

### Supplement 4: Search Strategies

#### Recommendation 1. Initial LMWH dose selection in obese patients with acute VTE.

OVERVIEW	
Interface:	Ovid
Database:	Ovid MEDLINE(R) In-Process & Other Non-Indexed Citations and Ovid MEDLINE(R) 1946 to Present
Date of Search:	January 24, 2017
Study Types:	Systematic reviews; Randomized controlled trials; Observational studies
Limits:	None
Search Strategy: search terms (number of results)	
1.	exp deep vein thrombosis/
2.	exp Venous Thromboembolism/
3.	exp pulmonary embolism/
4.	Thrombophlebitis/
5.	(PE or DVT or VTE).mp.
6.	((Pulmon\$ or vein or venous or lung) adj (Emboli\$ or thromb\$)).mp.
7.	(thrombus* or thrombotic* or thrombolic* or thromboemboli* or thrombos* or embol*).mp.
8.	((deep or thromb* or stasis) adj2 (vein* or venous)) or (blood flow stasis or blood clot).mp.
9.	or/1-8
10.	exp Heparin/ or heparin.mp.
11.	exp Heparin, Low-Molecular-Weight/
12.	dalteparin/ or enoxaparin/ or nadroparin/ or heparinoids/
13.	(LMWH or LMWHs or low molecular weight heparin or nadroparin or fraxiparin* or enoxaparin* or clexane or klexane or lovenox or dalteparin or fragmin or ardeparin* or normiflo or tinzaparin or logiparin or innohep or certoparin or sandoparin or reviparin or clivarin* or danaproid or danaparoid or orgaran or antixarin or bemiparin* or hibor or zibor or ivor or badyket or semuloparin or parnaparin or tedelparin or fluxum or lohepa or lowhepa or parvoparin or seleparin* or tedelgliparin or lomoparan or orgaran or sulodexide or zivor or embolex or xaparin or clivarine).mp.
14.	(FR-860 or FR 860 or FR860 or PK-10,169 or PK 10,169 or PK10,169 or PK-10169 or PK 10169 or PK10169 or EMT-967 or EMT 967 or EMT967 or EMT-966 or EMT 966 or EMT966 or CY 216 or CY-216 or CY216 or LMF CY-216 or LMF CY 216 or LMF CY216).mp.
15.	or/10-14
16.	systematic review/
17.	meta-analysis/
18.	(meta analy* or metanaly* or metaanaly*).ti,ab.
19.	(reference list* or bibliograph* or hand search* or manual search* or relevant journals).ab.
20.	((systematic* or evidence*) adj2 (review* or overview*)).ti,ab.
21.	(search strategy or search criteria or systematic search or study selection or data extraction).ab.
22.	(search* adj4 literature).ab.
23.	(medline or pubmed or cochrane or embase or psychlit or psyclit or psychinfo or psycinfo or cinahl or science citation index or bids or cancerlit).ab.
24.	((pool* or combined) adj2 (data or trials or studies or results)).ab.
25.	cochrane.jw.
26.	or/16-25
27.	animals/ not humans/
28.	nonhuman/

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29. exp Animal Experiment/
30. exp Experimental Animal/
31. animal model/
32. exp Rodent/
33. (rat or rats or mouse or mice).ti.
34. 27 or 28 or 29 or 30 or 31 or 32 or 33
35. 26 not 34
36. randomized controlled trial.pt.
37. controlled clinical trial.pt.
38. Clinical Trials as topic.sh.
39. trial.ti,ab.
40. factorial\*.ti,ab.
41. (crossover\* or cross over\*).ti,ab.
42. ((doubl\* or singl\*) adj blind\*).ti,ab.
43. (assign\* or allocat\* or volunteer\* or placebo\*).ti,ab.
44. placebo.ab.
45. random\*.ti,ab.
46. or/36-45
47. animals/ not humans/
48. exp Animals, Laboratory/
49. exp Animal Experimentation/
50. exp Models, Animal/
51. exp Rodentia/
52. (rat or rats or mouse or mice).ti.
53. or/47-52
54. 46 not 53
55. exp Dosage Forms/ or exp Drug Dosage Calculations/ or Dose-Response Relationship, Drug/ or Drug Administration Schedule/
56. Body Weight/ or Body Mass Index/
57. exp Obesity/ or exp Overweight/ or (obes\$ or overweight or over-weight).ti,ab,kw.
58. (((actual or ideal\* or dos\*) adj body weight) or (cap\* adj dos\*) or weight-based treatment).mp.
59. 55 or 56 or 57 or 58
60. 15 and 59
61. 9 and 60
62. 35 and 61
63. 54 and 61
64. 61 or 62 or 63
65. epidemiologic studies/
66. exp case control studies/
67. exp cohort studies/
68. cross-sectional studies/
69. case control.ti,ab.
70. (cohort adj (study or studies or analys\*)).ti,ab.
71. ((follow up or observational or uncontrolled or non randomi#ed or nonrandomi#ed or epidemiologic\*) adj (study or studies)).ti,ab.
72. ((longitudinal or retrospective or prospective or cross sectional) and (study or studies or review or analys\* or cohort\*)).ti,ab.
73. or/65-72
74. 61 and 73
75. 74 or 64
76. 75 not 34
77. remove duplicates from 76

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Records Retrieved: 2270

**OVERVIEW**

Interface: Ovid  
Database: Embase 1974 to 2017 Week 03  
Date of Search: January 24, 2017  
Study Types: Systematic reviews; Randomized controlled trials; Observational studies  
Limits: None

**Search Strategy: search terms (number of results)**

1. exp vein thrombosis/
2. exp Venous Thromboembolism/
3. exp 'lung embolism'/
4. Thrombophlebitis/
5. (PE or DVT or VTE).mp.
6. ((Pulmon\$ or vein or venous or lung) adj (Emboli\$ or thromb\$)).mp.
7. (thrombus\* or thrombotic\* or thrombolic\* or thromboemboli\* or thrombos\* or embol\*).mp.
8. (((deep or thromb\* or stasis) adj2 (vein\* or venous)) or (blood flow stasis or blood clot)).mp.
9. or/1-8
10. exp heparin derivative/ or heparin\*.mp.
11. nadroparin/
12. enoxaparin/
13. dalteparin/
14. ardeparin/
15. tinzaparin/
16. certoparin/
17. reviparin/
18. danaparoid/
19. (LMWH or LMWHs or low molecular weight heparin or nadroparin or fraxiparin\* or enoxaparin\* or clexane or klexane or lovenox or dalteparin or fragmin or ardeparin\* or normiflo or tinzaparin or logiparin or innohep or certoparin or sandoparin or reviparin or clivarin\* or danaproid or danaparoid or orgaran or antixarin or bemiparin\* or hibor or zibor or ivor or badyket or semuloparin or parnaparin or tedelparin or fluxum or lohepa or lowhepa or parvoparin or seleparin\* or tedelgliparin or lomoparan or orgaran or sulodexide or zivor or embolex or xaparin or clivarine).mp.
20. (FR-860 or FR 860 or FR860 or PK-10,169 or PK 10,169 or PK10,169 or PK-10169 or PK 10169 or PK10169 or EMT-967 or EMT 967 or EMT967 or EMT-966 or EMT 966 or EMT966 or CY 216 or CY-216 or CY216 or LMF CY-216 or LMF CY 216 or LMF CY216).mp.
21. or/10-20
22. random\*.ti,ab.
23. trial.ti,ab.
24. factorial\*.ti,ab.
25. (crossover\* or cross over\*).ti,ab.
26. ((doubl\* or singl\*) adj blind\*).ti,ab.
27. (assign\* or allocat\* or volunteer\* or placebo\*).ti,ab.
28. placebo.ab.
29. crossover procedure/
30. single blind procedure/
31. randomized controlled trial/
32. double blind procedure/
33. or/22-32

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34. animals/ not humans/
35. nonhuman/
36. exp Animal Experiment/
37. exp Experimental Animal/
38. animal model/
39. exp Rodent/
40. (rat or rats or mouse or mice).ti.
41. 34 or 35 or 36 or 37 or 38 or 39 or 40
42. 33 not 41
43. systematic review/
44. meta-analysis/
45. (meta analy\* or metanaly\* or metaanaly\*).ti,ab.
46. (reference list\* or bibliograph\* or hand search\* or manual search\* or relevant journals).ab.
47. ((systematic\* or evidence\*) adj2 (review\* or overview\*)).ti,ab.
48. (search strategy or search criteria or systematic search or study selection or data extraction).ab.
49. (search\* adj4 literature).ab.
50. (medline or pubmed or cochrane or embase or psychlit or psyclit or psychinfo or psycinfo or cinahl or science citation index or bids or cancerlit).ab.
51. ((pool\* or combined) adj2 (data or trials or studies or results)).ab.
52. cochrane.jw.
53. or/43-52
54. animals/ not humans/
55. nonhuman/
56. exp Animal Experiment/
57. exp Experimental Animal/
58. animal model/
59. exp Rodent/
60. (rat or rats or mouse or mice).ti.
61. 54 or 55 or 56 or 57 or 58 or 59 or 60
62. 53 not 61
63. exp Dosage Forms/ or exp Drug Dosage Calculations/ or Dose-Response Relationship, Drug/ or Drug Administration Schedule/
64. Body Weight/ or Body Mass Index/
65. (((actual or ideal\* or dos\*) adj body weight) or (cap\* adj dos\*) or weight-based treatment).mp.
66. 63 or 64 or 65
67. clinical study/
68. exp case control study/
69. family study/
70. longitudinal study/
71. prospective study/
72. cross-sectional study/
73. cohort analysis/
74. follow-up/
75. cohort\*.ti,ab.
76. (cohort adj (study or studies or analys\*)).ti,ab.
77. case control.ti,ab.
78. ((follow up or observational or uncontrolled or non randomi#ed or nonrandomi#ed or epidemiologic\*) adj (study or studies)).ti,ab.
79. ((longitudinal or retrospective or prospective or cross sectional) and (study or studies or review or analys\* or cohort\*)).ti,ab.
80. or/67-79
81. 9 and 21
82. 81 and 66

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83. 82 and (33 or 53 or 80)
84. 83 not 41
85. remove duplicates from 84
<b>Records Retrieved: 2070</b>

**OVERVIEW**

Interface:	Cochrane Library
Database:	Cochrane Database of Systematic Reviews
Date of Search:	January 24, 2017
Study Types:	Systematic reviews; Trials
Limits:	None

**Search Strategy: search terms (number of results)**

#1	MeSH descriptor: [Drug Dosage Calculations] explode all trees
#2	MeSH descriptor: [Dose-Response Relationship, Drug] this term only
#3	MeSH descriptor: [Dosage Forms] explode all trees
#4	MeSH descriptor: [Drug Administration Schedule] this term only
#5	MeSH descriptor: [Body Weight] this term only
#6	MeSH descriptor: [Body Mass Index] explode all trees
#7	((actual or ideal* or dos*) near body weight) or (cap* near dos*) or (weight-based treatment))
#8	MeSH descriptor: [Obesity] explode all trees
#9	MeSH descriptor: [Overweight] explode all trees
#10	(obes* or overweight or over-weight)
#11	#1 or #2 or #3 or #4 or #5 or #6 or #7 or #8 or #9 or #10
#12	MeSH descriptor: [Heparin] explode all trees
#13	MeSH descriptor: [Heparin, Low-Molecular-Weight] explode all trees
#14	MeSH descriptor: [Heparinoids] this term only
#15	MeSH descriptor: [Dalteparin] this term only
#16	MeSH descriptor: [Enoxaparin] this term only
#17	MeSH descriptor: [Nadroparin] this term only
#18	(LMWH or LMWHs or low molecular weight heparin or heparin* or nadroparin or fraxiparin* or enoxaparin* or clexane or klexane or lovenox or dalteparin or fragmin or ardeparin* or normiflo or tinzaparin or logiparin or innohep or certoparin or sandoparin or reviparin or clivarin* or danaproid or danaparoid or organon or antixarin or bemiparin* or hibor or zibor or ivor or badyket or semuloparin or parnaparin or tedelparin or fluxum or lohepa or lowhepa or parvoparin or seleparin* or tedelgliparin or lomoparan or organon or sulodexide or zivor or embolex or xaparin or clivarine)
#19	(FR-860 or FR 860 or FR860 or PK-10,169 or PK 10,169 or PK10,169 or PK-10169 or PK 10169 or PK10169 or EMT-967 or EMT 967 or EMT967 or EMT-966 or EMT 966 or EMT966 or CY 216 or CY-216 or CY216 or LMF CY-216 or LMF CY 216 or LMF CY216)
#20	#12 or #13 or #14 or #15 or #16 or #17 or #18 or #19
#21	MeSH descriptor: [Venous Thrombosis] explode all trees
#22	MeSH descriptor: [Thromboembolism] explode all trees
#23	MeSH descriptor: [Venous Thromboembolism] explode all trees
#24	MeSH descriptor: [Pulmonary Embolism] explode all trees
#25	MeSH descriptor: [Thrombophlebitis] this term only
#26	(DVT or VTE or PE)
#27	((Pulmon* or vein or venous or lung) near (Emboli* or thromb*))
#28	(Thrombus* or thrombotic* or thrombolic* or thromboemboli* or thrombos* or embol*)
#29	((deep or thromb* or stasis) near/2 (vein* or venous)) or (blood flow stasis or blood clot))
#30	#21 or #22 or #23 or #24 or #25 or #26 or #27 or #28 or #29

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#31	#11 and #20
#32	#31 and #30
<b>Records Retrieved: 535</b>	

**Recommendation 2.** IDOAC interactions in VTE patients requiring administration of inhibitors or inducers of P-glycoprotein (P-gp) or strong inhibitors or inducers of cytochrome (CYP) enzymes

OVERVIEW	
Interface:	Ovid
Database:	Ovid MEDLINE(R) In-Process & Other Non-Indexed Citations and Ovid MEDLINE(R) 1946 to Present
Date of Search:	March 27, 2017
Study Types:	Randomized controlled trials; Observational studies
Limits:	None
Search Strategy: search terms (number of results)	
1.	exp Drug Interactions/
2.	exp P-Glycoprotein/ or exp P-Glycoproteins/
3.	exp Cytochrome P-450 Enzyme System/ or exp Cytochrome P-450 CYP1A2/
4.	((P-Glycoprotein or P-gp or CYP) adj (inhibitor* or inducer*)).ti,ab,kw.
5.	interaction*.ti,ab,kw.
6.	1 or 2 or 3 or 4 or 5
7.	Antithrombins.mp. or exp Antithrombins/
8.	thrombin inhibitor/ or thrombin inhibitor.mp.
9.	Factor Xa Inhibitors.mp. or exp Factor Xa Inhibitors/
10.	rivaroxaban/ or dabigatran etexilate/ or apixaban/ or edoxaban/ or betrixaban/ or ximelagatran/
11.	(rivaroxaban or Xarelto or apixaban or Eliquis or dabigatran etexilate or Edoxaban or Savaysa or Betrixaban or ximelagatran or pradaxa or lixiana or exanta or Darexaban or Otamixaban\$ or Razaxaban or Bivalirudin or Desirudin or Lepirudin or Melagatran or YM 150 or Iprivask or argatrovan or pradax or BIBR-953 or BIBR-953ZW or BAY 59-7939 or BMS-562247 or DU-176 or DU-176b).mp.
12.	(TSOAC\$ or NOAC\$ or DOAC\$).ti,ab,kw.
13.	((Target adj Specific adj Oral adj Anticoagulant\$) or (oral adj anticoagulant\$) or (novel adj anticoagulant\$) or (new adj anticoagulant\$) or (direct\$ adj anticoagulant\$)).mp.
14.	((new or novel or direct or direct-acting or target-specific or targeted or non-vitamin K) adj3 oral anticoagulant*).mp.
15.	(factor Xa adj2 (antag* or inhibit*)).mp.
16.	or/7-15
17.	epidemiologic studies/
18.	exp case control studies/
19.	exp cohort studies/
20.	cross-sectional studies/
21.	case control.ti,ab.
22.	(cohort adj (study or studies or analys*)).ti,ab.
23.	((follow up or observational or uncontrolled or non randomi#ed or nonrandomi#ed or epidemiologic*) adj (study or studies)).ti,ab.
24.	((longitudinal or retrospective or prospective or cross sectional) and (study or studies or review or analys* or cohort*)).ti,ab.
25.	or/17-24
26.	6 and 16 and 25
26.	randomized controlled trial.pt.
27.	controlled clinical trial.pt.
28.	Clinical Trials as topic.sh.

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29. trial.ti,ab.
30. factorial\*.ti,ab.
31. (crossover\* or cross over\*).ti,ab.
32. ((doubl\* or singl\*) adj blind\*).ti,ab.
33. (assign\* or allocat\* or volunteer\* or placebo\*).ti,ab.
34. placebo.ab.
35. random\*.ti,ab.
36. or/26-35
37. 6 AND 16 AND (25 OR 36)

**Records Retrieved: 833**

### OVERVIEW

Interface:	Ovid
Database:	Embase 1974 to 2016 Week 07
Date of Search:	March 27, 2017
Study Types:	Randomized controlled trials; Observational studies
Limits:	None

### Search Strategy: search terms (number of results)

1. clinical study/
2. exp case control study/
3. family study/
4. longitudinal study/
5. prospective study/
6. cross-sectional study/
7. cohort analysis/
8. follow-up/
9. cohort\*.ti,ab.
10. cohort\*.ti,ab.
11. (cohort adj (study or studies or analys\*)).ti,ab.
12. case control.ti,ab.
13. ((follow up or observational or uncontrolled or non randomi#ed or nonrandomi#ed or epidemiologic\*) adj (study or studies)).ti,ab.
14. ((longitudinal or retrospective or prospective or cross sectional) and (study or studies or review or analys\* or cohort\*)).ti,ab.
15. 1 or 2 or 3 or 4 or 5 or 6 or 7 or 8 or 9 or 10 or 11 or 12 or 13 or 14
16. exp drug interaction/
17. ((P-Glycoprotein or P-gp or CYP) adj (inhibitor\* or inducer\*)).ti,ab,kw.
18. interaction\*.ti,ab,kw.
19. exp multidrug resistance protein/
20. exp cytochrome P450/
21. exp cytochrome p450 1a2/ or exp cytochrome p450 1a2 inducer/ or exp cytochrome p450 1a2 inhibitor/
22. or/16-21
23. exp antithrombin/ or Antithrombins.mp.
24. thrombin inhibitor/ or thrombin inhibitor.mp.
25. Factor Xa Inhibitors.mp. or exp blood clotting factor 10a inhibitor/
26. rivaroxaban/ or dabigatran etexilate/ or apixaban/ or edoxaban/ or betrixaban/ or ximelagatran/ or Darexaban/ or Otamixaban/ or Razaxaban/ or Bivalirudin/ or Desirudin/ or Lepirudin/ or Melagatran/
27. (rivaroxaban or Xarelto or apixaban or Eliquis or dabigatran etexilate or Edoxaban or Savaysa or



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Betrixaban or ximelagatran or pradaxa or lixiana or exanta or Darexaban or Otamixaban\$ or Razaxaban or Bivalirudin or Desirudin or Lepirudin or Melagatran or YM 150 or Iprivask or argatrovan or pradax or BIBR-953 or BIBR-953ZW or BAY 59-7939 or BMS-562247 or DU-176 or DU-176b).mp.  
 28. (TSOAC\$ or NOAC\$ or DOAC\$).ti,ab,kw.  
 29. ((Target adj Specific adj Oral adj Anticoagulant\$) or (oral adj anticoagulant\$) or (novel adj anticoagulant\$) or (new adj anticoagulant\$) or (direct\$ adj anticoagulant\$)).mp.  
 30. ((new or novel or direct or direct-acting or target-specific or targeted or non-vitamin K) adj3 oral anticoagulant\*).mp.  
 31. (factor Xa adj2 (antag\* or inhibit\*)).mp.  
 32. or/23-31  
 33. 22 and 32  
 34. 15 and 33  
 35. random\*.ti,ab.  
 36. trial.ti,ab.  
 37. factorial\*.ti,ab.  
 38. (crossover\* or cross over\*).ti,ab.  
 39. ((doubl\* or singl\*) adj blind\*).ti,ab.  
 40. (assign\* or allocat\* or volunteer\* or placebo\*).ti,ab.  
 41. placebo.ab.  
 42. crossover procedure/  
 43. single blind procedure/  
 44. randomized controlled trial/  
 45. double blind procedure/  
 46. or/25-35  
 47. 22 AND 32 AND (15 OR 46)

**Records Retrieved: 1563**

**OVERVIEW**

Interface: Cochrane Library  
 Database: Cochrane Database of Systematic Reviews  
 Date of Search: March 27, 2017  
 Study Types: Trials  
 Limits: 2015 - Current

**Search Strategy: search terms (number of results)**

#1 MeSH descriptor: [Drug Interactions] explode all trees  
 #2 MeSH descriptor: [P-Glycoprotein] explode all trees  
 #3 MeSH descriptor: [P-Glycoproteins] explode all trees  
 #4 MeSH descriptor: [Cytochrome P-450 Enzyme System] explode all trees  
 #5 MeSH descriptor: [Cytochrome P-450 CYP1A2] explode all trees  
 #6 ((P-Glycoprotein or P-gp or CYP) near (inhibitor\* or inducer\*)):ti,ab,kw  
 #7 (interaction\$):ti,ab,kw  
 #8 #1 or #2 or #3 or #4 or #5 or #6 or #7  
 #9 MeSH descriptor: [Antithrombins] explode all trees  
 #10 MeSH descriptor: [Factor Xa Inhibitors] explode all trees  
 #11 (rivaroxaban or Xarelto or apixaban or Eliquis or dabigatran etexilate or Edoxaban or Savaysa or Betrixaban or ximelagatran or pradaxa or lixiana or exanta or Darexaban or Otamixaban\$ or Razaxaban or Bivalirudin or Desirudin or Lepirudin or Melagatran or YM 150 or Iprivask or argatrovan or pradax or BIBR-953 or BIBR-953ZW or BAY 59-7939 or BMS-562247 or DU-176 or DU-176b)

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#12 ((Target adj Specific adj Oral adj Anticoagulant\$) or (oral adj anticoagulant\$) or (novel adj anticoagulant\$) or (new adj anticoagulant\$) or (direct adj anticoagulant\$))

#13 ((new or novel or direct or direct-acting or target-specific or targeted or non-vitamin K) near/3 oral anticoagulant\*)

#14 (factor Xa adj2 (antag\* or inhibit\*))

#15 #9 or #10 or #11 or #12 or #13 or #14

#16 #8 and #15

**Records Retrieved: 166**

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**Recommendation 3 & 4.** Home point-of-care INR testing (patient self-testing; PST) with or without self-adjustment of the VKA dose (patient self-management; PSM) in patients receiving maintenance VKA therapy for treatment of VTE

**OVERVIEW**

Interface:	Ovid
Database:	Ovid MEDLINE(R) In-Process & Other Non-Indexed Citations and Ovid MEDLINE(R) 1946 to Present
Date of Search:	January 17, 2017
Study Types:	Randomized controlled trials
Limits:	20150601- Current

