

# OAI Examination Measures

## Osteoarthritis Initiative: A Knee Health Study

Examination Measures and Frequency														
Measurement	Screening Visit	Enrollment Visit	Follow-up Visit										108-mo	120- /132- <sup>19</sup> mo
			12 - mo	18- mo <sup>1</sup>	24 - mo	30- mo <sup>1</sup>	36 - mo	48 - mo	60- mo	72- mo	84- mo	96- mo		
Blood collection, fasting <sup>2, 12</sup>														
- Blood draw for serum		X	X	X	X	X	X	X		X				
- Blood draw for plasma and buffy coat		X	X	X	X	X	X	X		X				
- Blood draw for RNA			X					X						
- Blood draw for lymphocyte extraction and cryopreservation								X		X <sup>14</sup>				
Urine collection														
- Fasting second AM void		X	X	X	X	X	X	X		X				
- Pregnancy test for premenopausal women	X	X	X	X	X	X	X	X		X		X		X
Height, standing	X				X			X				X		X
Weight	X		X		X		X	X		X		X		X
Knee size screen for MRI knee coil	X		X <sup>3</sup>	X <sup>3</sup>	X <sup>3</sup>	X <sup>3</sup>	X <sup>3</sup>	X <sup>3</sup>		X <sup>3</sup>		X <sup>3</sup>		
Body size screen for MRI bore	X													
Abdominal circumference <sup>4</sup>		X			X			X				X		
Hand examination (DIP bony enlargements) <sup>4</sup>	X													X
Hallux valgus												X		
Knee examination <sup>4</sup>														
- Alignment (by goniometer)		X	X		X		X							
- Anserine bursa tenderness		X	X				X	X						
- Effusion		X			X			X						X

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- Flexion contracture and hyperextension		X												X
- Tibiofemoral joint line tenderness		X	X		X		X	X						X
- Knee flexion pain/tenderness		X												
- Patellar tenderness		X	X		X		X	X						
- Patellar quadriceps tenderness/tendinitis		X												
- Patello-femoral crepitus		X	X		X		X	X						X
- Medial-lateral laxity					X		X							
- Knee pain location (knee pain map)					X							X		
Thrust, walk <sup>4</sup>			X		X		X							
Blood pressure, seated		X	X		X		X	X		X		X		X
Resting heart rate <sup>4</sup>		X			X			X		X		X		X
Performance Measures / Physical Activity														
- 20-meter timed walk		X	X		X		X	X		X		X		X
- 400-meter timed walk <sup>4</sup>		X			X			X				X		
- Chair stands, timed		X	X		X		X	X		X		X		X
- Isometric quadriceps and hamstring strength <sup>4</sup>		X	X <sup>5</sup>		X		X <sup>5</sup>	X						
- Accelerometry <sup>13</sup>								X <sup>13</sup>		X <sup>17</sup>				
- Standing balance test (semi-tandem, tandem, and one-leg)														X

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<b>MRI</b>															
- Knee, right and left		X	X	X <sup>6</sup> (Unilat)	X	X <sup>6</sup> (Unilat)	X <sup>7</sup>	X		X		X			
- Thigh, right and left <sup>4</sup>		X	X <sup>5</sup>		X		X <sup>5</sup>	X				X			
<b>X-ray</b>															
- Knee: bilateral PA fixed flexion view	X		X		X		X	X		X		X		X	
- Knee: unilateral fluoroscopic-guided view (one or both knees) <sup>8</sup>		X <sup>8</sup>	X <sup>8</sup>		X <sup>8</sup>										
- Knee: unilateral lateral view (both knees) <sup>9</sup>		X <sup>9</sup>	X <sup>5</sup>				X <sup>9</sup>	X <sup>5</sup>							
- Hip: AP pelvis view		X	X <sup>5</sup>					X				X			
- Hand: dominant PA hand		X	X <sup>5</sup>					X							
- Bilateral full limb for mechanical alignment <sup>10</sup>			X <sup>10</sup>		X <sup>5</sup>		X <sup>5</sup>	X <sup>5</sup>							
- Spine															
<b>DXA</b>															
- Knee (bilateral)						X <sup>11</sup>	X <sup>11</sup>	X <sup>11</sup>		X <sup>15</sup>		X <sup>18</sup>			
- Hip						X <sup>11</sup>	X <sup>11</sup>	X <sup>11</sup>		X <sup>15</sup>		X <sup>16</sup>			
- Body composition										X <sup>16</sup>					

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## *Osteoarthritis Initiative: A Knee Health Study*

<sup>1</sup>This visit obtained in a subset of progression cohort participants at either the 18-month or 30-month follow-up visit

<sup>2</sup>Most participants will have AM blood draws after an overnight fast; a small percent will have PM blood draws after a minimum 2 hour fast. AM vs PM blood draws will be consistent for the same participant across visits.

<sup>3</sup>Optional

<sup>4</sup>The majority of the Reference (Non-exposed) controls had a streamlined clinic visit which did not include the following exams: abdominal circumference, hand examination, knee examination, walk thrust, resting heart rate, 400-meter timed walk, isometric strength, and thigh MRI.

<sup>5</sup>To be obtained if participant eligible and a valid measurement was not obtained at the previous visit.

<sup>6</sup>Obtained in the knee that had the extended set of sequences at baseline, usually the right knee. 30-month visit may include trabecular sequences.

<sup>7</sup>Shorter MRI protocol is an option. Shorter protocol is defined as a scan of one knee (usually right) that had the extended set of sequences at previous visit. If both knees scanned, MRI may include trabecular sequences.

<sup>8</sup>Obtained in a subset of Progression subcohort participants at 2 clinical centers.

<sup>9</sup>Obtained in Reference (Non-exposed) controls.

<sup>10</sup>Obtained in the Progression and Incidence subcohort participants.

<sup>11</sup>BMD of bilateral knees and unilateral hip obtained in a subset of Progression subcohort participants at 1) either the 30-month or 36-month follow-up visit and 2) a follow-up measure at the 48-month follow-up visit.

<sup>12</sup>Selected assays for retention purposes only at clinic's discretion.

<sup>13</sup>Funded by D. Dunlop/P.Semanik ancillary study.

<sup>14</sup>To be obtained if not obtained at the 48-month follow-up visit.

<sup>15</sup>BMD of bilateral knees and unilateral hip obtained in the incidence and non-exposed control cohort, and those progression cohort participants enrolled in the McAlindon bone ancillary study who did not have an MRI with trabecular sequences at the 48-month follow-up visit.

<sup>16</sup>Body composition and hip DXA only if clinic wants to for retention purposes (not funded)

<sup>17</sup>Participants who completed the accelerometry measurement at the 48-month follow-up visit will be asked to do the accelerometry measurement again at the 72-month follow-up visit

<sup>18</sup>To be obtained in the incidence cohort participants who had knee DXA at the 72-month follow-up visit

<sup>19</sup>To be obtained in a subset of participants with K/L 0 at baseline