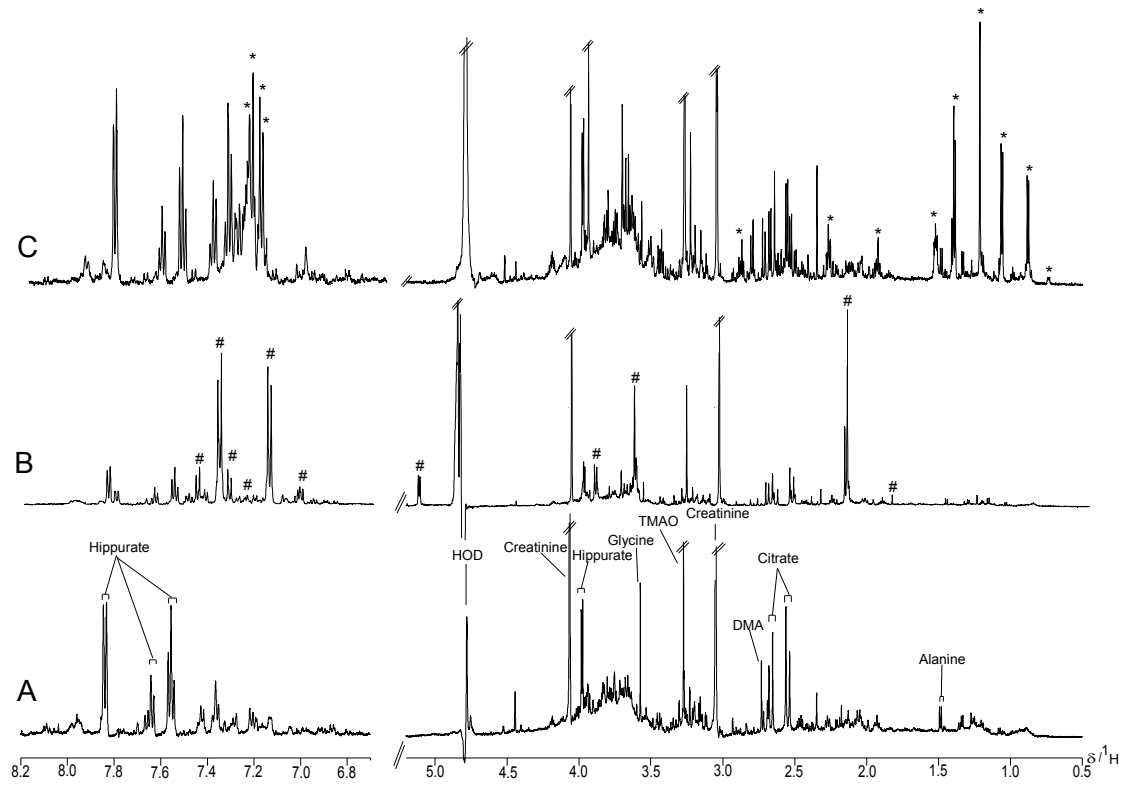


Web Figure 1: Typical ^1H NMR urine spectra from participants (A) with no ingestion of analgesics; (B) after ingestion of acetaminophen; (C) after ingestion of ibuprofen.



Web Table 1: Prevalence of Acetaminophen and/or Ibuprofen Metabolite Signals Detected in the ¹H NMR Urine Spectra for Western INTERMAP Population Samples, by Gender and Age.