**Search Strategy: search terms (number of results)**

1. exp 4-Hydroxycoumarins/ or warfarin/ or acenocoumarol/ or dicumarol/ or Coumarins/ or coumarin anticoagulant/ or ethyl biscoumacetate/ or phenprocoumon/ or phenindione/
2. vitamin K antagonist\$.mp.
3. (4-Hydroxycoumarins or warfarin or acenocoumarol or nicoumalone or sinthrome or Sintrom or phenindione or dicoumarol or coumadin or phenprocoumon or phepromaron or ethyl-biscoumacetate or phenindione or Diphenadione or Tiocloamarol or Racumi or Marcoumar or Marcumar or Falithrom or Coumadin or Jantoven or vitamin K antagonist\$ or VKA or fluindione or difenacoum or coumatetralyl).mp.
4. exp anticoagulant agent/
5. Anticoagula\$.mp.
6. or/1-5
  
7. randomized controlled trial.pt.
8. controlled clinical trial.pt.
9. Clinical Trials as topic.sh.
10. trial.ti,ab.
11. factorial\*.ti,ab.
12. (crossover\* or cross over\*).ti,ab.
13. ((doubl\* or singl\*) adj blind\*).ti,ab.
14. (assign\* or allocat\* or volunteer\* or placebo\*).ti,ab.
15. placebo.ab.
16. random\*.ti,ab.
17. or/7-16
18. animals/ not humans/
19. exp Animals, Laboratory/
20. exp Animal Experimentation/
21. exp Models, Animal/
22. exp Rodentia/
23. (rat or rats or mouse or mice).ti.
24. or/18-23
25. 17 not 24
26. exp Point-of-Care Systems/
27. exp Self Care/
28. exp Self administration/
29. exp International Normalized Ratio/

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30. Patient education/
31. exp Consumer Participation/
32. exp Drug Monitoring/
33. ((Point-of-care or monitor\* or manage\*) adj home).mp.
34. (self adj1 (monitor\* or test\* or management\*)).ti,ab,kw.
35. ((monitor\* or test\* or management\*) adj1 home).ti,ab,kw.
36. (patient\* adj2 (cent\* or participat\* or monitor\* or manage\* or measur\* or adjust\*)).mp.
37. (self\* or home\* or coagucheck or coaguhek or prothrombin monitor\* or coagulometer\* or consumer\*).mp.
38. or/26-37
39. 6 and 38
40. 25 and 39
41. limit 40 to ed=20150601-20170105

**Records Retrieved: 168**

### OVERVIEW

Interface: Ovid  
Database: Embase 1974 to 2016 Week 52  
Date of Search: January 17, 2017  
Study Types: Randomized controlled trials  
Limits: 201526 - Current

### Search Strategy: search terms (number of results)

1. exp 4 hydroxycoumarin/ or exp 4 hydroxycoumarin derivative/
2. warfarin/
3. acenocoumarol/
4. coumarin/ or coumarin derivative/
5. phenindione/
6. dicoumarol derivative/ or dicoumarol/
7. phenprocoumon/
8. phepromaron/
9. ethyl biscoumacetate/
10. fluindione/ or difenacoum/ or coumatetralyl/
11. vitamin K antagonist.mp. or antivitamin K/
12. (4 hydroxycoumarin or warfarin or acenocoumarol or nicoumalone or sinthrome or Sintrom or phenindione or dicoumarol or coumadin or phenprocoumon or phepromaron or ethyl-biscoumacetate or phenindione or Diphenadione or Tiocloamarol or Racumi or Marcoumar or Marcumar or Falithrom or Coumadin or Jantoven or vitamin K antagonist\$ or VKA or fluindione or difenacoum or coumatetralyl).mp.
13. exp anticoagulant agent/
14. Anticoagula\$.mp.
15. or/1-14
16. random\*.ti,ab.
17. trial.ti,ab.
18. factorial\*.ti,ab.
19. (crossover\* or cross over\*).ti,ab.
20. ((doubl\* or singl\*) adj blind\*).ti,ab.
21. (assign\* or allocat\* or volunteer\* or placebo\*).ti,ab.
22. placebo.ab.

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<p>23. crossover procedure/                  24. single blind procedure/                  25. randomized controlled trial/                  26. double blind procedure/                  27. or/16-26                  28. animals/ not humans/                  29. nonhuman/                  30. exp Animal Experiment/                  31. exp Experimental Animal/                  32. animal model/                  33. exp Rodent/                  34. (rat or rats or mouse or mice).ti.                  35. or/28-34                  36. 27 not 35                  37. exp hospital information system/                  38. exp self care/                  39. exp drug monitoring/                  40. ((Point-of-care or monitor* or manage*) adj home).mp.                  41. (self adj1 (monitor* or test* or management*)).ti,ab,kw.                  42. ((monitor* or test* or management*) adj1 home).ti,ab,kw.                  43. International Normalized Ratio/                  44. exp drug self administration/                  45. patient education/                  46. exp Consumer Participation/                  47. (patient* adj2 (cent* or participat* or monitor* or manage* or measur* or adjust*)).mp.                  48. (self* or home* or coagucheck or coaguheck or prothrombin monitor* or coagulometer* or consumer*).mp.                  49. or/37-48                  50. 15 and 49                  51. 36 and 50                  52. limit 51 to em=201523-201652</p>
<b>Records Retrieved: 1272</b>

<b>OVERVIEW</b>	
Interface:	Cochrane Library
Database:	Cochrane Database of Systematic Reviews
Date of Search:	January 17, 2017
Study Types:	Systematic reviews;
Limits:	2015 - Current
<b>Search Strategy: search terms (number of results)</b>	
#1	MeSH descriptor: [Point-of-Care Systems] explode all trees
#2	MeSH descriptor: [Self Care] explode all trees
#3	MeSH descriptor: [Self Administration] explode all trees
#4	MeSH descriptor: [International Normalized Ratio] explode all trees
#5	MeSH descriptor: [Patient Education as Topic] this term only
#6	MeSH descriptor: [Consumer Participation] explode all trees
#7	(patient* near/2 (cent* or participat* or monitor* or manage* or measur* or adjust*))

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#8	(self* or home* or coaguchek or coaguchek or (prothrombin monitor*) or coagulometer* or consumer*)
#9	MeSH descriptor: [Drug Monitoring] explode all trees
#10	((Point-of-care or monitor* or manage*) near home)
#11	self near/1 (monitor* or test* or management*):ti,ab,kw
#12	((monitor* or test* or management*) near/1 home):ti,ab,kw
#13	#1 or #2 or #3 or #4 or #5 or #6 or #7 or #8 or #9 or #10 or #11 or #12
#14	MeSH descriptor: [Warfarin] explode all trees
#15	MeSH descriptor: [Acenocoumarol] explode all trees
#16	MeSH descriptor: [Phenindione] explode all trees
#17	MeSH descriptor: [Coumarins] explode all trees
#18	MeSH descriptor: [Dicumarol] explode all trees
#19	MeSH descriptor: [Phenprocoumon] explode all trees
#20	MeSH descriptor: [Ethyl Biscoumacetate] explode all trees
#21	MeSH descriptor: [4-Hydroxycoumarins] explode all trees
#22	MeSH descriptor: [Phenprocoumon] explode all trees
#23	(4 hydroxycoumarin or warfarin or acenocoumarol or nicoumalone or sinthrome or Sintrom or phenindione or dicoumarol or coumadin or phenprocoumon or phepromaron or ethyl-biscoumacetate or phenindione or Diphenadione or Tioclomarol or Racumi or Marcoumar or Marcumar or Falithrom or Coumadin or Jantoven or vitamin K antagonist\$ or VKA or fluindione or difenacoum or coumatetralyl)
#24	MeSH descriptor: [Anticoagulants] explode all trees
#25	Anticoagula*
#26	#14 or #15 or #16 or #17 or #18 or #19 or #20 or #21 or #22 or #23 or #24 or #25
#27	#13 and #26 Publication Year from 2015 to 2017
<b>Records Retrieved: 166</b>	

**Recommendation 5 & 6.** INR recall intervals in patients on vitamin K antagonist therapy for VTE, following dose adjustment for out-of-range INR or with stable INR control

<b>OVERVIEW</b>	
Interface:	Ovid
Database:	Medline, and Medline In-Process & Other Non-Indexed Citations (1946-present)
Date of Search:	December 6, 2016
Study Types:	Randomized controlled trials
Limits:	None
<b>Search Strategy: search terms (number of results)</b>	
1.	exp 4-Hydroxycoumarins/ or warfarin/ or acenocoumarol/ or dicoumarol/ or Coumarins/ or coumarin anticoagulant/ or ethyl biscoumacetate/ or phenprocoumon/ or phenindione/
2.	vitamin K antagonist\$.mp.
3.	(4-Hydroxycoumarins or warfarin or acenocoumarol or nicoumalone or sinthrome or Sintrom or phenindione or dicoumarol or coumadin or phenprocoumon or phepromaron or ethyl-biscoumacetate or phenindione or Diphenadione or Tioclomarol or Racumi or Marcoumar or Marcumar or Falithrom or Coumadin or Jantoven or vitamin K antagonist\$ or VKA or fluindione or difenacoum or coumatetralyl).mp.
4.	1 or 2 or 3
5.	randomized controlled trial.pt.
6.	controlled clinical trial.pt.
7.	Clinical Trials as topic.sh.
8.	trial.ti,ab.
9.	factorial*.ti,ab.
10.	(crossover* or cross over*).ti,ab.
11.	((doubl* or singl*) adj blind*).ti,ab.
12.	(assign* or allocat* or volunteer* or placebo*).ti,ab.
13.	placebo.ab.
14.	random*.ti,ab.
15.	or/5-14
16.	animals/ not humans/
17.	exp Animals, Laboratory/
18.	exp Animal Experimentation/
19.	exp Models, Animal/
20.	exp Rodentia/
21.	(rat or rats or mouse or mice).ti.
22.	or/16-21
23.	15 not 22
24.	International Normalized Ratio/
25.	international normalized ratio.mp.
26.	INR.mp.
27.	exp Blood Coagulation Tests/
28.	((coagulation or clotting or thromboplastin or "kaolin cephalin of prothrombin" or "viper venom" or reptilase or fibrinogen) adj2 (time or ratio or monitor* or algorithm or nomogram or interval or recall* or retest*)).mp.
29.	or/24-28
30.	4 and 29
31.	23 and 30
<b>Records Retrieved: 1745</b>	

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**OVERVIEW**

Interface: Ovid  
 Database: Embase (1974-present)  
 Date of Search: December 6, 2016  
 Study Types: Randomized controlled trials  
 Limits: None

**Search Strategy: search terms (number of results)**

1. exp 4 hydroxycoumarin/ or exp 4 hydroxycoumarin derivative/
2. warfarin/
3. acenocoumarol/
4. coumarin/ or coumarin derivative/
5. phenindione/
6. dicoumarol derivative/ or dicoumarol/
7. phenprocoumon/
8. phepromaron/
9. ethyl biscoumacetate/
10. fluindione/ or difenacoum/ or coumatetralyl/
11. vitamin K antagonist.mp. or antivitamin K/
12. (4 hydroxycoumarin or warfarin or acenocoumarol or nicoumalone or sinthrome or Sintrom or phenindione or dicoumarol or coumadin or phenprocoumon or phepromaron or ethyl-biscoumacetate or phenindione or Diphenadione or Tioclomarol or Racumi or Marcoumar or Marcumar or Falithrom or Coumadin or Jantoven or vitamin K antagonist\$ or VKA or fluindione or difenacoum or coumatetralyl).mp.
13. or/1-12
14. International Normalized Ratio/
15. (international normalized ratio or INR).mp.
16. exp Blood Coagulation Tests/ or exp blood clotting test/
17. ((coagulation or clotting or thromboplastin or "kaolin cephalin of prothrombin" or "viper venom" or reptilase or fibrinogen) adj2 (time or ratio or monitor\* or algorithm or nomogram or interval or recall\* or retest\*)).mp.
18. 14 or 15 or 16 or 17
19. random\*.ti,ab.
20. trial.ti,ab.
21. factorial\*.ti,ab.
22. (crossover\* or cross over\*).ti,ab.
23. ((doubl\* or singl\*) adj blind\*).ti,ab.
24. (assign\* or allocat\* or volunteer\* or placebo\*).ti,ab.
25. placebo.ab.
26. crossover procedure/
27. single blind procedure/
28. randomized controlled trial/
29. double blind procedure/
30. or/19-29
31. animals/ not humans/
32. nonhuman/
33. exp Animal Experiment/
34. exp Experimental Animal/
35. animal model/
36. exp Rodent/



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37. (rat or rats or mouse or mice).ti.
38. 31 or 32 or 33 or 34 or 35 or 36 or 37
39. 30 not 38
40. 13 and 18
41. 39 and 40
<b>Records Retrieved: 2963</b>

<b>OVERVIEW</b>	
Interface:	Cochrane Library
Databases:	Cochrane Central Register of Controlled Trials (CENTRAL)
Date of Search:	December 6, 2016
Study Types:	Randomized controlled trials
Limits:	None
<b>Search Strategy: search terms (number of results)</b>	
#1	MeSH descriptor: [Warfarin] explode all trees
#2	MeSH descriptor: [Acenocoumarol] explode all trees
#3	MeSH descriptor: [Phenindione] explode all trees
#4	MeSH descriptor: [Coumarins] explode all trees
#5	MeSH descriptor: [Dicumarol] explode all trees
#6	MeSH descriptor: [Phenprocoumon] explode all trees
#7	MeSH descriptor: [Ethyl Biscoumacetate] explode all trees
#8	MeSH descriptor: [4-Hydroxycoumarins] explode all trees
#9	MeSH descriptor: [Phenprocoumon] explode all trees
#10	(4 hydroxycoumarin or warfarin or acenocoumarol or nicoumalone or sinthrome or Sintrom or phenindione or dicoumarol or coumadin or phenprocoumon or phepromaron or ethyl-biscoumacetate or phenindione or Diphenadione or Tiocloamarol or Racumi or Marcoumar or Marcumar or Falithrom or Coumadin or Jantoven or vitamin K antagonist\$ or VKA or fluindione or difenacoum or coumatetralyl)
#11	#1 or #2 or #3 or #4 or #5 or #6 or #7 or #8 or #9 or #10
#12	MeSH descriptor: [International Normalized Ratio] this term only
#13	(international normalized ratio or INR)
#14	MeSH descriptor: [Blood Coagulation Tests] this term only
#15	((coagulation or clotting or thromboplastin or "kaolin cephalin of prothrombin" or "viper venom" or reptilase or fibrinogen) near/2 (time or ratio or monitor* or algorithm or nomogram or interval or recall))
#16	#12 or #13 or #14 #15
#17	#11 and #16
#18	Trials in #17
<b>Records Retrieved: 931</b>	

<b>OVERVIEW</b>	
Interface:	Ovid
Database:	Medline, and Medline In-Process & Other Non-Indexed Citations (1946-present)
Date of Search:	February 28, 2017
Study Types:	Observational studies

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Limits: None

**Search Strategy: search terms [number of results]**

1. exp 4-Hydroxycoumarins/ or warfarin/ or acenocoumarol/ or dicoumarol/ or Coumarins/ or coumarin anticoagulant/ or ethyl biscoumacetate/ or phenprocoumon/ or phenindione/
2. vitamin K antagonist\$.mp.
3. (4-Hydroxycoumarins or warfarin or acenocoumarol or nicoumalone or sinthrome or Sintrom or phenindione or dicoumarol or coumadin or phenprocoumon or phepromaron or ethyl-biscoumacetate or phenindione or Diphenadione or Tiocloamarol or Racumi or Marcoumar or Marcumar or Falithrom or Coumadin or Jantoven or vitamin K antagonist\$ or VKA or fluindione or difenacoum or coumatetralyl).mp.
4. 1 or 2 or 3
5. meta-analysis/
6. meta-analysis as topic/
7. (meta analy\* or metanaly\* or metaanaly\*).ti,ab.
8. (reference list\* or bibliograph\* or hand search\* or manual search\* or relevant journals).ab.
9. ((systematic\* or evidence\*) adj2 (review\* or overview\*)).ti,ab.
10. (search strategy or search criteria or systematic search or study selection or data extraction).ab.
11. (search\* adj4 literature).ab.
12. (medline or pubmed or cochrane or embase or psychlit or psyclit or psychinfo or psycinfo or cinahl or science citation index or bids or cancerlit).ab.
13. ((pool\* or combined) adj2 (data or trials or studies or results)).ab.
14. cochrane.jw.
15. or/5-14
16. animals/ not humans/
17. exp Animals, Laboratory/
18. exp Animal Experimentation/
19. exp Models, Animal/
20. exp Rodentia/
21. (rat or rats or mouse or mice).ti.
22. or/16-21
23. 15 not 22
24. randomized controlled trial.pt.
25. controlled clinical trial.pt.
26. Clinical Trials as topic.sh.
27. trial.ti,ab.
28. factorial\*.ti,ab.
29. (crossover\* or cross over\*).ti,ab.
30. ((doubl\* or singl\*) adj blind\*).ti,ab.
31. (assign\* or allocat\* or volunteer\* or placebo\*).ti,ab.
32. placebo.ab.
33. random\*.ti,ab.
34. or/24-33
35. animals/ not humans/
36. exp Animals, Laboratory/
37. exp Animal Experimentation/
38. exp Models, Animal/
39. exp Rodentia/
40. (rat or rats or mouse or mice).ti.
41. or/35-40
42. 34 not 41
43. International Normalized Ratio/
44. international normalized ratio.mp.

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45. INR.mp. 7307
46. exp Blood Coagulation Tests/
47. ((coagulation or clotting or thromboplastin or "kaolin cephalin of prothrombin" or "viper venom" or reptilase or fibrinogen) adj2 (time or ratio or monitor\* or algorithm or nomogram or interval or recall\* or retest\*)).mp.
48. or/43-47
49. 4 and 48
50. 23 and 49
51. 42 and 49
52. 51 not 50
53. 50 or 51 or 52
54. epidemiologic studies/
55. exp case control studies/
56. exp cohort studies/
57. cross-sectional studies/
58. case control.ti,ab.
59. (cohort adj (study or studies or analys\*)).ti,ab.
60. ((follow up or observational or uncontrolled or non randomi#ed or nonrandomi#ed or epidemiologic\*) adj (study or studies)).ti,ab.
61. ((longitudinal or retrospective or prospective or cross sectional) and (study or studies or review or analys\* or cohort\*)).ti,ab.
62. or/54-61
63. 49 and 62
64. 41 or 53
65. 63 not 53

**Records Retrieved: 1732**

**OVERVIEW**

Interface: Ovid  
 Database: Embase (1974-present)  
 Date of Search: February 28, 2017  
 Study Types: Observational studies  
 Limits: None

**Search Strategy: search terms [number of results]**

1. exp 4 hydroxycoumarin/ or exp 4 hydroxycoumarin derivative/
2. warfarin/
3. acenocoumarol/
4. coumarin/ or coumarin derivative/
5. phenindione/
6. dicoumarol derivative/ or dicoumarol/
7. phenprocoumon/
8. phepromaron/
9. ethyl biscoumacetate/
10. fluindione/ or difenacoum/ or coumatetralyl/
11. vitamin K antagonist.mp. or antivitamin K/
12. (4 hydroxycoumarin or warfarin or acenocoumarol or nicoumalone or sinthrome or Sintrom or phenindione or dicoumarol or coumadin or phenprocoumon or phepromaron or ethyl-biscoumacetate or phenindione or Diphenadione or Tioclomarol or Racumi or Marcoumar or

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- Marcumar or Falithrom or Coumadin or Jantoven or vitamin K antagonist\$ or VKA or fluindione or difenacoum or coumatetralyl).mp.
13. or/1-12
  14. International Normalized Ratio/
  15. (international normalized ratio or INR).mp.
  16. exp Blood Coagulation Tests/ or exp blood clotting test/
  17. ((coagulation or clotting or thromboplastin or "kaolin cephalin of prothrombin" or "viper venom" or reptilase or fibrinogen) adj2 (time or ratio or monitor\* or algorithm or nomogram or interval or recall\* or retest\*)).mp.
  18. 14 or 15 or 16 or 17
  19. random\*.ti,ab.
  20. trial.ti,ab.
  21. factorial\*.ti,ab.
  22. (crossover\* or cross over\*).ti,ab.
  23. ((doubl\* or singl\*) adj blind\*).ti,ab.
  24. (assign\* or allocat\* or volunteer\* or placebo\*).ti,ab.
  25. placebo.ab.
  26. crossover procedure/
  27. single blind procedure/
  28. randomized controlled trial/
  29. double blind procedure/
  30. or/19-29
  31. animals/ not humans/
  32. nonhuman/
  33. exp Animal Experiment/
  34. exp Experimental Animal/
  35. animal model/
  36. exp Rodent/
  37. (rat or rats or mouse or mice).ti.
  38. 31 or 32 or 33 or 34 or 35 or 36 or 37
  39. 30 not 38
  40. systematic review/
  41. meta-analysis/
  42. (meta analy\* or metanaly\* or metaanaly\*).ti,ab.
  43. (reference list\* or bibliograph\* or hand search\* or manual search\* or relevant journals).ab.
  44. ((systematic\* or evidence\*) adj2 (review\* or overview\*)).ti,ab.
  45. (search strategy or search criteria or systematic search or study selection or data extraction).ab.
  46. (search\* adj4 literature).ab.
  47. (medline or pubmed or cochrane or embase or psychlit or psychlit or psychinfo or psycinfo or cinahl or science citation index or bids or cancerlit).ab.
  48. ((pool\* or combined) adj2 (data or trials or studies or results)).ab.
  49. cochrane.jw.
  50. or/40-49
  51. animals/ not humans/
  52. nonhuman/
  53. exp Animal Experiment/
  54. exp Experimental Animal/
  55. animal model/
  56. exp Rodent/
  57. (rat or rats or mouse or mice).ti.
  58. 51 or 52 or 53 or 54 or 55 or 56 or 57
  59. 50 not 58
  60. 13 and 18

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61. 59 and 60
62. 39 and 60
63. 62 not 61
64. 61 or 62 or 63
65. clinical study/
66. exp case control study/
67. family study/
68. longitudinal study/
69. prospective study/
70. cross-sectional study/
71. cohort analysis/
72. follow-up/
73. cohort\*.ti,ab.
74. cohort\*.ti,ab.
75. (cohort adj (study or studies or analys\*)).ti,ab.
76. case control.ti,ab.
77. ((follow up or observational or uncontrolled or non randomi#ed or nonrandomi#ed or epidemiologic\*) adj (study or studies)).ti,ab.
78. ((longitudinal or retrospective or prospective or cross sectional) and (study or studies or review or analys\* or cohort\*)).ti,ab.
79. 65 or 66 or 67 or 68 or 69 or 70 or 71 or 72 or 73 or 74 or 75 or 76 or 77 or 78
80. 60 and 79
81. 80 not 64

**Records Retrieved: 4799**

**Recommendation 7 & 8.** Anti-factor Xa monitoring in patients with renal dysfunction or obesity receiving LMWH for VTE treatment

