mortality. It also aimed to assess effects on	
		Any exercise program with any combination of	in the	family caregivers' burden, quality of life, and	Searches used
		aerobic-, strength- or balance-training (any	review.	mortality.	ALOIS, the
		duration).			Cochrane Dementia
		Comparator:		Included studies were conducted in people	and Cognitive
		Usual care or social contact/activities		with varying disease severity, from studies	Improvement
		Outcomes:		which included only people with mild	Group's Specialised
		Primary outcomes; cognition, activities of daily		dementia, to studies which included only	Register, which is
		living (ADL), challenging behaviour, depression and		people with severe Alzheimer's disease (AD);	up-dated monthly
		mortality of people with dementia.		sample size ranged from 12 to 191. In all	from a number of
		Secondary outcomes; caregiver burden, quality of		cases, the majority of study participants	bibliographic
		life and mortality. Use of healthcare services by		were female, and ten studies reported a	databases. The
		people with dementia and their family caregivers.		mean age for participants of >80 years. The	search strategy also
		Study design:		content, intensity and duration of exercise	included grey
		Randomised controlled trails (RCTs), (parallel		programs varied. Content was classified as	literature sources.
		group or cross-over).		aerobic and/or strength and/or balance. The	There were no
				duration of the intervention ranged from 2	language

	weeks to 1 year, and intensity ranged from	restrictions.
	20 minutes 3x/week to 30 minutes daily. For	
	most included studies, the comparator was	The review process
	either a social contact intervention or usual	included measures
	care. The main potential source of bias in	to minimise error
	included studies was in relation to non-	and/or bias
	blinding of study participants and personnel	(involvement of at
	(a consequence of the nature of the	least two reviewers
	intervention).	throughout).
	Cognition:	The methodological
	Where all studies (n=8) were included in the	quality of included
	analysis, there was a borderline positive	studies was
	effect in favour of exercise; SMD 0.55 (95%	assessed using the
	CI: 0.02 to 1.09). When studies conducted in	Cochrane risk of
	people with moderate to severe dementia	bias tool.
	were excluded, there was no statistically	
	significant difference between the exercise	Summary estimates
	and control groups.	were calculated
		where studies used
	ADL:	the same outcome
	Based on data from six studies, there was a	measure
	borderline positive effect in favour of	(cognition, ADL, or
	exercise SMD 0.68 (95% CI: 0.08 to 1.27).	depression, not
	Severity of dementia varied across the six	necessarily using
	studies, from a study that included only	the same scale). A
	people with mild AD to a study that included	fixed effect model
	only people with severe AD; no subgroup	was used where
	analyses were presented.	the I <sup>2</sup> statistic

			(measure of
		Depression:	between study
		Based on data from five studies, there was	heterogeneity) was
		no statistically significant difference	<30%; otherwise a
		between the exercise and control groups.	random effects
		Studies included people with mild-moderate,	model was use.
		mild-severe, or moderate-severe dementia;	Where available,
		no subgroup analyses were presented.	intention-to-treat
			(ITT) data were
		Challenging behaviour:	used in meta-
		The only study to report data on challenging	analyses. Analytical
		behaviours was conducted in people with	methods were
		mild to moderate AD (n=110) and reported	broadly
		no significant difference between the	appropriate, but
		exercise and control groups.	summary estimates
			should be
			interpreted
			cautiously due to
			the variety of
			content, intensity
			and duration of the
			exercise programs
			evaluated by
			included studies, as
			well as variation in
			the comparator
			condition. One
			sensitivity analysis
			was conducted to

		explore the effect
		of excluding trials
		in people with
		moderate- severe
		dementia.