Sample (total number of participants)	First urine specimen										Second urine specimen									
	Men					Women					Men					Women				
	Ages		Ages		Subtotal	Ages		Ages		Subtotal	Ages		Ages		Subtotal	Ages		Ages		Subtotal
	40-49	50-59	40-49	50-59		40-49	50-59	40-49	50-59		40-49	50-59	40-49	50-59		40-49	50-59	40-49	50-59	
N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	
Belfast (N=220)	3	5.1	5	7.6	11	17.5	5	15.6	24	10.9	5	8.5	4	6.1	8	12.7	6	18.8	23	10.5
West Bromwich (N=276)	10	13.5	9	13.6	11	16.9	16	22.5	46	16.7	8	10.8	14	21.2	12	18.5	19	26.8	53	19.2
<i>United Kingdom (N=496)</i>	<i>13</i>	<i>9.8</i>	<i>14</i>	<i>10.6</i>	<i>22</i>	<i>17.2</i>	<i>21</i>	<i>20.4</i>	<i>70</i>	<i>14.1</i>	<i>13</i>	<i>9.8</i>	<i>18</i>	<i>13.6</i>	<i>20</i>	<i>15.6</i>	<i>25</i>	<i>24.3</i>	<i>76</i>	<i>15.3</i>
Baltimore (N=274)	7	9.9	15	20.8	17	26.6	7	10.4	46	16.8	7	9.9	11	15.3	10	15.6	14	20.9	42	15.3
Chicago (N=315)	5	6.7	18	22.2	9	11.4	15	18.8	47	14.9	7	9.3	14	17.3	13	16.5	9	11.3	43	13.7
Honolulu (N=257)	4	6.8	4	5.9	5	7.6	7	10.9	20	7.8	1	1.7	7	10.3	6	9.1	10	15.6	24	9.3
Jackson (N=261)	4	6.5	15	22.4	12	17.9	17	26.2	48	18.4	8	12.9	14	20.9	19	28.4	13	20.0	54	20.7
Minneapolis (N=260)	8	12.3	9	13.8	13	20.0	18	27.7	48	18.5	5	7.7	11	16.9	12	18.5	18	27.7	46	17.7
Pittsburgh (N=259)	14	20.9	7	10.8	16	25.8	18	27.7	55	21.2	18	26.9	11	16.9	11	17.7	25	38.5	65	25.1
Corpus Christi, Hispanic (N=268)	8	11.9	5	7.7	10	14.1	19	29.2	42	15.7	11	16.4	10	15.4	18	25.4	17	26.2	56	20.9
Corpus Christi, Non-Hispanic (N=270)	10	14.5	11	16.4	18	26.9	22	32.8	61	22.6	10	14.5	10	14.9	18	26.9	21	31.3	59	21.9
<i>United States (N=2,164)</i>	<i>60</i>	<i>11.2</i>	<i>84</i>	<i>15.3</i>	<i>100</i>	<i>18.5</i>	<i>123</i>	<i>22.9</i>	<i>367</i>	<i>17.0</i>	<i>67</i>	<i>12.5</i>	<i>88</i>	<i>16.0</i>	<i>107</i>	<i>19.8</i>	<i>127</i>	<i>23.6</i>	<i>389</i>	<i>18.0</i>
Western Region (N=2,660)	73	10.9	98	14.4	122	18.2	144	22.5	437	16.4	80	12.0	106	15.5	127	19.0	152	23.7	465	17.5

Web Table 2: Prevalence of Self-reported Analgesic Use* for Western INTERMAP Population Samples, by Gender and Age.

	First visit										Third visit									
	Men					Women					Men					Women				
	Ages		Ages		Ages		Ages		Subtotal		Ages		Ages		Ages		Ages		Subtotal	
	40-49	50-59	40-49	50-59	40-49	50-59	40-49	50-59	N	%	40-49	50-59	40-49	50-59	40-49	50-59	40-49	50-59	N	%
Sample (total number of participants)	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%
Belfast (N=220)	2	3.4	6	9.1	3	4.8	3	9.4	14	6.4	2	3.4	4	6.1	4	6.3	1	3.1	11	5.0
West Bromwich (N=276)	8	10.8	9	13.6	3	4.6	5	7.0	25	9.1	5	6.8	6	9.1	3	4.6	10	14.1	24	8.7
<i>United Kingdom (N=496)</i>	<i>10</i>	<i>7.5</i>	<i>15</i>	<i>11.4</i>	<i>6</i>	<i>4.7</i>	<i>8</i>	<i>7.8</i>	<i>39</i>	<i>7.9</i>	<i>7</i>	<i>5.3</i>	<i>10</i>	<i>7.6</i>	<i>7</i>	<i>5.5</i>	<i>11</i>	<i>10.7</i>	<i>35</i>	<i>7.0</i>
Baltimore (N=274)	1	1.4	8	11.1	3	4.7	6	9.0	18	6.6	1	1.4	12	16.7	3	4.7	6	9.0	22	8.0
Chicago (N=315)	9	12.0	27	33.3	10	12.7	12	15.0	58	18.4	7	9.3	24	29.6	7	8.9	10	12.5	48	15.2
Honolulu (N=257)	1	1.7	2	2.9	2	3.0	4	6.3	9	3.5	2	3.4	3	4.4	1	1.5	3	4.7	9	3.5
Jackson (N=261)	3	4.8	5	7.5	3	4.5	3	4.6	14	5.4	3	4.8	2	3.0	2	3.0	4	6.2	11	4.2
Minneapolis (N=260)	4	6.2	17	26.2	8	12.3	18	27.7	47	18.1	5	7.7	16	24.6	7	10.8	21	32.3	49	18.8
Pittsburgh (N=259)	12	17.9	15	23.1	10	16.1	16	24.6	53	20.5	13	19.4	14	21.5	8	12.9	11	16.9	46	17.8
Corpus Christi, Hispanic (N=268)	4	6.0	3	4.6	6	8.5	12	18.5	25	9.3	4	6.0	7	10.8	14	19.7	11	16.9	36	13.4
Corpus Christi, Non-Hispanic (N=270)	8	11.6	10	14.9	8	11.9	16	23.9	42	15.6	8	11.6	13	19.4	8	11.9	13	19.4	42	15.6
<i>United States (N=2,164)</i>	<i>42</i>	<i>7.9</i>	<i>87</i>	<i>15.8</i>	<i>50</i>	<i>9.2</i>	<i>87</i>	<i>16.2</i>	<i>266</i>	<i>12.3</i>	<i>43</i>	<i>8.0</i>	<i>91</i>	<i>16.5</i>	<i>50</i>	<i>9.2</i>	<i>79</i>	<i>14.7</i>	<i>263</i>	<i>12.2</i>
Western Region (N=2,660)	52	7.8	102	15.0	56	8.4	95	13.9	305	11.5	50	7.5	101	14.8	58	8.7	90	14.0	298	11.2

* Self-reported analgesic use (yes/no)

Web Table 3: Prevalence of Acetaminophen and/or Ibuprofen Metabolite Signals Detected in the ¹H NMR Urine Spectra for Asian INTERMAP Population Samples, by Gender and Age.