<b>OVERVIEW</b>	
Interface:	Ovid
Database:	Medline, and Medline In-Process & Other Non-Indexed Citations (1946 - present)
Date of search:	February 24, 2017
Study Types:	Any study design
Limits:	None
<b>Search Strategy: search terms [number of results]</b>	
1	exp Thromboembolism/ or exp Venous Thromboembolism/
2	exp Pulmonary Embolism/
3	exp Venous Thrombosis/
4	Thrombophlebitis/
5	(DVT or VTE or PE).mp.
6	((Pulmon\$ or vein or venous or lung) adj (Emboli\$ or thromb\$)).mp.
7	(thrombus* or thrombotic* or thrombolic* or thromboemboli* or thrombos* or embol*).mp.
8	((deep or thromb* or stasis) adj2 (vein* or venous)) or (blood flow stasis or blood clot)).mp.
9	or/1-8
10	exp Factor Xa/
11	Factor Xa Inhibitors/
12	factor Xa.mp.
13	or/10-12
14	(test or level or monito* or analys* or assay or measure*).mp.
15	exp Blood Coagulation Tests/
16	exp Drug Monitoring/
17	Monitoring, Physiologic/mt, st [Methods, Standards]
18	14 or 15 or 16 or 17
19	13 and 18
20	9 and 19
21	exp Obesity/
22	exp Overweight/
23	(obes\$ or overweight or over-weight).ti,ab,kw.
24	21 or 22 or 23
25	exp Renal Insufficiency/
26	exp Glomerular Filtration Rate/
27	((renal or kidney) adj1 (insufficienc* or impairment* or dysfunction* or function or failure*)).ti,ab,kw.
28	25 or 26 or 27

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29	24 or 28
30	20 and 29
<b>Records retrieved: 230</b>	

<b>OVERVIEW</b>	
Interface:	Ovid
Database:	Embase (1974 - present)
Date of search:	February 24, 2017
Study Types:	Any study design
Limits:	None
<b>Search Strategy: search terms [number of results]</b>	
1	exp vein thrombosis/
2	exp Venous Thromboembolism/
3	exp 'lung embolism'/
4	Thrombophlebitis/
5	(PE or DVT or VTE).mp.
6	((Pulmon\$ or vein or venous or lung) adj (Emboli\$ or thromb\$)).mp.
7	(thrombus* or thrombotic* or thrombolic* or thromboemboli* or thrombos* or embol*).mp.
8	((((deep or thromb* or stasis) adj2 (vein* or venous)) or (blood flow stasis or blood clot)).mp.
9	or/1-8
10	exp blood clotting factor 10a/ or exp Factor Xa/ or blood clotting factor 10a inhibitor/
11	(factor Xa or blood clotting factor 10a).mp.
12	10 or 11
13	exp blood clotting test/
14	exp drug monitoring/
15	physiologic monitoring/
16	(test or level or monito* or analys* or assay or measure*).mp.
17	13 or 14 or 15 or 16
18	12 and 17
19	9 and 18
20	exp Obesity/
21	exp Overweight/
22	(obes\$ or overweight or over-weight).ti,ab,kw.
23	20 or 21 or 22
24	exp Renal Insufficiency/
25	exp Glomerular Filtration Rate/
26	((renal or kidney) adj1 (insufficienc* or impairment* or dysfunction* or function or failure*)).ti,ab,kw.
27	24 or 25 or 26

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28	23 or 27
29	19 and 28
<b>Records retrieved: 603</b>	



**Recommendation 9.** DOAC anticoagulant effect testing during management of DOAC-related bleeding (conditional recommendation based on very low certainty of the evidence about effects)

#### OVERVIEW

Interface:	Ovid
Database:	Ovid MEDLINE(R) In-Process & Other Non-Indexed Citations and Ovid MEDLINE(R) 1946 to Present
Date of Search:	March 23, 2017
Study Types:	Randomized controlled trials; Observational studies
Limits:	None

#### Search Strategy: search terms (number of results)

1. exp Thromboembolism/ or exp Venous Thromboembolism/
2. exp Pulmonary Embolism/
3. exp Venous Thrombosis/
4. Thrombophlebitis/
5. (DVT or VTE or PE).mp.
6. ((Pulmon\$ or vein or venous or lung) adj (Emboli\$ or thromb\$)).mp.
7. (thrombus\* or thrombotic\* or thrombolic\* or thromboemboli\* or thrombos\* or embol\*).mp.
8. (((deep or thromb\* or stasis) adj2 (vein\* or venous)) or (blood flow stasis or blood clot)).mp.
9. or/1-8
10. Antithrombins.mp. or exp Antithrombins/
11. thrombin inhibitor/ or thrombin inhibitor.mp.
12. Factor Xa Inhibitors.mp. or exp Factor Xa Inhibitors/
13. rivaroxaban/ or dabigatran etexilate/ or apixaban/ or edoxaban/ or betrixaban/ or ximelagatran/
14. (rivaroxaban or Xarelto or apixaban or Eliquis or dabigatran etexilate or Edoxaban or Savaysa or Betrixaban or ximelagatran or pradaxa or lixiana or exanta or Darexaban or Otamixaban\$ or Razaxaban or Bivalirudin or Desirudin or Lepirudin or Melagatran or YM 150 or Iprivask or argatrovan or pradax or BIBR-953 or BIBR-953ZW or BAY 59-7939 or BMS-562247 or DU-176 or DU-176b).mp.
15. (TSOAC\$ or NOAC\$ or DOAC\$).ti,ab,kw.
16. ((Target adj Specific adj Oral adj Anticoagulant\$) or (oral adj anticoagulant\$) or (novel adj anticoagulant\$) or (new adj anticoagulant\$) or (direct\$ adj anticoagulant\$)).mp.
17. ((new or novel or direct or direct-acting or target-specific or targeted or non-vitamin K) adj3 oral anticoagulant\*).mp.
18. (factor Xa adj2 (antag\* or inhibit\*)).mp.
19. or/10-18
20. randomized controlled trial.pt.
21. controlled clinical trial.pt.
22. Clinical Trials as topic.sh.
23. trial.ti,ab.
24. factorial\*.ti,ab.
25. (crossover\* or cross over\*).ti,ab.
26. ((doubl\* or singl\*) adj blind\*).ti,ab.
27. (assign\* or allocat\* or volunteer\* or placebo\*).ti,ab.
28. placebo.ab.

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29. random\*.ti,ab.
30. or/20-29
31. animals/ not humans/
32. exp Animals, Laboratory/
33. exp Animal Experimentation/
34. exp Models, Animal/
35. exp Rodentia/
36. (rat or rats or mouse or mice).ti.
37. or/31-36
38. 30 not 37
39. exp Blood Coagulation Tests/
40. exp Drug Monitoring/
41. Monitoring, Physiologic/mt, st [Methods, Standards]
42. (test or level or monito\* or analys\* or assay or measure\*).ti,ab,kw.
43. or/39-42
44. exp Factor Xa/
45. Factor Xa Inhibitors/
46. factor Xa.ti,ab,kw.
47. 44 or 45 or 46
48. exp Prothrombin/
49. (factor IIa or (Anti adj IIa) or prothrombin).ti,ab,kw.
50. 48 or 49
51. exp Blood Coagulation Tests/
52. exp Prothrombin Time/
53. exp International Normalized Ratio/
54. (Prothrombin time or INR or international normalized ratio).ti,ab,kw.
55. (ecarin clotting time or ECT).ti,ab,kw.
56. exp Antithrombin Proteins/
57. (plasma diluted thrombin time or (diluted adj1 thrombin time) or DTI assay or DTT).ti,ab,kw.
58. exp Partial Thromboplastin Time/
59. Thromboplastin Time.ti,ab,kw.
60. exp Thrombelastography/
61. (Thromboelastome\* or thromboelastogr\* or 'TEM' or 'ROTEM' or 'TEG' or 'ROTEG').ti,ab,kw.
62. 'Russel viper venom test'.mp.
63. exp Whole Blood Coagulation Time/
64. Whole Blood Coagulation Time.mp.
65. or/52-64
66. 47 or 50 or 6567. 43 and 6668. exp Hemorrhage/
69. (bleed\* or hemorrhage or haemorrhage or bloodloss\* or blood loss\*).mp.
70. 68 or 69
71. exp Cerebral Hemorrhage/
72. Intracranial Hemorrhages/
73. ((cerebral or intracerebral or intracranial or brain) adj1 (hemorrhag\* or haemorrhag\* or bleed\*)).mp.
74. ((hemorrhag\* or haemorrhag\*) adj1 stroke).mp.
75. or/71-74
76. 70 or 75
77. exp cohort studies/
78. exp case control study/
79. longitudinal study/
80. prospective study/
81. cross-sectional study/
82. cohort analysis/
83. cohort\*.ti,ab.

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84. (cohort adj (study or studies or analys\*)).ti,ab.
85. case control.ti,ab.
86. ((follow up or observational or uncontrolled or non randomi#ed or nonrandomi#ed or epidemiologic\*) adj (study or studies)).ti,ab.
87. ((longitudinal or retrospective or prospective or cross sectional) and (study or studies or review or analys\* or cohort\*)).ti,ab.
88. (case\$ and series).tw.
89. or/77-88
90. (38 or 68) not 37
91. 9 and 19 and 67 and 76 and 90

**Records Retrieved: 898**

## OVERVIEW

Interface: Ovid  
Database: Embase 1974 to Current  
Date of search: March 23, 2017  
Study Types: Randomized controlled trials; Observational studies  
Limits: None

## Search Strategy: search terms [number of results]

1. exp vein thrombosis/
2. exp Venous Thromboembolism/
3. exp 'lung embolism'/
4. Thrombophlebitis/
5. (PE or DVT or VTE).mp.
6. ((Pulmon\$ or vein or venous or lung) adj (Emboli\$ or thromb\$)).mp.
7. (thrombus\* or thrombotic\* or thrombolic\* or thromboemboli\* or thrombos\* or embol\*).mp.
8. (((deep or thromb\* or stasis) adj2 (vein\* or venous)) or (blood flow stasis or blood clot)).mp.
9. or/1-8
10. exp antithrombin/ or Antithrombins.mp.
11. thrombin inhibitor/ or thrombin inhibitor.mp.
12. Factor Xa Inhibitors.mp. or exp blood clotting factor 10a inhibitor/
13. rivaroxaban/ or dabigatran etexilate/ or apixaban/ or edoxaban/ or betrixaban/ or ximelagatran/ or Darexaban/ or Otamixaban/ or Razaxaban/ or Bivalirudin/ or Desirudin/ or Lepirudin/ or Melagatran/
14. (rivaroxaban or Xarelto or apixaban or Eliquis or dabigatran etexilate or Edoxaban or Savaysa or Betrixaban or ximelagatran or pradaxa or lixiana or exanta or Darexaban or Otamixaban\$ or Razaxaban or Bivalirudin or Desirudin or Lepirudin or Melagatran or YM 150 or Iprivask or argatrovan or pradax or BIBR-953 or BIBR-953ZW or BAY 59-7939 or BMS-562247 or DU-176 or DU-176b).mp.
15. (TSOAC\$ or NOAC\$ or DOAC\$).ti,ab,kw.
16. ((Target adj Specific adj Oral adj Anticoagulant\$) or (oral adj anticoagulant\$) or (novel adj anticoagulant\$) or (new adj anticoagulant\$) or (direc\$ adj anticoagulant\$)).mp.

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17. ((new or novel or direct or direct-acting or target-specific or targeted or non-vitamin K) adj3 oral anticoagulant\*).mp.
18. (factor Xa adj2 (antag\* or inhibit\*)).mp.
19. or/10-18
20. random\*.ti,ab.
21. trial.ti,ab.
22. factorial\*.ti,ab.
23. (crossover\* or cross over\*).ti,ab.
24. ((doubl\* or singl\*) adj blind\*).ti,ab.
25. (assign\* or allocat\* or volunteer\* or placebo\*).ti,ab.
26. placebo.ab.
27. crossover procedure/
28. single blind procedure/
29. randomized controlled trial/
30. double blind procedure/
31. or/20-30
32. animals/ not humans/
33. nonhuman/
34. exp Animal Experiment/
35. exp Experimental Animal/
36. animal model/
37. exp Rodent/
38. (rat or rats or mouse or mice).ti.
39. or/32-38
40. 31 not 39
41. exp Prothrombin/
42. (factor IIa or (Anti adj IIa) or prothrombin).ti,ab,kw.
43. 41 or 42
44. exp blood clotting test/
45. exp Prothrombin Time/
46. exp International Normalized Ratio/
47. (Prothrombin time or INR or international normalized ratio).ti,ab,kw.
48. exp partial thromboplastin time/
49. Thromboplastin Time.ti,ab,kw.
50. exp thromboelastography/
51. (Thromboelastome\* or thromboelastogr\* or 'TEM' or 'ROTEM' or 'TEG' or 'ROTEG').ti,ab,kw.
52. (ecarin clotting time or ECT).ti,ab,kw.
53. exp antithrombin/
54. (plasma diluted thrombin time or (diluted adj1 thrombin time) or DTI assay or DTT).ti,ab,kw.
55. Russel viper venom test.mp.
56. exp blood clotting time/
57. (Blood Coagulation Time or blood clotting time).ti,ab,kw.
58. or/44-57
59. exp blood clotting factor 10a/ or exp Factor Xa/ or blood clotting factor 10a inhibitor/
60. (factor Xa or blood clotting factor 10a).ti,ab,kw.

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61. 59 or 60
62. 43 or 58 or 61
63. exp blood clotting test/
64. exp drug monitoring/
65. physiologic monitoring/
66. (test or level or monito\* or analys\* or assay or measure\*).ti,ab,kw.
67. or/63-66
68. 62 and 67
  
69. exp bleeding/
70. (bleed\$ or hemorrhage or haemorrhage or bloodloss\$ or blood loss\$).mp.
71. 69 or 70
72. exp cerebral sinus thrombosis/
73. exp occlusive cerebrovascular disease/
74. brain embolism/
75. (cerebral vein or cerebral venous or sinus or intracranial) adj thrombo\*).mp.
76. ((intracranial or cerebral) adj embol\*).mp.
77. or/72-76
78. 71 or 77
79. clinical study/
80. exp case control study/
81. family study/
82. longitudinal study/
83. prospective study/
84. cross-sectional study/
85. cohort analysis/
86. follow-up/
87. cohort\*.ti,ab.
88. cohort\*.ti,ab.
89. (cohort adj (study or studies or analys\*)).ti,ab.
90. case control.ti,ab.
91. ((follow up or observational or uncontrolled or non randomi#ed or nonrandomi#ed or epidemiologic\*) adj (study or studies)).ti,ab.
92. ((longitudinal or retrospective or prospective or cross sectional) and (study or studies or review or analys\* or cohort\*)).ti,ab.
93. or/79-92
100. (31 or 93) not 39
101. 9 and 19 and 68 and 78 and 100

**Records Retrieved: 1646**

**Recommendation 10 & 14.** LMWH or UFH bridging therapy for patients switching from DOAC to VKA, or who require temporary interruption for invasive procedures

<b>OVERVIEW</b>	
Interface:	Ovid
Database:	MEDLINE(R) Epub Ahead of Print, In-Process & Other Non-Indexed Citations and MEDLINE(R) without Revisions 1996 to Daily Update
Date of search:	March 7, 2017
Study Types:	Any study design
Limits:	2015 - current
<b>Search Strategy: search terms [number of results]</b>	
1	exp Drug Administration Schedule/
2	exp Heparin, Low-Molecular-Weight/
3	exp Heparin/
4	exp Perioperative Care/
5	Postoperative Hemorrhage/
6	((bridg* adj therap*) or (bridg* adj coagul*) or (bridg* adj anticoag*) or (perioperat* adj bridg*)).mp.
7	1 or 2 or 3 or 4 or 5 or 6 Annotation: in &#x2013; LMWH/UHF bridge therapy__Medline
8	epidemiologic studies/
9	((follow up or observational or uncontrolled or non randomi#ed or nonrandomi#ed or epidemiologic*) adj (study or studies)).ti,ab.
10	((retrospective or prospective) adj3 (study or studies or analys*)).ti,ab.
11	or/8-10
12	7 and 11
13	animals/ not humans/
14	exp Animals, Laboratory/
15	exp Animal Experimentation/
16	exp Models, Animal/
17	exp Rodentia/
18	(rat or rats or mouse or mice).ti.
19	or/13-18
20	12 not 19
21	limit 20 to yr="2015 -Current"
<b>Records retrieved: 1778</b>	

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**OVERVIEW**

Interface: Ovid  
Database: Embase 1974 to Current  
Date of search: March 7, 2017  
Study Types: Any study design  
Limits: 2015 - current

**Search Strategy: search terms [number of results]**

- 1 exp Drug Administration Schedule/
- 2 exp Heparin, Low-Molecular-Weight/
- 3 exp Heparin/
- 4 exp Perioperative Care/
- 5 Postoperative Hemorrhage/
- 6 ((bridg\* adj therap\*) or (bridg\* adj coagul\*) or (bridg\* adj anticoag\*) or (perioperat\* adj bridg\*)).mp.
- 7 1 or 2 or 3 or 4 or 5 or 6  
Annotation: in &#x2013; LMWH/UHF bridge therapy\_\_Embase
- 8 clinical study/
- 9 prospective study/
- 10 ((follow up or observational or uncontrolled or non randomi#ed or nonrandomi#ed or epidemiologic\*) adj (study or studies)).ti,ab.
- 11 ((retrospective or prospective) adj3 (study or studies or analys\*)).ti,ab.
- 12 or/8-11
- 13 7 and 12
- 14 limit 13 to exclude medline journals
- 15 animals/ not humans/
- 16 nonhuman/
- 17 exp Animal Experiment/
- 18 exp Experimental Animal/
- 19 animal model/
- 20 exp Rodent/
- 21 (rat or rats or mouse or mice).ti.
- 22 15 or 16 or 17 or 18 or 19 or 20 or 21
- 23 14 not 22
- 24 limit 23 to yr="2015 -Current"

**Records retrieved: 1587**

**Recommendation 11.** Specialized anticoagulation management service (AMS) care in patients receiving anticoagulation therapy for treatment of VTE

## OVERVIEW

Interface: Ovid  
Database: Medline, and Medline In-Process & Other Non-Indexed Citations (1946-present)  
Date of search: February 27, 2017  
Study Types: Randomized controlled trials  
Limits: None

### Search Strategy: search terms [number of results]

- 1 exp anticoagulant agent/
- 2 Anticoagula\$.mp.
- 3 or/1-2
- 4 Antithrombins.mp. or exp Antithrombins/
- 5 thrombin inhibitor/ or thrombin inhibitor.mp.
- 6 Factor Xa Inhibitors.mp. or exp Factor Xa Inhibitors/
- 7 rivaroxaban/ or dabigatran etexilate/ or apixaban/ or edoxaban/ or betrixaban/ or ximelagatran/
- 8 (rivaroxaban or Xarelto or apixaban or Eliquis or dabigatran etexilate or Edoxaban or Savaysa or Betrixaban or ximelagatran or pradaxa or lixiana or exanta or Darexaban or Otamixaban\$ or Razaxaban or Bivalirudin or Desirudin or Lepirudin or Melagatran or YM 150 or Iprivask or argatrovan or pradax or BIBR-953 or BIBR-953ZW or BAY 59-7939 or BMS-562247 or DU-176 or DU-176b).mp.
- 9 (TSOAC\$ or NOAC\$ or DOAC\$).ti,ab,kw.
- 10 ((Target adj Specific adj Oral adj Anticoagulant\$) or (oral adj anticoagulant\$) or (novel adj anticoagulant\$) or (new adj anticoagulant\$) or (direc\$ adj anticoagulant\$)).mp.
- 11 ((new or novel or direct or direct-acting or target-specific or targeted or non-vitamin K) adj3 oral anticoagulant\*).mp.
- 12 (factor Xa adj2 (antag\* or inhibit\*)).mp.
- 13 or/4-12
- 14 exp Heparin/ or heparin.mp.
- 15 exp Heparin, Low-Molecular-Weight/
- 16 dalteparin/ or enoxaparin/ or nadroparin/ or heparinoids/
- 17 (LMWH or LMWHs or low molecular weight heparin or nadroparin or fraxiparin\* or enoxaparin\* or clexane or klexane or lovenox or dalteparin or fragmin or ardeparin\* or normiflo or tinzaparin or logiparin or innohep or certoparin or sandoparin or reviparin or clivarin\* or danaproid or danaparoid or orgaran or antixarin or bemiparin\* or hibor or zibor or ivor or badyket or semuloparin or parnaparin or tedelparin or fluxum or lohepa or lowhepa or parvoparin or seleparin\* or tedelgliparin or lomoparan or orgaran or sulodexide or zivor or embolex or xaparin or clivarine).mp.
- 18 (FR-860 or FR 860 or FR860 or PK-10,169 or PK 10,169 or PK10,169 or PK-10169 or PK 10169 or PK10169 or EMT-967 or EMT 967 or EMT967 or EMT-966 or EMT 966 or EMT966 or CY 216 or CY-216 or CY216 or LMF CY-216 or LMF CY 216 or LMF CY216).mp.
- 19 or/14-18
- 20 exp 4-Hydroxycoumarins/ or warfarin/ or acenocoumarol/ or dicoumarol/ or Coumarins/ or coumarin anticoagulant/ or ethyl biscoumacetate/ or phenprocoumon/ or phenindione/ (33516)
- 21 vitamin K antagonist\$.mp.
- 22 (4-Hydroxycoumarins or warfarin or acenocoumarol or nicoumalone or sinthrome or Sintrom or phenindione or dicoumarol or coumadin or phenprocoumon or phepromaron or ethyl-biscoumacetate or phenindione or Diphenadione or Tiocloamarol or Racumi or Marcoumar or Marcumar or Falithrom or



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Coumadin or Jantoven or vitamin K antagonist\$ or VKA or fluindione or difenacoum or coumatetralyl).mp.  
23 20 or 21 or 22 (45902)  
24 (fondaparinux or Arixtra).mp.  
25 exp Heparin/  
26 (unnfract\* adj heparin).mp.  
27 UFH.mp.  
28 ((sodium or alpha) adj1 heparin).mp.  
29 (Hepalean or Calcilean or Calciparine or Liquaemin or Liquemin or Multiparin or Novoheparin or Eparina  
or Hep-lock or Heparinate or Heparinic acid or Panheprin or Hepalean or Heparin Leo or Heparin Lock).mp.  
30 or/25-29  
31 3 or 13 or 19 or 23 or 24 or 30  
32 randomized controlled trial.pt.  
33 controlled clinical trial.pt.  
34 Clinical Trials as topic.sh.  
35 trial.ti,ab.  
36 factorial\*.ti,ab.  
37 (crossover\* or cross over\*).ti,ab.  
38 ((doubl\* or singl\*) adj blind\*).ti,ab.  
39 (assign\* or allocat\* or volunteer\* or placebo\*).ti,ab.  
40 placebo.ab.  
41 random\*.ti,ab.  
42 or/32-41  
43 animals/ not humans/  
44 exp Animals, Laboratory/  
45 exp Animal Experimentation/  
46 exp Models, Animal/  
47 exp Rodentia/  
48 (rat or rats or mouse or mice).ti.  
49 or/43-48  
50 42 not 49  
51 Health Services/  
52 exp Management Service Organizations/  
53 exp Patient Care Management/  
54 exp Managed Care Programs/  
55 exp Ambulatory Care Facilities/ or exp Ambulatory Care/  
56 exp Practice Patterns, Physicians'/  
57 exp Practice Management, Medical/  
58 exp Pharmaceutical Services/ or Pharmacists/  
59 exp Professional Role/  
60 anticoagul\* management\*.mp.  
61 ((thrombosis or anticoagul\*) adj2 (nurs\* or service or clinic or manage\* or ambulatory)).ti,ab,kw.  
62 or/51-61  
63 31 AND 50 AND 62

**Records retrieved: 1423**

**OVERVIEW**

Interface: Ovid  
Database: Medline, and Medline In-Process & Other Non-Indexed Citations (1946-present)