RCTs

Author	Inclusion criteria	Number of	Summary of results	Risk of bias
(year)		participants		
Cheng	Participants:	n=110 (Tai	This study aimed to asses the effects of cognitive stimulation	The study was
et al.	Participants were recruited from 9 nursing	Chi n=39,	(mahjong) and physical exercise (tai chi) on cognitive	described as a
(2014)	homes in Hong Kong. Inclusion criteria;	Mahjong	performance in people with dementia, compared with a	cluster
	MMSE score of 10-24, suffering from at	n=36,	control condition of simple handicrafts activities.	randomised
	least very mild dementia. Exclusion	simple		trial, with no
	criteria; being bedbound, audio/visual	handicraft	The mean age of study participants was approximately 81	further details
	impairment, regular activity participation	n=35)	years and the majority were female. With the exception of	reported.
	before study or contradictions for physical		diastolic blood pressure, there were no significant baseline	
	or group activities.		differences between the three groups with respect to	Due to the
	Intervention:		demographic characteristics, measures of general health,	nature of the
	Tai-Chi, a seated 12-form Yang style tailor		depression, or cognition. Most study participants had a	intervention
	made for frail individuals. 1 hour, 3 times a		Clinical Dementia Rating (CDR) indicative of very mild	and the
	week for 12 consecutive weeks.		dementia (46%) or mild dementia (38%); the remaining 16%	difficulty in
	Comparator:		had moderate dementia.	preventing
	Mahjong (136 tiles version) or simple			participants
	handicrafts which involved connecting		MMSE:	from talking
	beads to create different shapes. All 1		The effects of mahjong and tai chi, compared to control,	about the
	hour, 3 times a week for 12 consecutive		varied by time. Significant differences between the groups	intervention to
	weeks.		occurred at 6 and 9 months only. The difference in MMSE	interviewers,

	Outcomes:		between tai chi and control was 2.3 (95% CI: 0.4 to 4.2) and	participants,
	Primary outcome; MMSE score. Secondary		3.7 (95% CI: 1.4 to 6.0) points, at 6 and 9 months	study
	outcomes; immediate/delayed recall,		respectively. The difference in MMSE between mahjong and	personnel and
	categorical fluency and digit span.		control was 3.0 (95% CI: 0.9 to 5.0) and 4.5 (95% CI: 2.0 to	outcome
			6.9) points, at 6 and 9 months respectively. Over the 9-month	assessors were
			period of the study, the control group dropped 2.9 points	all un-blinded.
			(95% CI: -4.2 to -1.7) on the MMSE, whereas the mahjong	
			and tai chi groups gained 1.5 (95% CI: 0.0 to 3.0) and 1.3 (95%	ITT analyses
			CI: 0.0 to 2.5) points, respectively.	were
				reported.
			Secondary outcomes:	
			Despite an overall significant interaction with time, the	Results were
			individual means for the mahjong and tai chi groups, on any	reported for
			secondary outcome measure, were not significantly different	all specified
			from those of the control group at all time points.	outcomes.
Pitkala	Participants:	n=210,	This study aimed to assess the effects of intense and long-	The
et al.	Patients on the AD drug reimbursement	(group	term exercise on the physical functioning and mobility of	randomisation
(2013)	register of the Social Insurance Institution	exercise	home-dwelling patients with AD.	Used a
	of Finland who were living at the same	program		computer-
	address as their spouse. Inclusion criteria:	n=61, home	The mean age of study participants was approximately 78	generated
	fulfilled the criteria for diagnosis of	based	years and the majority were female. 67.1% suffered from	sequence;
	probable AD according to NINCDS-ADRDA;	exercise	moderate or severe AD according to the CDR and 96% were	numbers
	aged 65 years or older; able to walk with	program	receiving AD medication. There were no apparent baseline	received by
	or without a mobility aid; no other	n=68,	differences between the groups with respect to demographic	telephone
	terminal disease; at least 1 of fall during	control	characteristics, number of medications, or measures or	from a
	the past year, decreased walking speed, or	n=65).	function and cognition.	randomisation
	unintentional weight loss.			centre.
	Intervention:		FIM:	Randomisation
	Group based exercise, 4-hour sessions		Functioning deteriorated over time in all groups, but	centre did not