Sample (total number of participants)	First urine specimen										Second urine specimen									
	Men					Women					Men					Women				
	Ages 40-49		Ages 50-59		Subtotal	Ages 40-49		Ages 50-59		Subtotal	Ages 40-49		Ages 50-59		Subtotal	Ages 40-49		Ages 50-59		Subtotal
	N	%	N	%		N	%	N	%		N	%	N	%		N	%	N	%	
Toyama (N=298)	0	0	1	1.3	3	3.9	2	2.7	6	2.0	1	1.4	1	1.3	3	3.9	2	2.7	7	2.3
Sapporo (N=294)	1	1.3	0	0	0	0	1	1.4	2	0.7	0	0	0	0	2	2.7	2	2.7	4	1.4
Aito Town (N=259)	1	1.5	2	3.2	4	6.1	1	1.6	8	3.1	2	2.9	0	0	3	4.5	0	0	5	1.9
Wakayama (N=287)	1	1.4	0	0	0	0	4	6.1	5	1.7	1	1.4	0	0	1	1.3	0	0	2	0.7
<i>Japan (N=1,138)</i>	3	1.0	3	1.1	7	2.4	8	2.9	21	1.8	4	1.4	1	0.4	9	3.1	4	1.4	18	1.6
Beijing (N=272)	5	7.5	1	1.5	2	2.9	3	4.3	11	4.0	3	4.5	1	1.5	2	2.9	2	2.9	8	2.9
Guangxi (N=277)	3	4.3	0	0	3	4.3	3	4.4	9	3.2	0	0	3	4.3	2	2.9	0	0	5	1.8
Shanxi (N=283)	0	0	3	4.3	0	0	4	6.0	7	2.5	3	4.1	2	2.9	4	5.5	2	3.0	11	3.9
<i>China (N=832)</i>	8	3.8	4	1.9	5	2.4	10	4.9	27	3.2	6	2.9	6	2.9	8	3.8	4	2.0	24	2.9
<i>Asian Region (N=1,970)</i>	11	2.2	7	1.4	12	2.4	18	3.7	48	2.4	10	2.0	7	1.4	17	3.4	8	1.7	42	2.1

Web Table 4: Prevalence of Self-reported Analgesic Use* for Asian Population Samples, by Gender and Age.

Sample (total number of participants)	First visit										Third visit									
	Men					Women					Men					Women				
	Ages 40-49		Ages 50-59		Subtotal	Ages 40-49		Ages 50-59		Subtotal	Ages 40-49		Ages 50-59		Subtotal	Ages 40-49		Ages 50-59		Subtotal
	N	%	N	%		N	%	N	%		N	%	N	%		N	%	N	%	
Toyama (N=298)	0	0	1	1.3	0	0	0	0	1	0.3	0	0	1	1.3	0	0	1	1.4	2	0.7
Sapporo (N=294)	2	2.7	0	0	2	2.7	0	0	4	1.4	1	1.3	1	1.4	1	1.4	0	0	3	1.0
Aito Town (N=259)	0	0	3	4.8	2	3.0	3	4.8	8	3.1	1	1.5	1	1.6	1	1.5	1	1.6	4	1.5
Wakayama (N=287)	0	0	0	0	1	1.3	1	1.5	2	0.7	0	0	1	1.4	0	0	0	0	1	0.3
Japan (N=1,138)**	2	0.7	4	1.4	5	1.7	4	1.4	15	1.3	2	0.7	4	1.4	2	0.7	2	0.7	10	0.9
Beijing (N=272)	1	1.5	2	3	1	1.4	2	2.9	6	2.2	0	0	2	3.0	0	0	0	0	2	0.7
Guangxi (N=277)	0	0	0	0	1	1.4	0	0	1	0.4	1	1.4	0	0	1	1.4	0	0	2	0.7
Shanxi (N=283)	2	2.7	3	4.3	3	4.1	4	6	12	4.2	3	4.1	4	5.7	5	6.8	14	20.9	26	9.2
China (N=832)	3	1.4	5	2.4	5	2.4	6	2.9	19	2.3	4	1.9	6	2.9	6	2.8	14	6.9	30	3.6
Asian Region (N=1,970)	5	1.0	9	1.8	10	2.0	10	2.1	34	1.7	6	1.2	10	2.0	8	1.6	16	3.3	40	2.0

* Self-reported analgesic use (yes/no)

**Data were missing for six Japanese participants; these individuals were classified as non-users.