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Date of search: February 27, 2017  
Study Types: Observational studies  
Limits: None

**Search Strategy: search terms [number of results]**

- 1 exp anticoagulant agent/
- 2 Anticoagula\$.mp.
- 3 or/1-2
- 4 Antithrombins.mp. or exp Antithrombins/
- 5 thrombin inhibitor/ or thrombin inhibitor.mp.
- 6 Factor Xa Inhibitors.mp. or exp Factor Xa Inhibitors/
- 7 rivaroxaban/ or dabigatran etexilate/ or apixaban/ or edoxaban/ or betrixaban/ or ximelagatran/
- 8 (rivaroxaban or Xarelto or apixaban or Eliquis or dabigatran etexilate or Edoxaban or Savaysa or Betrixaban or ximelagatran or pradaxa or lixiana or exanta or Darexaban or Otamixaban\$ or Razaxaban or Bivalirudin or Desirudin or Lepirudin or Melagatran or YM 150 or Iprivask or argatrovan or pradax or BIBR-953 or BIBR-953ZW or BAY 59-7939 or BMS-562247 or DU-176 or DU-176b).mp.
- 9 (TSOAC\$ or NOAC\$ or DOAC\$).ti,ab,kw.
- 10 ((Target adj Specific adj Oral adj Anticoagulant\$) or (oral adj anticoagulant\$) or (novel adj anticoagulant\$) or (new adj anticoagulant\$) or (direct\$ adj anticoagulant\$)).mp.
- 11 ((new or novel or direct or direct-acting or target-specific or targeted or non-vitamin K) adj3 oral anticoagulant\*).mp.
- 12 (factor Xa adj2 (antag\* or inhibit\*)).mp.
- 13 or/4-12
- 14 exp Heparin/ or heparin.mp.
- 15 exp Heparin, Low-Molecular-Weight/
- 16 dalteparin/ or enoxaparin/ or nadroparin/ or heparinoids/
- 17 (LMWH or LMWHs or low molecular weight heparin or nadroparin or fraxiparin\* or enoxaparin\* or clexane or klexane or lovenox or dalteparin or fragmin or ardeparin\* or normiflo or tinzaparin or logiparin or innohep or certoparin or sandoparin or reviparin or clivarin\* or danaproid or danaparoid or orgaran or antixarin or bemiparin\* or hibor or zibor or ivor or badyket or semuloparin or parnaparin or tedelparin or fluxum or lohepa or lowhepa or parvoparin or seleparin\* or tedelgliparin or lomoparan or orgaran or sulodexide or zivor or embolex or xaparin or clivarine).mp.
- 18 (FR-860 or FR 860 or FR860 or PK-10,169 or PK 10,169 or PK10,169 or PK-10169 or PK 10169 or PK10169 or EMT-967 or EMT 967 or EMT967 or EMT-966 or EMT 966 or EMT966 or CY 216 or CY-216 or CY216 or LMF CY-216 or LMF CY 216 or LMF CY216).mp.
- 19 or/14-18
- 20 exp 4-Hydroxycoumarins/ or warfarin/ or acenocoumarol/ or dicumarol/ or Coumarins/ or coumarin anticoagulant/ or ethyl biscoumacetate/ or phenprocoumon/ or phenindione/
- 21 vitamin K antagonist\$.mp.
- 22 (4-Hydroxycoumarins or warfarin or acenocoumarol or nicoumalone or sinthrome or Sintrom or phenindione or dicoumarol or coumadin or phenprocoumon or phepromaron or ethyl-biscoumacetate or phenindione or Diphenadione or Tiocloamarol or Racumi or Marcoumar or Marcumar or Falithrom or Coumadin or Jantoven or vitamin K antagonist\$ or VKA or fluindione or difenacoum or coumatetralyl).mp.
- 23 30 or 31 or 32
- 24 (fondaparinux or Arixtra).mp.
- 25 exp Heparin/
- 26 (unnfract\* adj heparin).mp.
- 27 UFH.mp.
- 28 ((sodium or alpha) adj1 heparin).mp.
- 29 (Hepalean or Calcilean or Calciparine or Liquaemin or Liquemin or Multiparin or Novoheparin or Eparina or Hep-lock or Heparinate or Heparinic acid or Panheprin or Hepalean or Heparin Leo or Heparin Lock).mp.
- 30 or/25-29

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31	3 or 13 or 19 or 23 or 24 or 30
32	epidemiologic studies/
33	exp case control studies/
34	exp cohort studies/
35	cross-sectional studies/
36	case control.ti,ab.
37	(cohort adj (study or studies or analys*)).ti,ab.
38	((follow up or observational or uncontrolled or non randomi#ed or nonrandomi#ed or epidemiologic*) adj (study or studies)).ti,ab.
39	((longitudinal or retrospective or prospective or cross sectional) and (study or studies or review or analys* or cohort*)).ti,ab.
40	or/32-39
41	animals/ not humans/
42	exp Animals, Laboratory/
43	exp Animal Experimentation/
44	exp Models, Animal/
45	exp Rodentia/
46	(rat or rats or mouse or mice).ti.
47	or/41-46
48	40 not 47
49	Health Services/
50	exp Management Service Organizations/
51	exp Patient Care Management/
52	exp Managed Care Programs/
53	exp Ambulatory Care Facilities/ or exp Ambulatory Care/
54	exp Practice Patterns, Physicians'/
55	exp Practice Management, Medical/
56	exp Pharmaceutical Services/ or Pharmacists/
57	exp Professional Role/
58	anticoagul* management*.mp.
59	((thrombosis or anticoagul*) adj2 (nurs* or service or clinic or manage* or ambulatory)).ti,ab,kw.
60	or/49-59
61	31 AND 48 AND 60
<b>Records retrieved: 2590</b>	

**OVERVIEW**

Interface: Ovid  
 Database: Embase (1974-present) 1974 to Present  
 Date of search: February 24, 2017  
 Study Types: Randomized controlled trials  
 Limits: None

**Search Strategy: search terms [number of results]**

- 1 exp antithrombin/ or Antithrombins.mp.
- 2 thrombin inhibitor/ or thrombin inhibitor.mp.
- 3 Factor Xa Inhibitors.mp. or exp blood clotting factor 10a inhibitor/
- 4 rivaroxaban/ or dabigatran etexilate/ or apixaban/ or edoxaban/ or betrixaban/ or ximelagatran/ or Darexaban/ or Otamixaban/ or Razaxaban/ or Bivalirudin/ or Desirudin/ or Lepirudin/ or Melagatran/
- 5 (rivaroxaban or Xarelto or apixaban or Eliquis or dabigatran etexilate or Edoxaban or Savaysa or

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Betrixaban or ximelagatran or pradaxa or lixiana or exanta or Darexaban or Otamixaban\$ or Razaxaban or Bivalirudin or Desirudin or Lepirudin or Melagatran or YM 150 or Iprivask or argatrovan or pradax or BIBR-953 or BIBR-953ZW or BAY 59-7939 or BMS-562247 or DU-176 or DU-176b).mp.

6 (TSOAC\$ or NOAC\$ or DOAC\$).ti,ab,kw.

7 ((Target adj Specific adj Oral adj Anticoagulant\$) or (oral adj anticoagulant\$) or (novel adj anticoagulant\$) or (new adj anticoagulant\$) or (direct\$ adj anticoagulant\$)).mp.

8 ((new or novel or direct or direct-acting or target-specific or targeted or non-vitamin K) adj3 oral anticoagulant\*).mp.

9 (factor Xa adj2 (antag\* or inhibit\*)).mp.

10 or/1-9

11 exp 4 hydroxycoumarin/ or exp 4 hydroxycoumarin derivative/

12 warfarin/

13 acenocoumarol/

14 coumarin/ or coumarin derivative/

15 phenindione/

16 dicoumarol derivative/ or dicoumarol/

17 phenprocoumon/

18 phepromaron/

19 ethyl biscoumacetate/

20 fluindione/ or difenacoum/ or coumatetralyl/

21 vitamin K antagonist.mp. or antivitamin K/

22 (4 hydroxycoumarin or warfarin or acenocoumarol or nicoumalone or sinthrome or Sintrom or phenindione or dicoumarol or coumadin or phenprocoumon or phepromaron or ethyl-biscoumacetate or phenindione or Diphenadione or Tioclomarol or Racumi or Marcoumar or Marcumar or Falithrom or Coumadin or Jantoven or vitamin K antagonist\$ or VKA or fluindione or difenacoum or coumatetralyl).mp.

23 or/11-22

24 exp anticoagulant agent/

25 Anticoagula\$.mp.

26 24 or 25

27 (fondaparinux or Arixtra).mp.

28 exp Heparin/

29 (un?fract\* adj heparin).mp.

30 UFH.mp.

31 ((sodium or alpha) adj1 heparin).mp.

32 (Hepalean or Calcilean or Calciparine or Liquaemin or Liquemin or Multiparin or Novoheparin or Eparina or Hep-lock or Heparinate or Heparinic acid or Panheprin or Hepalean or Heparin Leo or Heparin Lock).mp.

33 or/28-32

34 exp heparin derivative/ or heparin\*.mp.

35 nadroparin/

36 enoxaparin/

37 dalteparin/

38 ardeparin/

39 tinzaparin/

40 certoparin/

41 reviparin/

42 danaparoid/

43 (LMWH or LMWHs or low molecular weight heparin or nadroparin or fraxiparin\* or enoxaparin\* or clexane or klexane or lovenox or dalteparin or fragmin or ardeparin\* or normiflo or tinzaparin or logiparin or innohep or certoparin or sandoparin or reviparin or clivarin\* or danaproid or danaparoid or organan or antixarin or bemiparin\* or hibor or zibor or ivor or badyket or semuloparin or parnaparin or tedelparin or fluxum or lohepa or lowhepa or parvoparin or seleparin\* or tedelgliparin or lomoparan or organan or sulodexide or zivor or embolex or xaparin or clivarine).mp.

44 (FR-860 or FR 860 or FR860 or PK-10,169 or PK 10,169 or PK10,169 or PK-10169 or PK 10169 or PK10169

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or EMT-967 or EMT 967 or EMT967 or EMT-966 or EMT 966 or EMT966 or CY 216 or CY-216 or CY216 or LMF CY-216 or LMF CY 216 or LMF CY216).mp.  
45 or/34-44  
46 10 or 23 or 26 or or 27 or 33 or 45  
47 random\*.ti,ab.  
48 trial.ti,ab.  
49 factorial\*.ti,ab.  
50 (crossover\* or cross over\*).ti,ab.  
51 ((doubl\* or singl\*) adj blind\*).ti,ab.  
52 (assign\* or allocat\* or volunteer\* or placebo\*).ti,ab.  
53 placebo.ab.  
54 crossover procedure/  
55 single blind procedure/  
56 randomized controlled trial/  
57 double blind procedure/  
58 or/47-57  
59 animals/ not humans/  
60 nonhuman/  
61 exp Animal Experiment/  
62 exp Experimental Animal/  
63 animal model/  
64 exp Rodent/  
65 (rat or rats or mouse or mice).ti.  
66 or/59-65  
67 58 not 66  
  
68 patient monitoring/ or ambulatory monitoring/  
69 integrated health care system/  
70 community care/  
71 hospital care/  
72 \*"pharmacist managed care"/  
73 medical care/ or pharmaceutical care/  
74 drug monitoring/  
75 patient monitoring/  
76 ((pharmac\* or nurs\*) adj5 anticoag\*).mp. [mp=title, abstract, heading word, drug trade name, original title, device manufacturer, drug manufacturer, device trade name, keyword, floating subheading]  
77 (special\* and anticoag\*).mp. [mp=title, abstract, heading word, drug trade name, original title, device manufacturer, drug manufacturer, device trade name, keyword, floating subheading]  
78 or/68-77  
79 46 and 67 and 78

**Records retrieved: 2622**

## OVERVIEW

Interface:	Ovid
Database:	Embase (1974-present) 1974 to Present
Date of search:	February 24, 2017
Study Types:	Observational studies

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Limits: None

**Search Strategy: search terms [number of results]**

- 1 exp antithrombin/ or Antithrombins.mp.
- 2 thrombin inhibitor/ or thrombin inhibitor.mp.
- 3 Factor Xa Inhibitors.mp. or exp blood clotting factor 10a inhibitor/
- 4 rivaroxaban/ or dabigatran etexilate/ or apixaban/ or edoxaban/ or betrixaban/ or ximelagatran/ or Darexaban/ or Otamixaban/ or Razaxaban/ or Bivalirudin/ or Desirudin/ or Lepirudin/ or Melagatran/
- 5 (rivaroxaban or Xarelto or apixaban or Eliquis or dabigatran etexilate or Edoxaban or Savaysa or Betrixaban or ximelagatran or pradaxa or lixiana or exanta or Darexaban or Otamixaban\$ or Razaxaban or Bivalirudin or Desirudin or Lepirudin or Melagatran or YM 150 or Iprivask or argatrovan or pradax or BIBR-953 or BIBR-953ZW or BAY 59-7939 or BMS-562247 or DU-176 or DU-176b).mp.
- 6 (TSOAC\$ or NOAC\$ or DOAC\$).ti,ab,kw.
- 7 ((Target adj Specific adj Oral adj Anticoagulant\$) or (oral adj anticoagulant\$) or (novel adj anticoagulant\$) or (new adj anticoagulant\$) or (direct\$ adj anticoagulant\$)).mp.
- 8 ((new or novel or direct or direct-acting or target-specific or targeted or non-vitamin K) adj3 oral anticoagulant\*).mp.
- 9 (factor Xa adj2 (antag\* or inhibit\*)).mp.
- 10 or/1-9
- 11 exp 4 hydroxycoumarin/ or exp 4 hydroxycoumarin derivative/
- 12 warfarin/
- 13 acenocoumarol/
- 14 coumarin/ or coumarin derivative/
- 15 phenindione/
- 16 dicoumarol derivative/ or dicoumarol/
- 17 phenprocoumon/
- 18 phepromaron/
- 19 ethyl biscoumacetate/
- 20 fluindione/ or difenacoum/ or coumatetralyl/
- 21 vitamin K antagonist.mp. or antivitamin K/
- 22 (4 hydroxycoumarin or warfarin or acenocoumarol or nicoumalone or sinthrome or Sintrom or phenindione or dicoumarol or coumadin or phenprocoumon or phepromaron or ethyl-biscoumacetate or phenindione or Diphenadione or Tiocloamarol or Racumi or Marcoumar or Marcumar or Falithrom or Coumadin or Jantoven or vitamin K antagonist\$ or VKA or fluindione or difenacoum or coumatetralyl).mp.
- 23 or/11-22
- 24 exp anticoagulant agent/
- 25 Anticoagula\$.mp.
- 26 24 or 25
- 27 (fondaparinux or Arixtra).mp.
- 28 exp Heparin/
- 29 (un?fract\* adj heparin).mp.
- 30 UFH.mp.
- 31 ((sodium or alpha) adj1 heparin).mp.
- 32 (Hepalean or Calcilean or Calciparine or Liquaemin or Liquemin or Multiparin or Novoheparin or Eparina or Hep-lock or Heparinate or Heparinic acid or Panheprin or Hepalean or Heparin Leo or Heparin Lock).mp.
- 33 or/28-32
- 34 exp heparin derivative/ or heparin\*.mp.
- 35 nadroparin/
- 36 enoxaparin/
- 37 dalteparin/
- 38 ardeparin/
- 39 tinzaparin/
- 40 certoparin/

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41 reviparin/  
42 danaparoid/  
43 (LMWH or LMWHs or low molecular weight heparin or nadroparin or fraxiparin\* or enoxaparin\* or clexane or klexane or lovenox or dalteparin or fragmin or ardeparin\* or normiflo or tinzaparin or logiparin or innohep or certoparin or sandoparin or reviparin or clivarin\* or danaproid or danaparoid or orgaran or antixarin or bemiparin\* or hibor or zibor or ivor or badyket or semuloparin or parnaparin or tedelparin or fluxum or lohepa or lowhepa or parvoparin or seleparin\* or tedelgliparin or lomoparan or orgaran or sulodexide or zivor or embolex or xaparin or clivarine).mp.  
44 (FR-860 or FR 860 or FR860 or PK-10,169 or PK 10,169 or PK10,169 or PK-10169 or PK 10169 or PK10169 or EMT-967 or EMT 967 or EMT967 or EMT-966 or EMT 966 or EMT966 or CY 216 or CY-216 or CY216 or LMF CY-216 or LMF CY 216 or LMF CY216).mp.  
45 or/34-44  
46 10 or 23 or 26 or or 27 or 33 or 45  
47 clinical study/  
48 exp case control study/  
49 family study/  
50 longitudinal study/  
51 prospective study/  
52 cross-sectional study/  
53 cohort analysis/  
54 follow-up/  
55 cohort\*.ti,ab.  
56 cohort\*.ti,ab.  
57 (cohort adj (study or studies or analys\*)).ti,ab.  
58 case control.ti,ab.  
59 ((follow up or observational or uncontrolled or non randomi#ed or nonrandomi#ed or epidemiologic\*) adj (study or studies)).ti,ab.  
60 ((longitudinal or retrospective or prospective or cross sectional) and (study or studies or review or analys\* or cohort\*)).ti,ab.  
61 or/47-60  
62 animals/ not humans/  
63 nonhuman/  
64 exp Animal Experiment/  
65 exp Experimental Animal/  
66 animal model/  
67 exp Rodent/  
68 (rat or rats or mouse or mice).ti.  
69 or/62-68  
70 61 not 69  
71 patient monitoring/ or ambulatory monitoring/  
72 integrated health care system/  
73 community care/  
74 hospital care/  
75 \*"pharmacist managed care"/  
76 medical care/ or pharmaceutical care/  
77 drug monitoring/  
78 patient monitoring/  
79 ((pharmac\* or nurs\*) adj5 anticoag\*).mp. [mp=title, abstract, heading word, drug trade name, original title, device manufacturer, drug manufacturer, device trade name, keyword, floating subheading]  
80 (special\* and anticoag\*).mp. [mp=title, abstract, heading word, drug trade name, original title, device manufacturer, drug manufacturer, device trade name, keyword, floating subheading]  
81 or/71-80  
82 46 and 70 and 81

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<b>Records retrieved: 4934</b>
--------------------------------

<b>OVERVIEW</b>	
Interface:	Cochrane Library
Databases:	Cochrane Central Register of Controlled Trials (CENTRAL)
Date of Search:	February 24, 2017
Study Types:	Trials
Limits:	None
<b>Search Strategy: search terms (number of results)</b>	
#1	MeSH descriptor: [Health Services] this term only
#2	MeSH descriptor: [Management Service Organizations] explode all trees
#3	MeSH descriptor: [Patient Care Management] explode all trees
#4	MeSH descriptor: [Managed Care Programs] explode all trees
#5	MeSH descriptor: [Ambulatory Care Facilities] explode all trees
#6	MeSH descriptor: [Ambulatory Care] this term only
#7	MeSH descriptor: [Practice Patterns, Physicians'] explode all trees
#8	MeSH descriptor: [Practice Management, Medical] explode all trees
#9	MeSH descriptor: [Pharmaceutical Services] explode all trees
#10	MeSH descriptor: [Pharmacists] this term only
#11	MeSH descriptor: [Professional Role] explode all trees
#12	(anticoagul* management* near (care or service))
#13	((thrombosis or anticoagul*) near/2 (service or clinic or manage* or ambulatory))
#14	#1 or #2 or #3 or #4 or #5 or #6 or #7 or #8 or #9 or #10 or #11 or #12 or #13
#15	MeSH descriptor: [Heparin] explode all trees
#16	(UFH or Unfractionated Heparin or Heparin, Unfractionated or Sodium Heparin or Heparin, Sodium or Heparin Sodium or alpha-Heparin or alpha Heparin or Hepalean or Calcilean or Calciparine or Liquaemin or Liquemin or Multiparin or Novoheparin or Eparina or Hep-lock or Heparinate or Heparinic acid or Panheprin or Hepalean or Heparin Leo or Heparin Lock):ti,ab,kw
#17	#15 or #16
#18	MeSH descriptor: [Antithrombins] explode all trees
#19	MeSH descriptor: [Factor Xa Inhibitors] explode all trees
#20	(rivaroxaban or Xarelto or apixaban or Eliquis or dabigatran etexilate or Edoxaban or Savaysa or Betrixaban or ximelagatran or pradaxa or lixiana or exanta or Darexaban or Otamixaban\$ or Razaxaban or Bivalirudin or Desirudin or Lepirudin or Melagatran or YM 150 or Iprivask or argatrovan or pradax or BIBR-953 or BIBR-953ZW or BAY 59-7939 or BMS-562247 or DU-176 or DU-176b)
#21	((Target adj Specific adj Oral adj Anticoagulant\$) or (oral adj anticoagulant\$) or (novel adj anticoagulant\$) or (new adj anticoagulant\$) or (direc\$ adj anticoagulant\$))
#22	((new or novel or direct or direct-acting or target-specific or targeted or non-vitamin K) near/3 oral anticoagulant*)
#23	(factor Xa adj2 (antag* or inhibit*))
#24	#18 or #19 or #20 or #21 or #22 or #23
#25	MeSH descriptor: [Anticoagulants] explode all trees
#26	(Anticoagulant or anticoagulation):ti,ab,kw
#27	#25 or #26
#28	MeSH descriptor: [Platelet Aggregation] explode all trees
#29	MeSH descriptor: [Aspirin] 10 tree(s) exploded
#30	MeSH descriptor: [Aminosalicylic Acids] explode all trees



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- #31 MeSH descriptor: [Phosphodiesterase Inhibitors] this term only
- #32 MeSH descriptor: [Dipyridamole] explode all trees
- #33 MeSH descriptor: [Thienopyridines] explode all trees
- #34 MeSH descriptor: [Ticlopidine] 11 tree(s) exploded
- #35 MeSH descriptor: [Prasugrel Hydrochloride] this term only
- #36 (Platelet Aggregation or Aspirin or Aminosalicylic Acids or Triflusal or Cilostazol or dipyridamole or Clopidogrel or Prasugrel or Ticlopidine or Tirofiban or Abciximab or Eptifibatide)
- #37 #28 or #29 or #30 or #31 or #32 or #33 or #34 or #35 or #36
- #38 fondaparinux or Arixtra
- #39 MeSH descriptor: [Heparin] explode all trees
- #40 MeSH descriptor: [Heparin, Low-Molecular-Weight] explode all trees
- #41 MeSH descriptor: [Heparinoids] this term only
- #42 MeSH descriptor: [Dalteparin] this term only
- #43 MeSH descriptor: [Enoxaparin] this term only
- #44 MeSH descriptor: [Nadroparin] this term only
- #45 (LMWH or LMWHs or low molecular weight heparin or heparin\* or nadroparin or fraxiparin\* or enoxaparin\* or clexane or klexane or lovenox or dalteparin or fragmin or ardeparin\* or normiflo or tinzaparin or logiparin or innohep or certoparin or sandoparin or reviparin or clivarin\* or danaproid or danaparoid or orgaran or antixarin or bemiparin\* or hibor or zibor or ivor or badyket or semuloparin or parnaparin or tedelparin or fluxum or lohepa or lowhepa or parvoparin or seleparin\* or tedelgliparin or lomoparan or orgaran or sulodexide or zivor or embolex or xaparin or clivarine)
- #46 (FR-860 or FR 860 or FR860 or PK-10,169 or PK 10,169 or PK10,169 or PK-10169 or PK 10169 or PK10169 or EMT-967 or EMT 967 or EMT967 or EMT-966 or EMT 966 or EMT966 or CY 216 or CY-216 or CY216 or LMF CY-216 or LMF CY 216 or LMF CY216)
- #47 #39 or #40 or #41 or #42 or #43 or #44 or #45 or #46
- #48 MeSH descriptor: [Warfarin] explode all trees
- #49 MeSH descriptor: [Acenocoumarol] explode all trees
- #50 MeSH descriptor: [Phenindione] explode all trees
- #51 MeSH descriptor: [Coumarins] explode all trees
- #52 MeSH descriptor: [Dicoumarol] explode all trees
- #53 MeSH descriptor: [Phenprocoumon] explode all trees
- #54 MeSH descriptor: [Ethyl Biscoumacetate] explode all trees
- #55 MeSH descriptor: [4-Hydroxycoumarins] explode all trees
- #56 MeSH descriptor: [Phenprocoumon] explode all trees
- #57 (4 hydroxycoumarin or warfarin or acenocoumarol or nicoumalone or sinthrome or Sintrom or phenindione or dicoumarol or coumadin or phenprocoumon or phepromaron or ethyl-biscoumacetate or phenindione or Diphenadione or Tiocloamarol or Racumi or Marcoumar or Marcumar or Falithrom or Coumadin or Jantoven or vitamin K antagonist\$ or VKA or fluindione or difenacoum or coumatetralyl)
- #58 #48 or #49 or #50 or #51 or #52 or #53 or #54 or #55 or #56 or #57
- #59 #17 or #24 or #27 or #37 or #38 or #47 or #58
- #60 #14 and #59