with approximately 1-hour training, twice	deterioration was less in the exercise groups than in the	know the
a week for 1 year. Classes followed a	control group. Over the 12 month period of the study, the	identities of
predetermined exercise program	FIM change was -7.1 (95% CI: -3.7 to-10.5) in the home	the potential
consisting of endurance, balance, strength	exercise group, -10.3 (95% CI: -6.7 to -13.9) in the group	participants.
training and exercised for improving	exercise group, and -14.4 (95% CI: -10.9 to-18.0] in the	
executive functioning.	control group. The difference between the home exercise	The nature of
Comparator:	group and the control group was significant at 6 ( $P$ = .001)	the
Tailored home-based exercise, 1-hour	and 12 (P = .004) months, but there was no significant	intervention
training twice a week forf 1 year or control	difference between the group exercise and control groups at	precluded
group receiving usual community care.	either time point. The changes in the FIM motor function	blinding of
Outcomes:	scores differed significantly between the groups, but no	participants
Physical functioning (Functional	differences in the FIM cognitive scores were observed (no	and study
Independence Measure (FIM)) and	data reported).	personnel,
mobility (Short Physical Performance		however,
Battery (SPPB)) and information on the use	SPPB:	outcome
and costs of social and health care	There were no significant differences in SPPB scores between	assessors were
services.	the groups.	blind to
		treatment
		group.
		ITT analyses
		were
		reported.
		Full results
		were not
		reported for
		SPPB.

## Risk of Bias: SRs

Author (year)	Risk of Bias						
	Inclusion criteria	Searches	Review Process	Quality assessment	Synthesis		
Forbes et al. (2013)					8		

#### RCTs

Study	RISK OF BIAS					
	Random allocation	Allocation concealment	Blinding of participants and personnel	Blinding of outcome assessment	Incomplete outcome data	Selective Reporting
Cheng et al. (2014)	?	?	8	8		$\odot$
Pitkala et al. (2013)			8		$\odot$	8

🙂 Low Risk

High Risk ? Unclear Risk

### Search Details

Source	Sear	ch Strategy	Number of hits	Relevant evidence identified
SRs and G	uidelin	es		
NICE	Dem	entia AND exercise	106	2
DARE	1	(group*)	95	
	2	MeSH DESCRIPTOR Group Processes EXPLODE ALL TREES		
	3	(exercis*)		
	4	(physical adj3 activit*)		
	5	(fitness)		
	6	(sport)		
	7	(physical adj2 (intervention* OR therap* OR activit*))		
	8	MeSH DESCRIPTOR Exercise EXPLODE ALL TREES		
	9	MeSH DESCRIPTOR Sports EXPLODE ALL TREES		
	10	MeSH DESCRIPTOR Physical Fitness EXPLODE ALL TREES		
	11	(dement*)		
	12	MeSH DESCRIPTOR Alzheimer Disease EXPLODE ALL TREES		
	13	MeSH DESCRIPTOR Dementia EXPLODE ALL TREES		
	14	MeSH DESCRIPTOR Lewy Body Disease EXPLODE ALL TREES		
	15	(alzheimer*)		
	16	#1 OR #2		
	17	#3 OR #4 OR #5 OR #6 OR #7 OR #8 OR #9 OR #10		
	18	#11 OR #12 OR #13 OR #14 OR #15		
	19	#16 AND #17		
	20	#18 AND #19		
Primary st	tudies		1	
CENTRAL	#1 D	ementia:ti,ab,kw 4727	131	

	#2 Alzheimer* Alzheimer* 5228		
	#3 MeSH descriptor: [Dementia] explode all trees 3568		
	#4 #1 or #2 or #3#1 or #2 or #3 8268		
	#5 "physical activity""physical activity" 7178		
	#6 exercise 43454		
	#7 MeSH descriptor: [Exercise] explode all trees 12693		
	#8 #5 or #6 or #7 47661		
	#9 group or groups or classes 342157		
	#10 #4 and #8 and #9 = 131	50	
Embase	1. EMBASE; *DEMENTIA/; 4002/ results.	53	
	2. EMBASE; dementia.ti,ab; 88194 results.		
	3. EMBASE; alzheimer*.ti,ab; 116149 results.		
	4. EMBASE; 1 OR 2 OR 3; 178521 results.		
	<ol><li>EMBASE; "physical activity".ti,ab; 71302 results.</li></ol>		
	7. EMBASE; exercise.ti,ab; 215201 results.		
	8. EMBASE; exp EXERCISE/; 204600 results.		
	9. EMBASE; exp PHYSICAL ACTIVITY/; 225698 results.		
	12. EMBASE; group-activit*.ti,ab; 1184 results.		
	<ol> <li>EMBASE; group-intervention*.ti,ab; 3089 results.</li> </ol>		
	14. EMBASE; group-based.ti,ab: 4442 results.		
	15. EMBASE; 12 OR 13 OR 14; 8641 results.		
	16. EMBASE; 6 OR 7 OR 8 OR 9; 492854 results.		
	17. EMBASE; 15 AND 16; 1074 results.		
	18. EMBASE; group-exercis*.ti,ab; 1117 results.		
	19. EMBASE; group-physical.ti,ab; 286 results.		
	20. EMBASE; exercise-class*.ti,ab; 490 results.		
	21. EMBASE; 18 OR 19 OR 20; 1831 results.		
	22. EMBASE; 17 OR 21; 2846results.		
	23. EMBASE; 4 AND 22; 53 results.		
Medline	33. MEDLINE; *DEMENTIA/; 27364 results.	12	