**Records Retrieved: 727**

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**Recommendation 12:** Supplementary patient education in addition to basic education for patients using oral anticoagulation for VTE treatment

**OVERVIEW**

Interface: Ovid  
Database: Ovid MEDLINE(R) In-Process & Other Non-Indexed Citations and Ovid MEDLINE(R) 1946 to Present  
Ovid MEDLINE(R) Daily Update February 25, 2016  
Date of Search: January 05, 2017  
Study Types: Randomized controlled trials  
Limits: None

**Search Strategy: search terms (number of results)**

- 1 exp anticoagulant agent/
- 2 Anticoagula\$.mp.
- 3 or/1-2
- 4 Antithrombins.mp. or expAntithrombins/
- 5 thrombin inhibitor/ or thrombin inhibitor.mp.
- 6 Factor Xa Inhibitors.mp. or exp Factor Xa Inhibitors/
- 7 rivaroxaban/ or dabigatranetexilate/ or apixaban/ or edoxaban/ or betrixaban/ or ximelagatran/ or hirudins/
- 8 (rivaroxaban or Xarelto or apixaban or Eliquis or dabigatranetexilate or Edoxaban or Savaysa or Betrixaban or ximelagatran or pradaxa or lixiana or exanta or Darexaban or Otamixaban\$ or Razaxaban or Bivalirudin or Desirudin or Lepirudin or Melagatran or YM 150 or Iprivask or argatroban or pradax or BIBR-953 or BIBR-953ZW or BAY 59-7939 or BMS-562247 or DU-176 or DU-176b).mp.
- 9 (TSOAC\$ or NOAC\$ or DOAC\$).ti,ab,kw.
- 10 ((Target adj Specific adj Oral adj Anticoagulant\$) or (oral adj anticoagulant\$) or (novel adj anticoagulant\$) or (new adj anticoagulant\$) or (direc\$ adj anticoagulant\$)).mp.
- 11 ((new or novel or direct or direct-acting or target-specific or targeted or non-vitamin K) adj3 oral anticoagulant\*).mp.
- 12 (factor Xa adj2 (antag\* or inhibit\*)).mp.
- 13 or/4-12
- 14 exp Heparin/ or heparin.mp.
- 15 exp Heparin, Low-Molecular-Weight/
- 16 dalteparin/ or enoxaparin/ or nadroparin/ or heparinoids/
- 17 (LMWH or LMWHs or low molecular weight heparin or nadroparin or fraxiparin\* or enoxaparin\* or clexane or klexane or lovenox or dalteparin or fragmin or ardeparin\* or normiflo or tinzaparin or logiparin or innohep or certoparin or sandoparin or reviparin or clivarin\* or danaproid or danaparoid or organan or antixarin or bemiparin\* or hibor or zibor or ivor or badyket or semuloparin or parnaparin or tedelparin or fluxum or lohepa or lowhepa or parvoparin or seleparin\* or tedelgliparin or lomoparan or organan or sulodexide or zivor or embolex or xaparin or clivarine).mp.
- 18 (FR-860 or FR 860 or FR860 or PK-10,169 or PK 10,169 or PK10,169 or PK-10169 or PK 10169 or PK10169 or EMT-967 or EMT 967 or EMT967 or EMT-966 or EMT 966 or EMT966 or CY 216 or CY-216 or CY216 or LMF CY-216 or LMF CY 216 or LMF CY216).mp.
- 19 or/14-18
- 20 exp 4-Hydroxycoumarins/ or warfarin/ or acenocoumarol/ or dicumarol/ or Coumarins/ or coumarin anticoagulant/ or ethyl biscoumacetate/ or phenprocoumon/ or phenindione/
- 21 vitamin K antagonist\$.mp.
- 22 (4-Hydroxycoumarins or warfarin or acenocoumarol or nicoumalone or sinthrome or Sintrom or phenindione or dicumarol or coumadin or phenprocoumon or phepromaron or ethyl-biscoumacetate or phenindione or Diphenadione or Tioclomarol or Racumi or Marcoumar or Marcumar or Falithrom or Coumadin or Jantoven or vitamin K antagonist\$ or VKA or fluindione or difenacoum or coumatetralyl).mp.

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23 20 or 21 or 22  
24 (fondaparinux or Arixtra).mp.  
25 exp Heparin/  
26 (un?fract\* adj heparin).mp.  
27 UFH.mp.  
28 ((sodium or alpha) adj1 heparin).mp.  
29 (Hepalean or Calcilean or Calciparine or Liquaemin or Liquemin or Multiparin or Novoheparin or Eparina or Heplock or Heparinate or Heparinic acid or Panheprin or Hepalean or Heparin Leo or Heparin Lock or blockasol or celparin or hed or heparin).mp.  
30 or/25-29  
31 3 or 13 or 19 or 23 or 24 or 30  
32 exp Patient Education as Topic/ or exp patient education/ or exp education/ or exp health education/ or exp attitude to health/ or expself care/ or exp patient care planning/ or expself evaluation/ or expself monitoring/  
33 Health Education/  
34 exp Patient Compliance/  
35 (((patient or patients) adj3 (education or educate or educating or information or literature or leaflet\$ or booklet\$ or pamphlet\$)) or education or self monitoring\* or self-testing\*).mp.  
36 or/32-35  
37 31 and 36  
  
38 randomized controlled trial.pt.  
39 controlled clinical trial.pt.  
40 Clinical Trials as topic.sh.  
41 trial.ti,ab.  
42 factorial\*.ti,ab.  
43 (crossover\* or cross over\* or cross-over\*).ti,ab.  
44 ((doubl\* or singl\*) adj blind\*).ti,ab.  
45 (assign\* or allocat\* or volunteer\* or placebo\*).ti,ab.  
46 placebo.ab.  
47 random\*.ti,ab.  
48 or/38-47  
49 animals/ not humans/  
50 exp Animals, Laboratory/  
51 exp Animal Experimentation/  
52 exp Models, Animal/  
53 expRodentia/  
54 (rat or rats or mouse or mice).ti.  
55 or/49-54  
56 48 not 55  
57 37 and 56

**Records Retrieved: 851**

**OVERVIEW**

Interface:	Ovid
Database:	Embase 1980 to 2017 Week 01
Date of Search:	January 5, 2017
Study Types:	Randomized controlled trials
Limits:	2010 - present

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**Search Strategy: search terms (number of results)**

- 1 expantithrombin/ or Antithrombins.mp.
- 2 thrombin inhibitor/ or thrombin inhibitor.mp.
- 3 Factor Xa Inhibitors.mp. or exp blood clotting factor 10a inhibitor/
- 4 rivaroxaban/ or dabigatranetexilate/ or apixaban/ or edoxaban/ or betrixaban/ or ximelagatran/ or Darexaban/ or Otamixaban/ or Razaxaban/ or Bivalirudin/ or Desirudin/ or Lepirudin/ or Melagatran/ or hirudin/
- 5 (rivaroxaban or Xarelto or apixaban or Eliquis or dabigatranetexilate or Edoxaban or Savaysa or Betrixaban or ximelagatran or pradaxa or lixiana or exanta or Darexaban or Otamixaban\$ or Razaxaban or Bivalirudin or Desirudin or Lepirudin or Melagatran or YM 150 or Iprivask or argatroban or pradax or BIBR-953 or BIBR-953ZW or BAY 59-7939 or BMS-562247 or DU-176 or DU-176b).mp.
- 6 (TSOAC\$ or NOAC\$ or DOAC\$).ti,ab,kw.
- 7 ((Target adj Specific adj Oral adj Anticoagulant\$) or (oral adj anticoagulant\$) or (novel adj anticoagulant\$) or (new adj anticoagulant\$) or (direct\$ adj anticoagulant\$)).mp.
- 8 ((new or novel or direct or direct-acting or target-specific or targeted or non-vitamin K) adj3 oral anticoagulant\*).mp.
- 9 (factor Xa adj2 (antag\* or inhibit\*)).mp.
- 10 or/1-9
- 11 exp 4 hydroxycoumarin/ or exp 4 hydroxycoumarin derivative/
- 12 warfarin/
- 13 acenocoumarol/
- 14 coumarin/ or coumarin derivative/
- 15 phenindione/
- 16 dicoumarol derivative/ or dicoumarol/
- 17 phenprocoumon/
- 18 phepromaron/
- 19 ethyl biscoumacetate/
- 20 fluindione/ or difenacoum/ or coumatetralyl/
- 21 vitamin K antagonist.mp. or antivitamin K/
- 22 (4 hydroxycoumarin or warfarin or acenocoumarol or nicoumalone or sinthrome or Sintrom or phenindione or dicoumarol or coumadin or phenprocoumon or phepromaron or ethyl-biscoumacetate or phenindione or Diphenadione or Tiocloamarol or Racumi or Marcoumar or Marcumar or Falithrom or Coumadin or Jantoven or vitamin K antagonist\$ or VKA or fluindione or difenacoum or coumatetralyl).mp.
- 23 or/11-22
- 24 exp anticoagulant agent/
- 25 Anticoagula\$.mp.
- 26 24 or 25
- 27 (fondaparinux or Arixtra).mp.
- 28 exp Heparin/
- 29 (un?fract\* adjheparin).mp.
- 30 UFH.mp.
- 31 ((sodium or alpha) adj1 heparin).mp.
- 32 (Hepalean or Calcilean or Calciparine or Liquaemin or Liquemin or Multiparin or Novoheparin or Eparina or Heplock or Heparinate or Heparinic acid or Panheprin or Hepalean or Heparin Leo or Heparin Lockor or blockasol or celparin or hed-heparin).mp.
- 33 or/28-32
- 34 exp heparin derivative/ or heparin\*.mp.
- 35 nadroparin/
- 36 enoxaparin/
- 37 dalteparin/
- 38 ardeparin/
- 39 tinzaparin/
- 40 certoparin/

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41 reviparin/  
42 danaparoid/  
43 (LMWH or LMWHs or low molecular weight heparin or nadroparin or fraxiparin\* or enoxaparin\* or clexane or klexane or lovenox or dalteparin or fragmin or ardeparin\* or normiflo or tinzaparin or logiparin or innohep or certoparin or sandoparin or reviparin or clivarin\* or danaproid or danaparoid or orgaran or antixarin or bemiparin\* or hibor or zibor or ivor or badyket or semuloparin or parnaparin or tedelparin or fluxum or lohepa or lowhepa or parvoparin or seleparin\* or tedelgliparin or lomoparan or orgaran or sulodexide or zivor or embolex or xaparin or clivarine).mp.  
44 (FR-860 or FR 860 or FR860 or PK-10,169 or PK 10,169 or PK10,169 or PK-10169 or PK 10169 or PK10169 or EMT-967 or EMT 967 or EMT967 or EMT-966 or EMT 966 or EMT966 or CY 216 or CY-216 or CY216 or LMF CY-216 or LMF CY 216 or LMF CY216).mp.  
45 or/34-44  
46 10 or 23 or 26 or 27 or 33 or 45  
47 exp Patient Education as Topic/ or exp patient education/ or exp education/ or exp health education/ or exp attitude to health/ or expself care/ or exp patient care planning/ or expself evaluation/ or expself monitoring/ (1538463)  
48 Health Education/  
49 exp Patient Compliance/  
50 (((patient or patients) adj3 (education or educate or educating or information or literature or leaflet\$ or booklet\$ or pamphlet\$)) or education or self monitoring\* or self-testing\*).mp.  
51 or/47-50  
52 46 and 51  
53 systematic review/  
54 meta-analysis/  
55 (meta analy\* or metanaly\* or metaanaly\*).ti,ab.  
56 (reference list\* or bibliograph\* or hand search\* or manual search\* or relevant journals).ab.  
57 ((systematic\* or evidence\*) adj2 (review\* or overview\*)).ti,ab.  
58 (search strategy or search criteria or systematic search or study selection or data extraction).ab.  
59 (search\* adj4 literature).ab.  
60 (medline or pubmed or cochrane or embase or psychlit or psyclit or psychinfo or psycinfo or cinahl or science citation index or bids or cancerlit).ab.  
61 ((pool\* or combined) adj2 (data or trials or studies or results)).ab.  
62 cochrane.jw.  
63 or/53-62  
64 animals/ not humans/  
65 nonhuman/  
66 exp Animal Experiment/  
67 exp Experimental Animal/  
68 animal model/  
69 exp Rodent/  
70 (rat or rats or mouse or mice).ti.  
71 or/64-70  
72 63 not 71  
73 52 and 72  
74 random\*.ti,ab.  
75 trial.ti,ab.  
76 factorial\*.ti,ab.  
77 (crossover\* or cross over\* or cross-over).ti,ab.  
78 ((doubl\* or singl\*) adj blind\*).ti,ab.  
79 (assign\* or allocat\* or volunteer\* or placebo\*).ti,ab.  
80 placebo.ab.  
81 crossover procedure/  
82 single blind procedure/

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83 randomized controlled trial/  
84 double blind procedure/  
85 or/74-84  
86 animals/ not humans/  
87 nonhuman/  
88 exp Animal Experiment/  
89 exp Experimental Animal/  
90 animal model/  
91 exp Rodent/  
92 (rat or rats or mouse or mice).ti.  
93 or/86-92  
94 85 not 93  
95 52 and 94  
96 95 not 7397 limit 96 to yr="2010 -Current"

**Records Retrieved: 4185**

# American Society of Hematology Guidelines for Management of Venous Thromboembolism: Optimal Management of Anticoagulation Therapy

## OVERVIEW

Interface: Cochrane Library  
Database: Cochrane Database of Systematic Reviews  
Date of Search: January 5, 2017  
Study Types: Trials  
Limits: None

## Search Strategy: search terms (number of results)

- #1 MeSH descriptor: [Patient Education as Topic] explode all trees
- #2 MeSH descriptor: [Education] explode all trees
- #3 MeSH descriptor: [Self Care] explode all trees
- #4 MeSH descriptor: [Health Knowledge, Attitudes, Practice] explode all trees
- #5 MeSH descriptor: [Patient Care Planning] explode all trees
- #6 MeSH descriptor: [Patient Care Team] explode all trees
- #7 MeSH descriptor: [Health Education] this term only
- #8 MeSH descriptor: [Patient Compliance] explode all trees
- #9 (((patient or patients) near/3 (education or educate or educating or information or literature or leaflet\* or booklet\* or pamphlet\*)) or (information near/3 pack\*) or education\* or self-testing\* or self-monitoring\*)
- #10 #1 or #2 or #3 or #4 or #5 or #6 or #7 or #8 or #9
- #11 MeSH descriptor: [Anticoagulants] explode all trees
- #12 (Anticoagulant or anticoagulation)
- #13 #11 or #12
- #14 MeSH descriptor: [Heparin] explode all trees
- #15 MeSH descriptor: [Heparin, Low-Molecular-Weight] explode all trees
- #16 MeSH descriptor: [Heparinoids] this term only
- #17 MeSH descriptor: [Dalteparin] this term only
- #18 MeSH descriptor: [Enoxaparin] this term only
- #19 MeSH descriptor: [Nadroparin] this term only
- #20 (LMWH or LMWHs or low molecular weight heparin or heparin\* or nadroparin or fraxiparin\* or enoxaparin\* or clexane or klexane or lovenox or dalteparin or fragmin or ardeparin\* or normiflo or tinzaparin or logiparin or innohep or certoparin or sandoparin or reviparin or clivarin\* or danaproid or danaparoid or orgaran or antixarin or bemiparin\* or hibor or zibor or ivor or badyket or semuloparin or parnaparin or tedelparin or fluxum or lohepa or lowhepa or parvoparin or seleparin\* or tedelgliparin or lomoparan or orgaran or sulodexide or zivor or embolex or xaparin or clivarine)
- #21 (FR-860 or FR 860 or FR860 or PK-10,169 or PK 10,169 or PK10,169 or PK-10169 or PK 10169 or PK10169 or EMT-967 or EMT 967 or EMT967 or EMT-966 or EMT 966 or EMT966 or CY 216 or CY-216 or CY216 or LMF CY-216 or LMF CY 216 or LMF CY216)
- #22 #14 or #15 or #16 or #17 or #18 or #19 or #20 or #21
- #23 MeSH descriptor: [Heparin] explode all trees
- #24 (UFH or Unfractionated Heparin or Heparin, Unfractionated or Sodium Heparin or Heparin, Sodium or Heparin Sodium or alpha-Heparin or alpha Heparin or Hepalean or Calcilean or Calciparine or Liquaemin or Liquemin or Multiparin or Novoheparin or Eparina or Hep-lock or Heparinate or Heparinic acid or Panheprin or Hepalean or Heparin Leo or Heparin Lock or blockasol or celparin or hed or heparin)
- #25 #23 or #24
- #26 MeSH descriptor: [Antithrombins] explode all trees
- #27 MeSH descriptor: [Factor Xa Inhibitors] explode all trees
- #28 MeSH descriptor: [Rivaroxaban] explode all trees
- #29 MeSH descriptor: [Dabigatran] explode all trees
- #30 MeSH descriptor: [Hirudins] explode all trees
- #31 (rivaroxaban or Xarelto or apixaban or Eliquis or dabigatranetexilate or Edoxaban or Savaysa or Betrixaban)

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or ximelagatran or pradaxa or lixiana or exanta or Darexaban or Otamixaban\$ or Razaxaban or Bivalirudin or Desirudin or Lepirudin or Melagatran or YM 150 or Iprivask or argatroban or pradax or BIBR-953 or BIBR-953ZW or BAY 59-7939 or BMS-562247 or DU-176 or DU-176b)

#32 ((Target adj Specific adj Oral adj Anticoagulant\$) or (oral adj anticoagulant\$) or (novel adj anticoagulant\$) or (new adj anticoagulant\$) or (direct\$ adj anticoagulant\$))

#33 ((new or novel or direct or direct-acting or target-specific or targeted or non-vitamin K) near/3 oral anticoagulant\*)

#34 (factor Xa adj2 (antag\* or inhibit\*))

#35 #26 or #27 or #28 or #29 or #30 or #31 or #32 or #33 or #34

#36 MeSH descriptor: [Warfarin] explode all trees

#37 MeSH descriptor: [Acenocoumarol] explode all trees

#38 MeSH descriptor: [Phenindione] explode all trees

#39 MeSH descriptor: [Coumarins] explode all trees

#40 MeSH descriptor: [Dicumarol] explode all trees

#41 MeSH descriptor: [Phenprocoumon] explode all trees

#42 MeSH descriptor: [Ethyl Biscoumacetate] explode all trees

#43 MeSH descriptor: [4-Hydroxycoumarins] explode all trees

#44 MeSH descriptor: [Phenprocoumon] explode all trees

#45 (4 hydroxycoumarin or warfarin or acenocoumarol or nicoumalone or sinthrome or Sintrom or phenindione or dicoumarol or coumadin or phenprocoumon or phepromaron or ethyl-biscoumacetate or phenindione or Diphenadione or Tioclomarol or Racumi or Marcoumar or Marcumar or Falithrom or Coumadin or Jantoven or vitamin K antagonist\$ or VKA or fluindione or difenacoum or coumatetralyl)

#46 #36 or #37 or #38 or #39 or #40 or #41 or #42 or #43 or #44 or #45

#47 fondaparinux or Arixtra

#48 #13 or #22 or #25 or #35 or #46 or #47

#49 #10 and #48

**Records Retrieved: 896**



**Recommendation 13a, 13b, 13c, 13d.** Interventions to improve medication adherence in patients receiving oral anticoagulation therapy for treatment of VTE

## OVERVIEW

Interface:	Ovid
Database:	Ovid MEDLINE(R) In-Process & Other Non-Indexed Citations and Ovid MEDLINE(R) 1946 to Present
Date of Search:	January 26, 2017
Study Types:	Systematic reviews; Randomized controlled trials; Observational studies
Limits:	None

## Search Strategy: search terms (number of results)

1. exp Patient Compliance/ or exp Medication Adherence/
2. ((drug or therap\* or medica\* or treatm\* or patient) adj (adheren\* or complian\* or refus\* or discontinu\* or persisten\*)).ti,ab,kw.
3. treatment refusal.ti,ab,kw.
4. Antithrombins.mp. or exp Antithrombins/
5. thrombin inhibitor/ or thrombin inhibitor.mp.
6. Factor Xa Inhibitors.mp. or exp Factor Xa Inhibitors/
7. rivaroxaban/ or dabigatran etexilate/ or apixaban/ or edoxaban/ or betrixaban/ or ximelagatran/
8. (rivaroxaban or Xarelto or apixaban or Eliquis or dabigatran etexilate or Edoxaban or Savaysa or Betrixaban or ximelagatran or pradaxa or lixiana or exanta or Darexaban or Otamixaban\$ or Razaxaban or Bivalirudin or Desirudin or Lepirudin or Melagatran or YM 150 or Iprivask or argatrovan or pradax or BIBR-953 or BIBR-953ZW or BAY 59-7939 or BMS-562247 or DU-176 or DU-176b).mp.
9. (TSOAC\$ or NOAC\$ or DOAC\$).ti,ab,kw.
10. ((Target adj Specific adj Oral adj Anticoagulant\$) or (oral adj anticoagulant\$) or (novel adj anticoagulant\$) or (new adj anticoagulant\$) or (direc\$ adj anticoagulant\$)).mp.
11. ((new or novel or direct or direct-acting or target-specific or targeted or non-vitamin K) adj3 oral anticoagulant\*).mp.
12. (factor Xa adj2 (antag\* or inhibit\*)).mp.
13. or/4-12
14. exp 4-Hydroxycoumarins/ or warfarin/ or acenocoumarol/ or dicumarol/ or Coumarins/ or coumarin anticoagulant/ or ethyl biscoumacetate/ or phenprocoumon/ or phenindione/
15. vitamin K antagonist\$.mp.
16. (4-Hydroxycoumarins or warfarin or acenocoumarol or nicoumalone or sinthrome or Sintrom or phenindione or dicoumarol or coumadin or phenprocoumon or phepromaron or ethyl-biscoumacetate or phenindione or Diphenadione or Tiocloamarol or Racumi or Marcoumar or Marcumar or Falithrom or Coumadin or Jantoven or vitamin K antagonist\$ or VKA or fluindione or difenacoum or coumatetralyl).mp.
17. 14 or 15 or 16
18. 13 or 17
19. 1 or 2 or 3
20. 18 and 19
21. epidemiologic studies/
22. exp case control studies/
23. exp cohort studies/
24. cross-sectional studies/
25. case control.ti,ab.
26. (cohort adj (study or studies or analys\*)).ti,ab.

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27. ((follow up or observational or uncontrolled or non randomi#ed or nonrandomi#ed or epidemiologic\*) adj (study or studies)).ti,ab.
28. ((longitudinal or retrospective or prospective or cross sectional) and (study or studies or review or analys\* or cohort\*)).ti,ab.
29. or/21-28
30. meta-analysis/
31. meta-analysis as topic/
32. (meta analy\* or metanaly\* or metaanaly\*).ti,ab.
33. (reference list\* or bibliograph\* or hand search\* or manual search\* or relevant journals).ab.
34. ((systematic\* or evidence\*) adj2 (review\* or overview\*)).ti,ab.
35. (search strategy or search criteria or systematic search or study selection or data extraction).ab.
36. (search\* adj4 literature).ab.
37. (medline or pubmed or cochrane or embase or psychlit or psyclit or psychinfo or psycinfo or cinahl or science citation index or bids or cancerlit).ab.
38. ((pool\* or combined) adj2 (data or trials or studies or results)).ab.
39. cochrane.jw.
40. or/30-39
41. animals/ not humans/
42. exp Animals, Laboratory/
43. exp Animal Experimentation/
44. exp Models, Animal/
45. exp Rodentia/
46. (rat or rats or mouse or mice).ti.
47. or/41-46
48. 40 not 47
49. randomized controlled trial.pt.
50. controlled clinical trial.pt.
51. Clinical Trials as topic.sh.
52. trial.ti,ab.
53. factorial\*.ti,ab.
54. (crossover\* or cross over\*).ti,ab.
55. ((doubl\* or singl\*) adj blind\*).ti,ab.
56. (assign\* or allocat\* or volunteer\* or placebo\*).ti,ab.
57. placebo.ab.
58. random\*.ti,ab.
59. or/49-58
60. animals/ not humans/
61. exp Animals, Laboratory/
62. exp Animal Experimentation/
63. exp Models, Animal/
64. exp Rodentia/
65. (rat or rats or mouse or mice).ti.
66. or/60-65
67. 59 not 66
68. 20 and 48
69. 20 and 67
70. 20 and 29
71. 68 or 69 or 70

**Records Retrieved: 404**

### OVERVIEW

## American Society of Hematology Guidelines for Management of Venous Thromboembolism: Optimal Management of Anticoagulation Therapy

Interface: Ovid  
Database: Embase 1974 to 2017 Week 03  
Date of Search: January 26, 2017  
Study Types: Systematic reviews; Randomized controlled trials; Observational studies  
Limits: None

### Search Strategy: search terms (number of results)

1. random\*.ti,ab.
2. trial.ti,ab.
3. factorial\*.ti,ab.
4. (crossover\* or cross over\*).ti,ab.
5. ((doubl\* or singl\*) adj blind\*).ti,ab.
6. (assign\* or allocat\* or volunteer\* or placebo\*).ti,ab.
7. placebo.ab.
8. crossover procedure/
9. single blind procedure/
10. randomized controlled trial/
11. double blind procedure/
12. or/1-11
13. animals/ not humans/
14. nonhuman/
15. exp Animal Experiment/
16. exp Experimental Animal/
17. animal model/
18. exp Rodent/
19. (rat or rats or mouse or mice).ti.
20. or/13-19
21. 12 not 20
22. systematic review/
23. meta-analysis/
24. (meta analy\* or metanaly\* or metaanaly\*).ti,ab.
25. (reference list\* or bibliograph\* or hand search\* or manual search\* or relevant journals).ab.
26. ((systematic\* or evidence\*) adj2 (review\* or overview\*)).ti,ab.
27. (search strategy or search criteria or systematic search or study selection or data extraction).ab.
28. (search\* adj4 literature).ab.
29. (medline or pubmed or cochrane or embase or psychlit or psyclit or psychinfo or psycinfo or cinahl or science citation index or bids or cancerlit).ab.
30. ((pool\* or combined) adj2 (data or trials or studies or results)).ab.
31. cochrane.jw.
32. or/22-31
33. animals/ not humans/
34. nonhuman/
35. exp Animal Experiment/
36. exp Experimental Animal/
37. animal model/
38. exp Rodent/
39. (rat or rats or mouse or mice).ti.
40. or/33-39
41. 32 not 40
42. exp patient compliance/ or exp medication compliance/
43. ((drug or therap\* or medica\* or treatm\* or patient) adj (adheren\* or complian\* or refus\* or discontinu\*

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- or persisten\*)).ti,ab,kw.
44. 42 or 43
  45. exp antithrombin/ or Antithrombins.mp.
  46. thrombin inhibitor/ or thrombin inhibitor.mp.
  47. Factor Xa Inhibitors.mp. or exp blood clotting factor 10a inhibitor/
  48. rivaroxaban/ or dabigatran etexilate/ or apixaban/ or edoxaban/ or betrixaban/ or ximelagatran/ or Darexaban/ or Otamixaban/ or Razaxaban/ or Bivalirudin/ or Desirudin/ or Lepirudin/ or Melagatran/
  49. (rivaroxaban or Xarelto or apixaban or Eliquis or dabigatran etexilate or Edoxaban or Savaysa or Betrixaban or ximelagatran or pradaxa or lixiana or exanta or Darexaban or Otamixaban\$ or Razaxaban or Bivalirudin or Desirudin or Lepirudin or Melagatran or YM 150 or Iprivask or argatrovan or pradax or BIBR-953 or BIBR-953ZW or BAY 59-7939 or BMS-562247 or DU-176 or DU-176b).mp.
  50. (TSOAC\$ or NOAC\$ or DOAC\$).ti,ab,kw.
  51. ((Target adj Specific adj Oral adj Anticoagulant\$) or (oral adj anticoagulant\$) or (novel adj anticoagulant\$) or (new adj anticoagulant\$) or (direc\$ adj anticoagulant\$)).mp.
  52. ((new or novel or direct or direct-acting or target-specific or targeted or non-vitamin K) adj3 oral anticoagulant\*).mp.
  53. (factor Xa adj2 (antag\* or inhibit\*)).mp.
  54. or/45-53
  55. exp 4 hydroxycoumarin/ or exp 4 hydroxycoumarin derivative/
  56. warfarin/
  57. acenocoumarol/
  58. coumarin/ or coumarin derivative/
  59. phenindione/
  60. dicoumarol derivative/ or dicoumarol/
  61. phenprocoumon/
  62. phepromaron/
  63. ethyl biscoumacetate/
  64. fluidione/ or difenacoum/ or coumatetralyl/
  65. vitamin K antagonist.mp. or antivitamin K/
  66. (4 hydroxycoumarin or warfarin or acenocoumarol or nicoumalone or sinthrome or Sintrom or phenindione or dicoumarol or coumadin or phenprocoumon or phepromaron or ethyl-biscoumacetate or phenindione or Diphenadione or Tiocloamarol or Racumi or Marcoumar or Marcumar or Falithrom or Coumadin or Jantoven or vitamin K antagonist\$ or VKA or fluidione or difenacoum or coumatetralyl).mp.
  67. or/55-66
  68. exp anticoagulant agent/
  69. Anticoagula\$.mp.
  70. 68 or 69
  90. 54 or 67 or 70
  71. clinical study/
  72. exp case control study/
  73. family study/
  74. longitudinal study/
  75. prospective study/
  76. cross-sectional study/
  77. cohort analysis/
  78. follow-up/
  79. cohort\*.ti,ab.
  80. cohort\*.ti,ab.
  81. (cohort adj (study or studies or analys\*)).ti,ab.
  82. case control.ti,ab.
  83. ((follow up or observational or uncontrolled or non randomi#ed or nonrandomi#ed or epidemiologic\*) adj (study or studies)).ti,ab.
  84. ((longitudinal or retrospective or prospective or cross sectional) and (study or studies or review or analys\* and (follow up or observational or uncontrolled or non randomi#ed or nonrandomi#ed or epidemiologic\*) adj (study or studies))).ti,ab.

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<p>or cohort*).ti,ab.              85. or/71-84              86. 44 and 90 and (21 or 41 or 85)</p>
<p><b>Records Retrieved: 3885</b></p>

**OVERVIEW**

Interface:	Cochrane Library
Database:	Cochrane Database of Systematic Reviews
Date of Search:	January 26, 2017
Study Types:	Systematic reviews; Randomized controlled trials
Limits:	None

**Search Strategy: search terms (number of results)**

#1	MeSH descriptor: [Patient Compliance] explode all trees
#2	MeSH descriptor: [Medication Adherence] explode all trees
#3	((drug or therap* or medica* or treatm* or patient) near (adheren* or complian* or refus* or discontinu* or persisten*)):ti,ab,kw
#4	#1 or #2 or #3
#5	MeSH descriptor: [Antithrombins] explode all trees
#6	MeSH descriptor: [Factor Xa Inhibitors] explode all trees
#7	(rivaroxaban or Xarelto or apixaban or Eliquis or dabigatran etexilate or Edoxaban or Savaysa or Betrixaban or ximelagatran or pradaxa or lixiana or exanta or Darexaban or Otamixaban\$ or Razaxaban or Bivalirudin or Desirudin or Lepirudin or Melagatran or YM 150 or Iprivask or argatrovan or pradax or BIBR-953 or BIBR-953ZW or BAY 59-7939 or BMS-562247 or DU-176 or DU-176b)
#8	((Target adj Specific adj Oral adj Anticoagulant\$) or (oral adj anticoagulant\$) or (novel adj anticoagulant\$) or (new adj anticoagulant\$) or (direc\$ adj anticoagulant\$))
#9	((new or novel or direct or direct-acting or target-specific or targeted or non-vitamin K) near/3 oral anticoagulant*)
#10	(factor Xa adj2 (antag* or inhibit*))
#11	#5 or #6 or #7 or #8 or #9 or #10
#12	MeSH descriptor: [Warfarin] explode all trees
#13	MeSH descriptor: [Acenocoumarol] explode all trees
#14	MeSH descriptor: [Phenindione] explode all trees
#15	MeSH descriptor: [Coumarins] explode all trees
#16	MeSH descriptor: [Dicumarol] explode all trees
#17	MeSH descriptor: [Phenprocoumon] explode all trees
#18	MeSH descriptor: [Ethyl Biscoumacetate] explode all trees
#19	MeSH descriptor: [4-Hydroxycoumarins] explode all trees
#20	MeSH descriptor: [Phenprocoumon] explode all trees
#21	(4 hydroxycoumarin or warfarin or acenocoumarol or nicoumalone or sinthrome or Sintrom or phenindione or dicoumarol or coumadin or phenprocoumon or phepromaron or ethyl-biscoumacetate or phenindione or Diphenadione or Tiocloamarol or Racumi or Marcoumar or Marcumar or Falithrom or Coumadin or Jantoven or vitamin K antagonist\$ or VKA or fluidione or difenacoum or coumatetralyl)
#22	#12 or #13 or #14 or #15 or #16 or #17 or #18 or #19 or #20 or #21
#23	#11 or #22
#24	#4 and #23

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**Records Retrieved: 267**

**Recommendation 15.** DOAC anticoagulant effect testing in patients interrupting DOAC therapy for scheduled invasive procedures

**OVERVIEW**

Interface:	Ovid
Database:	Ovid MEDLINE(R) In-Process & Other Non-Indexed Citations and Ovid MEDLINE(R) 1946 to Present
Date of Search:	March 23, 2017
Study Types:	Observational studies
Limits:	None

**Search Strategy: search terms (number of results)**

1. Antithrombins.mp. or exp Antithrombins/
2. thrombin inhibitor/ or thrombin inhibitor.mp.
3. Factor Xa Inhibitors.mp. or exp Factor Xa Inhibitors/
4. rivaroxaban/ or dabigatran etexilate/ or apixaban/ or edoxaban/ or betrixaban/ or ximelagatran/
5. (rivaroxaban or Xarelto or apixaban or Eliquis or dabigatran etexilate or Edoxaban or Savaysa or Betrixaban or ximelagatran or pradaxa or lixiana or exanta or Darexaban or Otamixaban\$ or Razaxaban or Bivalirudin or Desirudin or Lepirudin or Melagatran or YM 150 or lprivask or argatrovan or pradax or BIBR-953 or BIBR-953ZW or BAY 59-7939 or BMS-562247 or DU-176 or DU-176b).mp.
6. (TSOAC\$ or NOAC\$ or DOAC\$).ti,ab,kw.
7. ((Target adj Specific adj Oral adj Anticoagulant\$) or (oral adj anticoagulant\$) or (novel adj anticoagulant\$) or (new adj anticoagulant\$) or (direct\$ adj anticoagulant\$)).mp.
8. ((new or novel or direct or direct-acting or target-specific or targeted or non-vitamin K) adj3 oral anticoagulant\*).mp.
9. (factor Xa adj2 (antag\* or inhibit\*)).mp.
10. or/1-9
  
11. exp cohort studies/
12. exp case control study/
13. longitudinal study/
14. prospective study/
15. cross-sectional study/
16. cohort analysis/
17. cohort\*.ti,ab.
18. (cohort adj (study or studies or analys\*)).ti,ab.
19. case control.ti,ab.
20. ((follow up or observational or uncontrolled or non randomi#ed or nonrandomi#ed or epidemiologic\*) adj (study or studies)).ti,ab.
21. ((longitudinal or retrospective or prospective or cross sectional) and (study or studies or review or analys\* or cohort\*)).ti,ab.
22. (case\$ and series).tw.
23. or/11-22
  
24. exp Withholding Treatment/
25. (cessation or resumption or discontin\* or withdraw\*).ti,ab,kw.
26. 24 or 25

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27. (cessat* or resum* or discontin* or withdraw*).ti,ab,kw.
28. 26 and 27
29. exp perioperative care/
30. exp perioperative period/
31. periop\$.mp.
32. periproc\$.mp.
33. (invasive* or procedure* or surger* or operat*).ti,ab,kw.
34. exp Surgical Procedures, Operative/
35. exp Preoperative Period/ or exp Preoperative Care/
36. (preop* or preproc*).ti,ab,kw.
37. or/29-36
38. 10 and 22 and 28 and 37
<b>Records Retrieved: 96</b>

### OVERVIEW

Interface: Ovid  
Database: Embase 1974 to Current  
Date of Search: March 23, 2017  
Study Types: Observational studies  
Limits: None

### Search Strategy: search terms (number of results)

1. exp antithrombin/ or Antithrombins.mp.
2. thrombin inhibitor/ or thrombin inhibitor.mp.
3. Factor Xa Inhibitors.mp. or exp blood clotting factor 10a inhibitor/
4. rivaroxaban/ or dabigatran etexilate/ or apixaban/ or edoxaban/ or betrixaban/ or ximelagatran/ or Darexaban/ or Otamixaban/ or Razaxaban/ or Bivalirudin/ or Desirudin/ or Lepirudin/ or Melagatran/
5. (rivaroxaban or Xarelto or apixaban or Eliquis or dabigatran etexilate or Edoxaban or Savaysa or Betrixaban or ximelagatran or pradaxa or lixiana or exanta or Darexaban or Otamixaban\$ or Razaxaban or Bivalirudin or Desirudin or Lepirudin or Melagatran or YM 150 or lprivask or argatrovan or pradax or BIBR-953 or BIBR-953ZW or BAY 59-7939 or BMS-562247 or DU-176 or DU-176b).mp.
6. (TSOAC\$ or NOAC\$ or DOAC\$).ti,ab,kw.
7. ((Target adj Specific adj Oral adj Anticoagulant\$) or (oral adj anticoagulant\$) or (novel adj anticoagulant\$) or (new adj anticoagulant\$) or (direc\$ adj anticoagulant\$)).mp.
8. ((new or novel or direct or direct-acting or target-specific or targeted or non-vitamin K) adj3 oral anticoagulant\*).mp.
9. (factor Xa adj2 (antag\* or inhibit\*)).mp.
10. or/1-9
  
11. clinical study/
12. exp case control study/
13. family study/
14. longitudinal study/
15. prospective study/
16. cross-sectional study/
17. cohort analysis/
18. follow-up/
19. cohort\*.ti,ab.
20. cohort\*.ti,ab.



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21. (cohort adj (study or studies or analys\*)).ti,ab.
22. case control.ti,ab.
23. ((follow up or observational or uncontrolled or non randomi#ed or nonrandomi#ed or epidemiologic\*) adj (study or studies)).ti,ab.
24. ((longitudinal or retrospective or prospective or cross sectional) and (study or studies or review or analys\* or cohort\*)).ti,ab.
25. or/11-24
26. exp treatment withdrawal/
27. (cessation or resumption or discontin\* or withdraw\*).ti,ab.
28. (cessat\* or resum\* or discontin\* or withdraw\*).ti,ab.
29. 26 or 27 or 28
30. exp surgery/ or exp perioperative period/
31. exp preoperative care/
32. (invasive\* or procedure\* or surger\* or operat\* or periop\* or periproc\* or preop\* or preproc\*).ti,ab.
33. 30 or 31 or 32
34. 19 and 25 and 29 and 33

**Records Retrieved: 433**

**Recommendation 16.** Vitamin K administration in patients receiving VKA for treatment of VTE with INR >4.5 but <10 and without clinically relevant bleeding

OVERVIEW	
Interface:	Ovid
Database:	Ovid MEDLINE(R) In-Process & Other Non-Indexed Citations and Ovid MEDLINE(R) 1946 to Present
Date of Search:	January 27, 2017
Study Types:	Randomized controlled trials
Limits:	None
Search Strategy: search terms (number of results)	
1	exp 4-Hydroxycoumarins/ or warfarin/ or acenocoumarol/ or dicumarol/ or Coumarins/ or coumarin anticoagulant/ or ethyl biscoumacetate/ or phenprocoumon/ or phenindione/
2	vitamin K antagonist\$.mp.
3	(4-Hydroxycoumarins or warfarin or acenocoumarol or nicoumalone or sinthrome or Sintrom or phenindione or dicoumarol or coumadin or phenprocoumon or phepromaron or ethyl-biscoumacetate or phenindione or Diphenadione or Tiocloamarol or Racumi or Marcoumar or Marcumar or Falithrom or Coumadin or Jantoven or vitamin K antagonist\$ or VKA or fluindione or difenacoum or coumatetralyl).mp.
4	1 or 2 or 3
5	randomized controlled trial.pt.
6	controlled clinical trial.pt.
7	Clinical Trials as topic.sh.
8	trial.ti,ab.
9	factorial*.ti,ab.
10	(crossover* or cross over*).ti,ab.
11	((doubl* or singl*) adj blind*).ti,ab.
12	(assign* or allocat* or volunteer* or placebo*).ti,ab.
13	placebo.ab.
14	random*.ti,ab.
15	or/5-14
16	animals/ not humans/
17	exp Animals, Laboratory/
18	exp Animal Experimentation/
19	exp Models, Animal/
20	exp Rodentia/
21	(rat or rats or mouse or mice).ti.
22	or/16-21
23	15 not 22
24	exp vitamin k/
25	(vitamin K or phytonadione or Mephyton).mp.
26	24 or 25
27	4 and 23 and 26
<b>Records retrieved:</b> 1887	

American Society of Hematology Guidelines for Management of Venous Thromboembolism: Optimal Management of Anticoagulation Therapy

Interface: Ovid  
Database: Embase 1974 to Current  
Date of Search: January 27, 2017  
Study Types: Randomized controlled trials  
Limits: None

**Search Strategy: search terms (number of results)**

1 random\*.ti,ab.  
2 trial.ti,ab.  
3 factorial\*.ti,ab.  
4 (crossover\* or cross over\*).ti,ab.  
5 ((doubl\* or singl\*) adj blind\*).ti,ab.  
6 (assign\* or allocat\* or volunteer\* or placebo\*).ti,ab.  
7 placebo.ab.  
8 crossover procedure/  
9 single blind procedure/  
10 randomized controlled trial/  
11 double blind procedure/  
12 or/1-11  
13 animals/ not humans/  
14 nonhuman/  
15 exp Animal Experiment/  
16 exp Experimental Animal/  
17 animal model/  
18 exp Rodent/  
19 (rat or rats or mouse or mice).ti.  
20 13 or 14 or 15 or 16 or 17 or 18 or 19  
21 12 not 20  
22 exp 4 hydroxycoumarin/ or exp 4 hydroxycoumarin derivative/  
23 warfarin/  
24 acenocoumarol/  
25 coumarin/ or coumarin derivative/  
26 phenindione/  
27 dicoumarol derivative/ or dicoumarol/  
28 phenprocoumon/  
29 phepromaron/  
30 ethyl biscoumacetate/  
31 fluindione/ or difenacoum/ or coumatetralyl/  
32 vitamin K antagonist.mp. or antivitamin K/  
33 (4 hydroxycoumarin or warfarin or acenocoumarol or nicoumalone or sinthrome or Sintrom or phenindione or dicoumarol or coumadin or phenprocoumon or phepromaron or ethyl-biscoumacetate or phenindione or Diphenadione or Tiocloamarol or Racumi or Marcoumar or Marcumar or Falithrom or Coumadin or Jantoven or vitamin K antagonist\$ or VKA or fluindione or difenacoum or coumatetralyl).mp.  
34 or/22-33  
35 exp phytomenadione/  
36 (vitamin K or phytonadione or Mephyton).mp.  
37 35 or 36  
38 21 and 34 and 37

**Records retrieved: 2375**

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## OVERVIEW

Interface: Cochrane Library  
Database: Cochrane Database of Systematic Reviews  
Date of Search: January 27, 2017  
Study Types: Trials  
Limits: None

### Search Strategy: search terms (number of results)

#1 MeSH descriptor: [Vitamin K] 2 tree(s) exploded  
#2 (vitamin K or phytonadione or Mephyton)  
#3 #1 or #2  
#4 MeSH descriptor: [Warfarin] explode all trees  
#5 MeSH descriptor: [Acenocoumarol] explode all trees  
#6 MeSH descriptor: [Phenindione] explode all trees  
#7 MeSH descriptor: [Coumarins] explode all trees  
#8 MeSH descriptor: [Dicumarol] explode all trees  
#9 MeSH descriptor: [Phenprocoumon] explode all trees  
#10 MeSH descriptor: [Ethyl Biscoumacetate] explode all trees  
#11 MeSH descriptor: [4-Hydroxycoumarins] explode all trees  
#12 MeSH descriptor: [Phenprocoumon] explode all trees  
#13 (4 hydroxycoumarin or warfarin or acenocoumarol or nicoumalone or sinthrome or Sintrom or phenindione or dicoumarol or coumadin or phenprocoumon or phepromaron or ethyl-biscoumacetate or phenindione or Diphenadione or Tiocloamarol or Racumi or Marcoumar or Marcumar or Falithrom or Coumadin or Jantoven or vitamin K antagonist\$ or VKA or fluindione or difenacoum or coumatetralyl)  
#14 #4 or #5 or #6 or #7 or #8 or #9 or #10 or #11 or #12 or #13  
#15 #3 and #14 in Trials