	34. MEDI INE: dementia ti ab: 63620 results		
	35. MEDLINE: alzheimer* ti ab: 87340 results		
	36. MEDLINE: 33 OR 34 OR 35: 132460 results.		
	37. MEDLINE: "physical activity".ti.ab: 53200 results.		
	38. MEDLINE: exercise.ti.ab: 170618 results.		
	39. MEDLINE: exp EXERCISE/: 114492 results.		
	40. MEDLINE: exp PHYSICAL ACTIVITY/: 188093 results.		
	41. MEDLINE: 37 OR 38 OR 39 OR 40: 325072 results.		
	43. MEDLINE: group-activit*.ti.ab: 934 results.		
	44. MEDLINE: group-intervention*.ti.ab: 1641 results.		
	45. MEDLINE: group-based.ti.ab: 3242 results.		
	46. MEDLINE: 43 OR 44 OR 45: 5771 results.		
	47. MEDLINE; 41 AND 46; 596 results.		
	48. MEDLINE; group-exercis*.ti,ab; 791 results.		
	49. MEDLINE; group-physical.ti,ab; 214 results.		
	50. MEDLINE; exercise-class*.ti,ab; 311 results.		
	51. MEDLINE; 47 OR 50; 899 results.		
	52. MEDLINE; 36 AND 51; 12 results.		
PsycINFO	58. PsycINFO; *DEMENTIA/; 20146 results.	18	
-	59. PsycINFO; dementia.ti,ab; 41445 results.		
	60. PsycINFO; alzheimer*.ti,ab; 38456 results.		
	61. PsycINFO; 58 OR 59 OR 60; 64227 results.		
	62. PsycINFO; "physical activity".ti,ab; 16727 results.		
	63. PsycINFO; exercise.ti,ab; 31639 results.		
	64. PsycINFO; exp EXERCISE/; 16200 results.		
	65. PsycINFO; exp PHYSICAL ACTIVITY/; 22805 results.		
	66. PsycINFO; 62 OR 63 OR 64 OR 65; 47772 results.		
	67. PsycINFO; group-activit*.ti,ab; 1687 results.		
	68. PsycINFO; group-intervention*.ti,ab; 2704 results.		
	69. PsycINFO; group-based.ti,ab; 2423 results.		
	70. PsycINFO; 67 OR 68 OR 69; 6736 results.		
	71. PsycINFO; 66 AND 70; 316 results.		

Summary	NA	NA	
	77. PsycINFO; 61 AND 76; 18 results.		
	76. PsycINFO; 71 OR 75; 922 results.		
	75. PsycINFO; 72 OR 73 OR 74; 628 results.		
	74. PsycINFO; exercise-class*.ti,ab; 197 results.		
	73. PsycINFO; group-physical.ti,ab; 90 results.		
	72. PsycINFO; group-exercis*.ti,ab; 364 results.		

#### Disclaimer

BEST in MH answers to clinical questions are for information purposes only. BEST in MH does not make recommendations. Individual health care providers are responsible for assessing the applicability of BEST in MH answers to their clinical practice. BEST in MH is not responsible or liable for, directly or indirectly, any form of damage resulting from the use/misuse of information contained in or implied by these documents. Links to other sites are provided for information purposes only. BEST in MH cannot accept responsibility for the content of linked sites.

© Best Evidence Summaries of Topics in Mental Health 2013