**Records Retrieved:** 592

**Recommendation 17. 4-Factor PCC compared with fresh frozen plasma (FFP) in patients with VKA-related life-threatening bleeding during treatment for VTE**

**OVERVIEW**

Interface:	Ovid
Database:	Ovid MEDLINE(R) In-Process & Other Non-Indexed Citations and Ovid MEDLINE(R) 1946 to Present
Date of Search:	February 10, 2017
Study Types:	Randomized controlled trials; Observational studies
Limits:	None

**Search Strategy: search terms (number of results)**

- 1 epidemiologic studies/
- 2 exp case control studies/
- 3 exp cohort studies/
- 4 cross-sectional studies/
- 5 case control.ti,ab.
- 6 (cohort adj (study or studies or analys\*)).ti,ab.
- 7 ((follow up or observational or uncontrolled or non randomi#ed or nonrandomi#ed or epidemiologic\*) adj (study or studies)).ti,ab.
- 8 ((longitudinal or retrospective or prospective or cross sectional) and (study or studies or review or analys\* or cohort\*)).ti,ab.
- 9 or/1-8
- 10 randomized controlled trial.pt.
- 11 controlled clinical trial.pt.
- 12 Clinical Trials as topic.sh.
- 13 trial.ti,ab.
- 14 factorial\*.ti,ab.
- 15 (crossover\* or cross over\*).ti,ab.
- 16 ((doubl\* or singl\*) adj blind\*).ti,ab.
- 17 (assign\* or allocat\* or volunteer\* or placebo\*).ti,ab.
- 18 placebo.ab.
- 19 random\*.ti,ab.
- 20 or/10-19
- 21 animals/ not humans/
- 22 exp Animals, Laboratory/
- 23 exp Animal Experimentation/
- 24 exp Models, Animal/
- 25 exp Rodentia/
- 26 (rat or rats or mouse or mice).ti.
- 27 or/21-26
- 28 20 not 27
- 29 exp Prothrombin/
- 30 Factor II/ or Factor VII/ or Factor IX/ or Factor X/
- 31 Blood Coagulation Factors/
- 32 prothrombin time/ or thrombin time/
- 33 (prothrombin complex concentrate or PCC or Beriplex or Octaplex or Kcentra or Cofact).mp.
- 34 29 or 30 or 31 or 32 or 33

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35	Plasma/ or Plasma Substitutes/
36	(fresh-frozen plasma or FFP or Octaplas).mp.
37	35 or 36
38	exp 4-Hydroxycoumarins/ or warfarin/ or acenocoumarol/ or dicoumarol/ or Coumarins/ or coumarin anticoagulant/ or ethyl biscoumacetate/ or phenprocoumon/ or phenindione/
39	vitamin K antagonist\$.mp.
40	(4-Hydroxycoumarins or warfarin or acenocoumarol or nicoumalone or sinthrome or Sintrom or phenindione or dicoumarol or coumadin or phenprocoumon or phepromaron or ethyl-biscoumacetate or phenindione or Diphenadione or Tiocloamarol or Racumi or Marcoumar or Marcumar or Falithrom or Coumadin or Jantoven or vitamin K antagonist\$ or VKA or fluindione or difenacoum or coumatetralyl).mp.
41	38 or 39 or 40
42	9 or 28
43	34 and 37 and 41 and 42
<b>Records Retrieved: 87</b>	

**OVERVIEW**

Interface: Ovid  
 Database: Embase 1974 to Current  
 Date of Search: February 10, 2017  
 Study Types: Randomized controlled trials; Observational studies  
 Limits: None

**Search Strategy: search terms (number of results)**

- 1 clinical study/
- 2 exp case control study/
- 3 family study/
- 4 longitudinal study/
- 5 prospective study/
- 6 cross-sectional study/
- 7 cohort analysis/
- 8 follow-up/
- 9 cohort\*.ti,ab.
- 10 cohort\*.ti,ab.
- 11 (cohort adj (study or studies or analys\*)).ti,ab.
- 12 case control.ti,ab.
- 13 ((follow up or observational or uncontrolled or non randomi#ed or nonrandomi#ed or epidemiologic\*) adj (study or studies)).ti,ab.
- 14 ((longitudinal or retrospective or prospective or cross sectional) and (study or studies or review or analys\* or cohort\*)).ti,ab.
- 15 or/1-14
- 16 random\*.ti,ab.
- 17 trial.ti,ab.
- 18 factorial\*.ti,ab.
- 19 (crossover\* or cross over\*).ti,ab.
- 20 ((doubl\* or singl\*) adj blind\*).ti,ab.
- 21 (assign\* or allocat\* or volunteer\* or placebo\*).ti,ab.
- 22 placebo.ab.
- 23 crossover procedure/
- 24 single blind procedure/

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25 randomized controlled trial/  
26 double blind procedure/  
27 or/16-26  
28 animals/ not humans/  
29 nonhuman/  
30 exp Animal Experiment/  
31 exp Experimental Animal/  
32 animal model/  
33 exp Rodent/  
34 (rat or rats or mouse or mice).ti.  
35 or/28-34  
36 27 not 35  
37 exp 4 hydroxycoumarin/ or exp 4 hydroxycoumarin derivative/  
38 warfarin/  
39 acenocoumarol/  
40 coumarin/ or coumarin derivative/  
41 phenindione/  
42 dicoumarol derivative/ or dicoumarol/  
43 phenprocoumon/  
44 phepromaron/  
45 ethyl biscoumacetate/  
46 fluindione/ or difenacoum/ or coumatetralyl/  
47 vitamin K antagonist.mp. or antivitamin K/  
48 (4 hydroxycoumarin or warfarin or acenocoumarol or nicoumalone or sinthrome or Sintrom or phenindione or dicoumarol or coumadin or phenprocoumon or phepromaron or ethyl-biscoumacetate or phenindione or Diphenadione or Tiocloamarol or Racumi or Marcoumar or Marcumar or Falithrom or Coumadin or Jantoven or vitamin K antagonist\$ or VKA or fluindione or difenacoum or coumatetralyl).mp.  
49 or/37-48  
50 exp prothrombin/ or exp prothrombin complex/  
51 blood clotting factor/ or blood clotting factor 10/ or blood clotting factor 7/ or blood clotting factor 9/ or blood clotting factor 9 concentrate/ or blood clotting factor concentrate/  
52 prothrombin time/ or thrombin time/  
53 (prothrombin complex concentrate or PCC or Beriplex or Octaplex or Kcentra or Cofact).mp.  
54 or/50-53  
55 plasma substitute/ or plasma/  
56 exp fresh frozen plasma/  
57 (fresh-frozen plasma or FFP or Octaplas).mp.  
58 55 or 56 or 57  
59 15 or 36  
60 49 and 54 and 58 and 59

**Records Retrieved: 619**

**OVERVIEW**

Interface: Cochrane Library  
Database: Cochrane Database of Systematic Reviews  
Date of Search: February 10, 2017  
Study Types: Trials  
Limits: None

**Search Strategy: search terms (number of results)**

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#1	MeSH descriptor: [Prothrombin] explode all trees
#2	MeSH descriptor: [Factor VII] explode all trees
#3	MeSH descriptor: [Factor IX] explode all trees
#4	MeSH descriptor: [Factor X] explode all trees
#5	MeSH descriptor: [Blood Coagulation Factors] this term only
#6	MeSH descriptor: [Prothrombin Time] this term only
#7	MeSH descriptor: [Thrombin Time] this term only
#8	(prothrombin complex concentrate or PCC or Beriplex or Octaplex or Kcentra or Cofact)
#9	(confidex or profilnine)
#10	#1 or #2 or #3 or #4 or #5 or #6 or #7 or #8 or #9
#11	MeSH descriptor: [Plasma] this term only
#12	MeSH descriptor: [Plasma Substitutes] this term only
#13	(fresh-frozen plasma or FFP or Octaplas or fresh frozen plasma)
#14	#11 or #12 or #13
#15	MeSH descriptor: [Warfarin] explode all trees
#16	MeSH descriptor: [Acenocoumarol] explode all trees
#17	MeSH descriptor: [Phenindione] explode all trees
#18	MeSH descriptor: [Coumarins] explode all trees
#19	MeSH descriptor: [Dicumarol] explode all trees
#20	MeSH descriptor: [Phenprocoumon] explode all trees
#21	MeSH descriptor: [Ethyl Biscoumacetate] explode all trees
#22	MeSH descriptor: [4-Hydroxycoumarins] explode all trees
#23	MeSH descriptor: [Phenprocoumon] explode all trees
#24	(4 hydroxycoumarin or warfarin or acenocoumarol or nicoumalone or sinthrome or Sintrom or phenindione or dicoumarol or coumadin or phenprocoumon or phepromaron or ethyl-biscoumacetate or phenindione or Diphenadione or Tiocloamarol or Racumi or Marcoumar or Marcumar or Falithrom or Coumadin or Jantoven or vitamin K antagonist\$ or VKA or fluindione or difenacoum or coumatetralyl)
#25	#15 or #16 or #17 or #18 or #19 or #20 or #21 or #22 or #23 or #24
#26	#10 and #14 and #25 in Trials
<b>Records Retrieved: 17</b>	



**Recommendation 18a & 18b. 4-Factor PCC, andexanet alpha** in patients with oral direct Xa inhibitor related life-threatening bleeding during treatment for VTE

**OVERVIEW**

Interface:	Ovid
Database:	Ovid MEDLINE(R) In-Process & Other Non-Indexed Citations and Ovid MEDLINE(R) 1946 to Present
Date of Search:	January 22, 2018
Study Types:	Randomized controlled trials; Observational studies
Limits:	None

**Search Strategy: search terms (number of results)**

- 1 epidemiologic studies/
- 2 exp case control studies/
- 3 exp cohort studies/
- 4 cross-sectional studies/
- 5 case control.ti,ab.
- 6 (cohort adj (study or studies or analys\*)).ti,ab.
- 7 ((follow up or observational or uncontrolled or non randomi#ed or nonrandomi#ed or epidemiologic\*) adj (study or studies)).ti,ab.
- 8 ((longitudinal or retrospective or prospective or cross sectional) and (study or studies or review or analys\* or cohort\*)).ti,ab.
- 9 or/1-8
- 10 randomized controlled trial.pt.
- 11 controlled clinical trial.pt.
- 12 Clinical Trials as topic.sh.
- 13 trial.ti,ab.
- 14 factorial\*.ti,ab.
- 15 (crossover\* or cross over\*).ti,ab.
- 16 ((doubl\* or singl\*) adj blind\*).ti,ab.
- 17 (assign\* or allocat\* or volunteer\* or placebo\*).ti,ab.
- 18 placebo.ab.
- 19 random\*.ti,ab.
- 20 or/10-19
- 21 animals/ not humans/
- 22 exp Animals, Laboratory/
- 23 exp Animal Experimentation/
- 24 exp Models, Animal/
- 25 exp Rodentia/
- 26 (rat or rats or mouse or mice).ti.
- 27 or/21-26
- 28 20 not 27
- 29 exp Prothrombin/
- 30 Factor II/ or Factor VII/ or Factor IX/ or Factor X/
- 31 Blood Coagulation Factors/
- 32 (prothrombin complex concentrate or PCC or Beriplex or Octaplex or Kcentra or Cofact).mp.
- 33 Factor Xa Inhibitors.mp. or exp Factor Xa Inhibitors/
- 34 rivaroxaban/ or apixaban/ or edoxaban/ or betrixaban/

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35	(rivaroxaban or Xarelto or apixaban or Eliquis or Edoxaban or Savaysa or Betrixaban or lixiana or Darexaban).mp.
36	(TSOAC\$ or NOAC\$ or DOAC\$).ti,ab,kw.
37	((Target adj Specific adj Oral adj Anticoagulant\$) or (oral adj anticoagulant\$) or (novel adj anticoagulant\$) or (new adj anticoagulant\$) or (direc\$ adj anticoagulant\$)).mp.
38	((new or novel or direct or direct-acting or target-specific or targeted or non-vitamin K) adj3 oral anticoagulant*).mp.
39	(factor Xa adj2 (antag* or inhibit*)).mp.
40	or/29-32
41	or/33-39
42	9 or 28
43	anticoagulation reversal/
44	antidotes/
45	andexanet alpha.mp.
46	43 or 44 or 45
47	40 or 46
48	41 and 42 and 47
<b>Records Retrieved:</b> 294	

### OVERVIEW

Interface:	Ovid
Database:	Embase 1974 to 2017 Week 5
Date of Search:	January 22, 2018
Study Types:	Randomized controlled trials; Observational studies
Limits:	None

### Search Strategy: search terms (number of results)

1	clinical study/
2	exp case control study/
3	family study/
4	longitudinal study/
5	prospective study/
6	cross-sectional study/
7	cohort analysis/
8	follow-up/
9	cohort*.ti,ab.
10	cohort*.ti,ab.
11	(cohort adj (study or studies or analys*)).ti,ab.
12	case control.ti,ab.
13	((follow up or observational or uncontrolled or non randomi#ed or nonrandomi#ed or epidemiologic*) adj (study or studies)).ti,ab.
14	((longitudinal or retrospective or prospective or cross sectional) and (study or studies or review or analys* or cohort*)).ti,ab.
15	or/114
16	random*.ti,ab.
17	trial.ti,ab.
18	factorial*.ti,ab.
19	(crossover* or cross over*).ti,ab.
20	((doubl* or singl*) adj blind*).ti,ab.

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21	(assign* or allocat* or volunteer* or placebo*).ti,ab.
22	placebo.ab.
23	crossover procedure/
24	single blind procedure/
25	randomized controlled trial/
26	double blind procedure/
27	or/16-26
28	animals/ not humans/
29	nonhuman/
30	exp Animal Experiment/
31	exp Experimental Animal/
32	animal model/
33	exp Rodent/
34	(rat or rats or mouse or mice).ti.
35	28 or 29 or 30 or 31 or 32 or 33 or 34
36	27 not 35
37	Factor Xa Inhibitors.mp. or exp blood clotting factor 10a inhibitor/
38	rivaroxaban/ or apixaban/ or edoxaban/ or betrixaban/
39	(rivaroxaban or Xarelto or apixaban or Eliquis or Edoxaban or Savaysa or Betrixaban or lixiana).mp.
40	(TSOAC\$ or NOAC\$ or DOAC\$).ti,ab,kw.
41	((Target adj Specific adj Oral adj Anticoagulant\$) or (oral adj anticoagulant\$) or (novel adj anticoagulant\$) or (new adj anticoagulant\$) or (direc\$ adj anticoagulant\$)).mp.
42	((new or novel or direct or direct-acting or target-specific or targeted or non-vitamin K) adj3 oral anticoagulant*).mp.
43	(factor Xa adj2 (antag* or inhibit*)).mp.
44	exp prothrombin/ or exp prothrombin complex/
45	blood clotting factor/ or blood clotting factor 10/ or blood clotting factor 7/ or blood clotting factor 9/ or blood clotting factor 9 concentrate/ or blood clotting factor concentrate/
46	(prothrombin complex concentrate or PCC or Beriplex or Octaplex or Kcentra or Cofact).mp.
47	antidote/
48	anticoagulation reversal.mp.
49	andexanet alpha.mp. or exp andexanet alfa/
50	or/ 44-49
51	or/37-43
52	15 or 36
53	50 and 51 and 52
<b>Records Retrieved: 1237</b>	

<b>OVERVIEW</b>	
Interface:	Cochrane Library
Database:	Cochrane Database of Systematic Reviews
Date of Search:	January 22, 2018
Study Types:	Trials
Limits:	None
<b>Search Strategy: search terms (number of results)</b>	
#1	MeSH descriptor: [Prothrombin] explode all trees
#2	MeSH descriptor: [Factor VII] explode all trees
#3	MeSH descriptor: [Factor IX] explode all trees
#4	MeSH descriptor: [Factor X] explode all trees

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#5	MeSH descriptor: [Blood Coagulation Factors] this term only
#6	(prothrombin complex concentrate or PCC or Beriplex or Octaplex or Kcentra or Cofact)
#7	(andexanet alfa)
#8	#1 or #2 or #3 or #4 or #5 or #6 or #7
#9	MeSH descriptor: [Factor Xa Inhibitors] explode all trees
#10	(rivaroxaban or Xarelto or apixaban or Eliquis or Edoxaban or Savaysa or Betrixaban or lixiana)
#11	((Target adj Specific adj Oral adj Anticoagulant\$) or (oral adj anticoagulant\$) or (novel adj anticoagulant\$) or (new adj anticoagulant\$) or (direc\$ adj anticoagulant\$))
#12	((new or novel or direct or direct-acting or target-specific or targeted or non-vitamin K) near/3 oral anticoagulant*)
#13	(factor Xa adj2 (antag* or inhibit*))
#14	#9 or #10 or #11 or #12 or #13
#15	#8 and #14 in Trials
<b>Records Retrieved:</b> 120	

**Recommendation 19.** Idarucizumab in patients with dabigatran related life-threatening bleeding during treatment for VTE

OVERVIEW	
Interface:	Ovid
Database:	Ovid MEDLINE(R) In-Process & Other Non-Indexed Citations and Ovid MEDLINE(R) 1946 to Present
Date of Search:	February 16, 2017
Study Types:	Randomized controlled trials; Observational studies
Limits:	None
Search Strategy: search terms (number of results)	
1	epidemiologic studies/
2	exp case control studies/
3	exp cohort studies/
4	cross-sectional studies/
5	case control.ti,ab.
6	(cohort adj (study or studies or analys*)).ti,ab.
7	((follow up or observational or uncontrolled or non randomi#ed or nonrandomi#ed or epidemiologic*) adj (study or studies)).ti,ab.
8	((longitudinal or retrospective or prospective or cross sectional) and (study or studies or review or analys* or cohort*)).ti,ab.
9	or/1-8
10	randomized controlled trial.pt.
11	controlled clinical trial.pt.
12	Clinical Trials as topic.sh.
13	trial.ti,ab.
14	factorial*.ti,ab.
15	(crossover* or cross over*).ti,ab.
16	((doubl* or singl*) adj blind*).ti,ab.
17	(assign* or allocat* or volunteer* or placebo*).ti,ab.
18	placebo.ab.
19	random*.ti,ab.
20	or/10-19
21	animals/ not humans/
22	exp Animals, Laboratory/
23	exp Animal Experimentation/
24	exp Models, Animal/
25	exp Rodentia/
26	(rat or rats or mouse or mice).ti.
27	or/21-26
28	20 not 27
29	exp Antidotes/
30	(Praxbind or idarucizumab).mp.
31	Antibodies, Monoclonal, Humanized/
32	29 or 30 or 31
33	Antithrombins.mp. or exp Antithrombins/
34	thrombin inhibitor/ or thrombin inhibitor.mp.

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35	dabigatran etexilate/ or ximelagatran/
36	(dabigatran etexilate or ximelagatran or pradaxa or exanta or Otamixaban\$ or Razaxaban or Bivalirudin or Desirudin or Lepirudin or Melagatran or YM 150 or Iprivask or argatrovan or pradax or BIBR-953 or BIBR-953ZW or BAY 59-7939 or BMS-562247 or DU-176 or DU-176b).mp.
37	(TSOAC\$ or NOAC\$ or DOAC\$).ti,ab,kw.
38	((Target adj Specific adj Oral adj Anticoagulant\$) or (oral adj anticoagulant\$) or (novel adj anticoagulant\$) or (new adj anticoagulant\$) or (direct\$ adj anticoagulant\$)).mp.
39	((new or novel or direct or direct-acting or target-specific or targeted or non-vitamin K) adj3 oral anticoagulant*).mp.
40	or/33-39
41	9 or 28
42	32 and 40 and 41
<b>Records Retrieved: 53</b>	

## OVERVIEW

Interface:	Ovid
Database:	Embase 1974 to 2016 Week 07
Date of Search:	February 16, 2017
Study Types:	Randomized controlled trials; Observational studies
Limits:	None

## Search Strategy: search terms (number of results)

- 1 clinical study/
- 2 exp case control study/
- 3 family study/
- 4 longitudinal study/
- 5 prospective study/
- 6 cross-sectional study/
- 7 cohort analysis/
- 8 follow-up/
- 9 cohort\*.ti,ab.
- 10 cohort\*.ti,ab.
- 11 (cohort adj (study or studies or analys\*)).ti,ab.
- 12 case control.ti,ab.
- 13 ((follow up or observational or uncontrolled or non randomi#ed or nonrandomi#ed or epidemiologic\*) adj (study or studies)).ti,ab.
- 14 ((longitudinal or retrospective or prospective or cross sectional) and (study or studies or review or analys\* or cohort\*)).ti,ab.
- 15 or/1-14
- 16 random\*.ti,ab.
- 17 trial.ti,ab.
- 18 factorial\*.ti,ab.
- 19 (crossover\* or cross over\*).ti,ab.
- 20 ((doubl\* or singl\*) adj blind\*).ti,ab.
- 21 (assign\* or allocat\* or volunteer\* or placebo\*).ti,ab.
- 22 placebo.ab.
- 23 crossover procedure/
- 24 single blind procedure/
- 25 randomized controlled trial/
- 26 double blind procedure/

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27	or/16-26
28	animals/ not humans/
29	nonhuman/
30	exp Animal Experiment/
31	exp Experimental Animal/
32	animal model/
33	exp Rodent/
34	(rat or rats or mouse or mice).ti.
35	or/28-34
36	27 not 35
37	exp antithrombin/ or Antithrombins.mp.
38	thrombin inhibitor/ or thrombin inhibitor.mp.
39	dabigatran etexilate/ or ximelagatran/ or Bivalirudin/ or Lepirudin/ or Melagatran/
40	(dabigatran etexilate or Edoxaban or Savaysa or Betrixaban or ximelagatran or pradaxa or lixiana or exanta or Darexaban or Bivalirudin or Desirudin or Lepirudin or Melagatran or YM 150 or Iprivask or argatrovan or pradax or BIBR-953 or BIBR-953ZW or BAY 59-7939 or BMS-562247 or DU-176 or DU-176b).mp.
41	(TSOAC\$ or NOAC\$ or DOAC\$).ti,ab,kw.
42	((Target adj Specific adj Oral adj Anticoagulant\$) or (oral adj anticoagulant\$) or (novel adj anticoagulant\$) or (new adj anticoagulant\$) or (direct\$ adj anticoagulant\$)).mp.
43	((new or novel or direct or direct-acting or target-specific or targeted or non-vitamin K) adj3 oral anticoagulant*).mp.
44	antidote/
45	(Praxbind or idarucizumab).mp.
46	monoclonal antibody/
47	44 or 45 or 46
48	or/37-43
49	15 or 36
50	47 and 48 and 49
<b>Records Retrieved: 370</b>	

OVERVIEW	
Interface:	Cochrane Library
Database:	Cochrane Database of Systematic Reviews
Date of Search:	February 16, 2017
Study Types:	Trials
Limits:	None
Search Strategy: search terms (number of results)	
#1	MeSH descriptor: [Antidotes] explode all trees
#2	MeSH descriptor: [Antibodies, Monoclonal, Humanized] this term only
#3	(Praxbind or idarucizumab)
#4	#1 or #2 or #3
#5	MeSH descriptor: [Antithrombins] explode all trees
#6	(ximelagatran or pradaxa or exanta or Darexaban or Otamixaban\$ or Razaxaban or Bivalirudin or Desirudin or Lepirudin or Melagatran or YM 150 or Iprivask or argatrovan or pradax or BIBR-953 or BIBR-953ZW or BAY 59-7939 or BMS-562247 or DU-176 or DU-176b)
#7	((Target adj Specific adj Oral adj Anticoagulant\$) or (oral adj anticoagulant\$) or (novel adj anticoagulant\$) or (new adj anticoagulant\$) or (direct\$ adj anticoagulant\$))
#8	((new or novel or direct or direct-acting or target-specific or targeted or non-vitamin K) near/3 oral anticoagulant*)

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#9	#5 or #6 or #7 or #8
#10	MeSH descriptor: [Anticoagulants] explode all trees
#11	(Anticoagulant or anticoagulation):ti,ab,kw
#12	#10 or #11
#13	#9 or #12
#14	#4 and #13 in Trials
#15	#4 and #13 Publication Year from 2015 to 2017, in Trials
#16	#4 and #9 in Trials
<b>Records Retrieved: 9</b>	



**Recommendation 20.** Protamine in patients with UFH/LMWH related life-threatening bleeding during treatment for VTE

**OVERVIEW**

Interface:	Ovid
Database:	Ovid MEDLINE(R) In-Process & Other Non-Indexed Citations and Ovid MEDLINE(R) 1946 to Present
Date of Search:	May 25, 2017
Study Types:	Systematic reviews
Limits:	None

**Search Strategy: search terms (number of results)**

- 1 meta-analysis/
- 2 meta-analysis as topic/
- 3 (meta analy\* or metanaly\* or metaanaly\*).ti,ab.
- 4 (reference list\* or bibliograph\* or hand search\* or manual search\* or relevant journals).ab.
- 5 ((systematic\* or evidence\*) adj2 (review\* or overview\*)).ti,ab.
- 6 (search strategy or search criteria or systematic search or study selection or data extraction).ab.
- 7 (search\* adj4 literature).ab.
- 8 (medline or pubmed or cochrane or embase or psychlit or psyclit or psychinfo or psycinfo or cinahl or science citation index or bids or cancerlit).ab.
- 9 ((pool\* or combined) adj2 (data or trials or studies or results)).ab.
- 10 cochrane.jw.11 or/1-10
- 12 animals/ not humans/
- 13 exp Animals, Laboratory/
- 14 exp Animal Experimentation/
- 15 exp Models, Animal/
- 16 exp Rodentia/
- 17 (rat or rats or mouse or mice).ti.
- 18 or/12-17
- 19 exp Protamines/
- 20 (Protamin\* or Denpru or Prosulf or Neoprote or Neutrahep or Newtain or Protas or Prothiobin).mp.
- 21 19 or 20
- 22 exp Heparin/ or heparin.mp.
- 23 exp Heparin, Low-Molecular-Weight/
- 24 dalteparin/ or enoxaparin/ or nadroparin/ or heparinoids/
- 25 (LMWH or LMWHs or low molecular weight heparin or nadroparin or fraxiparin\* or enoxaparin\* or clexane or klexane or lovenox or dalteparin or fragmin or ardeparin\* or normiflo or tinzaparin or logiparin or innohep or certoparin or sandoparin or reviparin or clivarin\* or danaproid or danaparoid or orgaran or antixarin or bemiparin\* or hibor or zibor or ivor or badyket or semuloparin or parnaparin or tedelparin or fluxum or lohepa or lowhepa or parvoparin or seleparin\* or tedelgliparin or lomoparan or orgaran or sulodexide or zivor or embolex or xaparin or clivarine).mp.
- 26 (FR-860 or FR 860 or FR860 or PK-10,169 or PK 10,169 or PK10,169 or PK-10169 or PK 10169 or PK10169 or EMT-967 or EMT 967 or EMT967 or EMT-966 or EMT 966 or EMT966 or CY 216 or CY-216 or CY216 or LMF CY-216 or LMF CY 216 or LMF CY216).mp.
- 27 or/22-26
- 28 (fondaparinux or Arixtra).mp.
- 29 exp Heparin/

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30 (un?fract\* adj heparin).mp.  
31 UFH.mp.  
32 ((sodium or alpha) adj1 heparin).mp.  
33 (Hepalean or Calcilean or Calciparine or Liquaemin or Liquemin or Multiparin or Novoheparin or Eparina or Hep-lock or Heparinate or Heparinic acid or Panheprin or Hepalean or Heparin Leo or Heparin Lock).mp.  
34 or/29-33  
35 27 or 34  
36 18 and 21 and 35

**Records Retrieved: 877**

### OVERVIEW

Interface: Ovid  
Database: Embase 1974 to Current  
Date of Search: May 25, 2017  
Study Types: Systematic reviews  
Limits: None

### Search Strategy: search terms (number of results)

1 systematic review/  
2 meta-analysis/  
3 (meta analy\* or metanaly\* or metaanaly\*).ti,ab.  
4 (reference list\* or bibliograph\* or hand search\* or manual search\* or relevant journals).ab.  
5 ((systematic\* or evidence\*) adj2 (review\* or overview\*)).ti,ab.  
6 (search strategy or search criteria or systematic search or study selection or data extraction).ab.  
7 (search\* adj4 literature).ab.  
8 (medline or pubmed or cochrane or embase or psychlit or psyclit or psychinfo or psycinfo or cinahl or science citation index or bids or cancerlit).ab.  
9 ((pool\* or combined) adj2 (data or trials or studies or results)).ab.  
10 cochrane.jw.  
11 or/1-10  
12 animals/ not humans/  
13 nonhuman/  
14 exp Animal Experiment/  
15 exp Experimental Animal/  
16 animal model/  
17 exp Rodent/  
18 (rat or rats or mouse or mice).ti.  
19 or/12-18  
20 11 not 19  
21 exp Heparin/  
22 (un?fract\* adj heparin).mp.  
23 UFH.mp.  
24 ((sodium or alpha) adj1 heparin).mp.  
25 (Hepalean or Calcilean or Calciparine or Liquaemin or Liquemin or Multiparin or Novoheparin or Eparina or Hep-lock or Heparinate or Heparinic acid or Panheprin or Hepalean or Heparin Leo or Heparin Lock).mp.  
26 or/21-25  
27 exp heparin derivative/ or heparin\*.mp.  
28 nadroparin/  
29 enoxaparin/  
30 dalteparin/

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31	ardeparin/
32	tinzaparin/
33	certoparin/
34	reviparin/
35	danaparoid/
36	(LMWH or LMWHs or low molecular weight heparin or nadroparin or fraxiparin* or enoxaparin* or clexane or klexane or lovenox or dalteparin or fragmin or ardeparin* or normiflo or tinzaparin or logiparin or innohep or certoparin or sandoparin or reviparin or clivarin* or danaproid or danaparoid or organan or antixarin or bemiparin* or hibor or zibor or ivor or badyket or semuloparin or parnaparin or tedelparin or fluxum or lohepa or lowhepa or parvoparin or seleparin* or tedelgliparin or lomoparan or organan or sulodexide or zivor or embolex or xaparin or clivarine).mp.
37	(FR-860 or FR 860 or FR860 or PK-10,169 or PK 10,169 or PK10,169 or PK-10169 or PK 10169 or PK10169 or EMT-967 or EMT 967 or EMT967 or EMT-966 or EMT 966 or EMT966 or CY 216 or CY-216 or CY216 or LMF CY-216 or LMF CY 216 or LMF CY216).mp.
38	or/27-37
39	26 or 38
40	exp protamine/
41	(Protamin* or Denpru or Prosulf or Neoprota or Neutrahep or Newtain or Protas or Prothiobin).mp.
42	40 or 41
43	20 and 39 and 42
<b>Records Retrieved: 111</b>	

<b>OVERVIEW</b>	
Interface:	Cochrane Library
Database:	Cochrane Database of Systematic Reviews
Date of Search:	May 25, 2017
Study Types:	Systematic reviews
Limits:	None
<b>Search Strategy: search terms (number of results)</b>	
#1	MeSH descriptor: [Protamines] explode all trees
#2	(Protamin* or Denpru or Prosulf or Neoprota or Neutrahep or Newtain or Protas or Prothiobin)
#3	#1 or #2
#4	MeSH descriptor: [Heparin] explode all trees
#5	(UFH or Unfractionated Heparin or Heparin, Unfractionated or Sodium Heparin or Heparin, Sodium or Heparin Sodium or alpha-Heparin or alpha Heparin or Hepalean or Calcilean or Calciparine or Liqueamin or Liquemin or Multiparin or Novoheparin or Eparina or Hep-lock or Heparinate or Heparinic acid or Panheprin or Hepalean or Heparin Leo or Heparin Lock):ti,ab,k
#6	#4 or #5
#7	MeSH descriptor: [Heparin] explode all trees
#8	MeSH descriptor: [Heparin, Low-Molecular-Weight] explode all trees
#9	MeSH descriptor: [Heparinoids] this term only
#10	MeSH descriptor: [Dalteparin] this term only
#11	MeSH descriptor: [Enoxaparin] this term only
#12	MeSH descriptor: [Nadroparin] this term only
#13	(LMWH or LMWHs or low molecular weight heparin or heparin* or nadroparin or fraxiparin* or enoxaparin* or clexane or klexane or lovenox or dalteparin or fragmin or ardeparin* or normiflo or tinzaparin or logiparin or innohep or certoparin or sandoparin or reviparin or clivarin* or danaproid or danaparoid or organan or antixarin or bemiparin* or hibor or zibor or ivor or badyket or semuloparin or parnaparin or tedelparin or fluxum or lohepa or lowhepa or parvoparin or seleparin* or tedelgliparin or lomoparan or

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organan or sulodexide or zivor or embolex or xaparin or clivarine)

#14 (FR-860 or FR 860 or FR860 or PK-10,169 or PK 10,169 or PK10,169 or PK-10169 or PK 10169 or PK10169 or EMT-967 or EMT 967 or EMT967 or EMT-966 or EMT 966 or EMT966 or CY 216 or CY-216 or CY216 or LMF CY-216 or LMF CY 216 or LMF CY216)

#15 #7 or #8 or #9 or #10 or #11 or #12 or #13 or #14

#16 #6 or #15

#17 #3 and #16 in Cochrane Reviews (Reviews and Protocols) and Other Reviews

**Records Retrieved: 25**

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**Recommendation 21.** Resumption of oral anticoagulation in patients receiving treatment for VTE who survive an episode of anticoagulation therapy related major bleeding.

OVERVIEW	
Interface:	Ovid
Database:	Ovid MEDLINE(R) In-Process & Other Non-Indexed Citations and Ovid MEDLINE(R) 1946 to Present
Date of Search:	August 31, 2017
Study Types:	Observational studies
Limits:	None
Search Strategy: search terms (number of results)	
1	exp anticoagulant agent/
2	Anticoagula\$.mp.
3	or/1-2
4	Antithrombins.mp. or exp Antithrombins/
5	thrombin inhibitor/ or thrombin inhibitor.mp.
6	Factor Xa Inhibitors.mp. or exp Factor Xa Inhibitors/
7	rivaroxaban/ or dabigatran etexilate/ or apixaban/ or edoxaban/ or betrixaban/ or ximelagatran/
8	(rivaroxaban or Xarelto or apixaban or Eliquis or dabigatran etexilate or Edoxaban or Savaysa or Betrixaban or ximelagatran or pradaxa or lixiana or exanta or Darexaban or Otamixaban\$ or Razaxaban or Bivalirudin or Desirudin or Lepirudin or Melagatran or YM 150 or Iprivask or argatrovan or pradax or BIBR-953 or BIBR-953ZW or BAY 59-7939 or BMS-562247 or DU-176 or DU-176b).mp.
9	(TSOAC\$ or NOAC\$ or DOAC\$).ti,ab,kw.
10	((Target adj Specific adj Oral adj Anticoagulant\$) or (oral adj anticoagulant\$) or (novel adj anticoagulant\$) or (new adj anticoagulant\$) or (direc\$ adj anticoagulant\$)).mp.
11	((new or novel or direct or direct-acting or target-specific or targeted or non-vitamin K) adj3 oral anticoagulant*).mp.
12	(factor Xa adj2 (antag* or inhibit*)).mp.
13	or/4-12
14	exp 4-Hydroxycoumarins/ or warfarin/ or acenocoumarol/ or dicumarol/ or Coumarins/ or coumarin anticoagulant/ or ethyl biscoumacetate/ or phenprocoumon/ or phenindione/
15	vitamin K antagonist\$.mp.
16	(4-Hydroxycoumarins or warfarin or acenocoumarol or nicoumalone or sinthrome or Sintrom or phenindione or dicoumarol or coumadin or phenprocoumon or phepromaron or ethyl-biscoumacetate or phenindione or Diphenadione or Tiocloamarol or Racumi or Marcoumar or Marcumar or Falithrom or Coumadin or Jantoven or vitamin K antagonist\$ or VKA or fluindione or difenacoum or coumatetralyl).mp.
17	14 or 15 or 16
18	(fondaparinux or Arixtra).mp.
19	3 or 13 or 17 or 18
20	exp Hemorrhage/
21	(bleed\$ or hemorrhage or haemorrhage or bloodloss\$ or blood loss\$).ti,ab,kw.
22	20 or 21
23	epidemiologic studies/
24	exp case control studies/
25	exp cohort studies/
26	cross-sectional studies/
27	case control.ti,ab.

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28 (cohort adj (study or studies or analys\*)).ti,ab.  
29 ((follow up or observational or uncontrolled or non randomi#ed or nonrandomi#ed or epidemiologic\*) adj (study or studies)).ti,ab.  
30 ((longitudinal or retrospective or prospective or cross sectional) and (study or studies or review or analys\* or cohort\*)).ti,ab.  
31 or/23-30  
32 Retreatment/  
33 Recurrence/  
34 (relapse or recurr\* or recrudescence or resum\* or interrupt\* or restart\*).mp.  
35 32 or 33 or 34  
36 19 and 22 and 31 and 35  
37 (Stroke and recurrent haemorrhage associated with antithrombotic treatment after gastrointestinal bleeding in patients with atrial fibrillation).m\_titl.  
38 "The Risks of Thromboembolism Vs. Recurrent Gastrointestinal Bleeding after Interruption of Systemic Anticoagulation in Hospitalized Inpatients With Gastrointestinal Bleeding".m\_titl.  
39 Optimal Timing of Resumption of Warfarin After Intracranial Hemorrhage.m\_titl.  
40 (Reinitiation of Anticoagulation After Warfarin-Associated Intracranial Hemorrhage and Mortality Risk).m\_titl.  
41 (Anticoagulant Reversal, Blood Pressure Levels, and Anticoagulant Resumption in Patients With Anticoagulation-Related Intracerebral Hemorrhage).m\_titl.  
42 (Risk of thromboembolism, recurrent hemorrhage, and death after warfarin therapy interruption for intracranial hemorrhage).m\_titl.  
43 (Restarting Anticoagulation and Outcomes After Major Gastrointestinal Bleeding in Atrial Fibrillation).m\_titl.  
44 (Risk of Thromboembolism, Recurrent Hemorrhage, and Death After Warfarin Therapy Interruption for Gastrointestinal Tract Bleeding).m\_titl.  
45 or/37-44  
46 remove duplicates from 45  
47 from 46 keep 1-4,7-10  
48 36 and 47  
49 (recrudescence or resum\* or interrupt\* or restart).mp. [mp=title, abstract, original title, name of substance word, subject heading word, keyword heading word, protocol supplementary concept word, rare disease supplementary concept word, unique identifier, synonyms]  
50 32 or 49  
51 19 and 22 and 31 and 50  
52 47 and 51  
53 Safety of discontinuation of anticoagulation in patients with intracranial hemorrhage at high thromboembolic risk.m\_titl.  
54 51 and 53  
55 (recrudescence or resum\* or interrupt\* or restart\*).mp. [mp=title, abstract, original title, name of substance word, subject heading word, keyword heading word, protocol supplementary concept word, rare disease supplementary concept word, unique identifier, synonyms]  
56 32 or 55  
57 19 and 22 and 31 and 55  
58 53 and 57  
59 47 and 57  
60 Clinical outcome of patients with major bleeding after venous thromboembolism.m\_titl.  
61 56 and 60  
62 19 and 22 and 31 and 56

**Records Retrieved: 447**

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## OVERVIEW

Interface: Ovid  
Database: Embase 1974 to 2016 Week 07  
Date of Search: August 31, 2017  
Study Types: Randomized controlled trials; Observational studies  
Limits: None

## Search Strategy: search terms (number of results)

- 1 gastrointestinal bleeding.mp. or gastrointestinal hemorrhage/
- 2 intracranial bleeding.mp. or brain hemorrhage/
- 3 1 or 2
- 4 exp antithrombin/ or Antithrombins.mp.
- 5 thrombin inhibitor/ or thrombin inhibitor.mp.
- 6 Factor Xa Inhibitors.mp. or exp blood clotting factor 10a inhibitor/
- 7 rivaroxaban/ or dabigatran etexilate/ or apixaban/ or edoxaban/ or betrixaban/ or ximelagatran/ or Darexaban/ or Otamixaban/ or Razaxaban/ or Bivalirudin/ or Desirudin/ or Lepirudin/ or Melagatran/
- 8 (rivaroxaban or Xarelto or apixaban or Eliquis or dabigatran etexilate or Edoxaban or Savaysa or Betrixaban or ximelagatran or pradaxa or lixiana or exanta or Darexaban or Otamixaban\$ or Razaxaban or Bivalirudin or Desirudin or Lepirudin or Melagatran or YM 150 or Iprivask or argatrovan or pradax or BIBR-953 or BIBR-953ZW or BAY 59-7939 or BMS-562247 or DU-176 or DU-176b).mp.
- 9 (TSOAC\$ or NOAC\$ or DOAC\$).ti,ab,kw.
- 10 ((Target adj Specific adj Oral adj Anticoagulant\$) or (oral adj anticoagulant\$) or (novel adj anticoagulant\$) or (new adj anticoagulant\$) or (direc\$ adj anticoagulant\$)).mp.
- 11 ((new or novel or direct or direct-acting or target-specific or targeted or non-vitamin K) adj3 oral anticoagulant\*).mp.
- 12 (factor Xa adj2 (antag\* or inhibit\*)).mp.
- 13 or/4-12
- 14 exp 4 hydroxycoumarin/ or exp 4 hydroxycoumarin derivative/
- 15 warfarin/
- 16 acenocoumarol/
- 17 coumarin/ or coumarin derivative/
- 18 phenindione/
- 19 dicoumarol derivative/ or dicoumarol/
- 20 phenprocoumon/
- 21 phepromaron/
- 22 ethyl biscoumacetate/
- 23 fluindione/ or difenacoum/ or coumatetralyl/
- 24 vitamin K antagonist.mp. or antivitamin K/
- 25 (4 hydroxycoumarin or warfarin or acenocoumarol or nicoumalone or sinthrome or Sintrom or phenindione or dicoumarol or coumadin or phenprocoumon or phepromaron or ethyl-biscoumacetate or phenindione or Diphenadione or Tiocloamarol or Racumi or Marcoumar or Marcumar or Falithrom or Coumadin or Jantoven or vitamin K antagonist\$ or VKA or fluindione or difenacoum or coumatetralyl).mp.
- 26 or/14-25
- 27 exp anticoagulant agent/
- 28 Anticoagula\$.mp.
- 29 27 or 28
- 30 (fondaparinux or Arixtra).mp.
- 31 13 or 26 or 29 or 30
- 32 exp bleeding/ (763689)

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33	(bleed\$ or hemorrhage or haemorrhage or bloodloss\$ or blood loss\$).ti,ab,kw.
34	32 or 33
35	clinical study/
36	exp case control study/
37	family study/
38	longitudinal study/
39	prospective study/
40	cross-sectional study/
41	cohort analysis/
42	follow-up/
43	cohort*.ti,ab.
44	cohort*.ti,ab.
45	(cohort adj (study or studies or analys*)).ti,ab.
46	case control.ti,ab.
47	((follow up or observational or uncontrolled or non randomi#ed or nonrandomi#ed or epidemiologic*) adj (study or studies)).ti,ab.
48	((longitudinal or retrospective or prospective or cross sectional) and (study or studies or review or analys* or cohort*)).ti,ab.
49	or/35-48
50	retreatment/
51	(recrudescence or resum* or interrupt* or restart*).mp. [mp=title, abstract, heading word, drug trade name, original title, device manufacturer, drug manufacturer, device trade name, keyword, floating subheading]
52	50 or 51
53	3 and 31 and 49 and 52

**Records Retrieved: 372**

### OVERVIEW

Interface:	Cochrane Library
Database:	Cochrane Database of Systematic Reviews
Date of Search:	January 31, 2017
Study Types:	Trials
Limits:	None

### Search Strategy: search terms (number of results)

#1	recrudescence or resum* or interrupt* or restart*
#2	MeSH descriptor: [Antithrombins] explode all trees
#3	MeSH descriptor: [Factor Xa Inhibitors] explode all trees
#4	(rivaroxaban or Xarelto or apixaban or Eliquis or dabigatran etexilate or Edoxaban or Savaysa or Betrixaban or ximelagatran or pradaxa or lixiana or exanta or Darexaban or Otamixaban\$ or Razaxaban or Bivalirudin or Desirudin or Lepirudin or Melagatran or YM 150 or Iprivask or argatrovan or pradax or BIBR-953 or BIBR-953ZW or BAY 59-7939 or BMS-562247 or DU-176 or DU-176b)
#5	((Target adj Specific adj Oral adj Anticoagulant\$) or (oral adj anticoagulant\$) or (novel adj anticoagulant\$) or (new adj anticoagulant\$) or (direc\$ adj anticoagulant\$))
#6	((new or novel or direct or direct-acting or target-specific or targeted or non-vitamin K) near/3 oral anticoagulant*)
#7	(factor Xa adj2 (antag* or inhibit*))
#8	#2 or #3 or #4 or #5 or #6 or #7
#9	MeSH descriptor: [Warfarin] explode all trees



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- #10 MeSH descriptor: [Acenocoumarol] explode all trees
- #11 MeSH descriptor: [Phenindione] explode all trees
- #12 MeSH descriptor: [Coumarins] explode all trees
- #13 MeSH descriptor: [Dicumarol] explode all trees
- #14 MeSH descriptor: [Phenprocoumon] explode all trees
- #15 MeSH descriptor: [Ethyl Biscoumacetate] explode all trees
- #16 MeSH descriptor: [4-Hydroxycoumarins] explode all trees
- #17 MeSH descriptor: [Phenprocoumon] explode all trees
- #18 (4 hydroxycoumarin or warfarin or acenocoumarol or nicoumalone or sinthrome or Sintrom or phenindione or dicoumarol or coumadin or phenprocoumon or pepromaron or ethyl-biscoumacetate or phenindione or Diphenadione or Tioclomarol or Racumi or Marcoumar or Marcumar or Falithrom or Coumadin or Jantoven or vitamin K antagonist\$ or VKA or fluindione or difenacoum or coumatetralyl)
- #19 #9 or #10 or #11 or #12 or #13 or #14 or #15 or #16 or #17 or #18
- #20 MeSH descriptor: [Hemorrhage] explode all trees
- #21 (bleed\* or hemorrhage or haemorrhage or bloodloss\* or blood loss\*):ti,ab,kw
- #22 #20 or #21
- #23 #8 or #19
- #24 #1 and #22 and #23

**Records Retrieved: 131**