American Academy of Orthopaedic Surgeons
DISTRACTED WALKING STUDY

These are findings from an Ipsos poll conducted October 8-20, 2015 on behalf the American Academy of Orthopaedic Surgeons. For the survey, a sample of 2,008 adults age 18+ from the continental U.S., Alaska and Hawaii was interviewed online in English.

The sample for this study was randomly drawn from Ipsos's online panel (see link below for more info on "Access Panels and Recruitment"), partner online panel sources, and "river" sampling (see link below for more info on the Ipsos "Ampario Overview" sample method) and does not rely on a population frame in the traditional sense. Ipsos uses fixed sample targets, unique to each study, in drawing sample. After a sample has been obtained from the Ipsos panel, Ipsos calibrates respondent characteristics to be representative of the U.S. Population using standard procedures such as raking-ratio adjustments. The source of these population targets is U.S. Census 2015 American Community Survey data. The sample drawn for this study reflects fixed sample targets on demographics. Post-hoc weights were made to the population characteristics on gender, age, region, race/ethnicity and income.

Statistical margins of error are not applicable to online polls. All sample surveys and polls may be subject to other sources of error, including, but not limited to coverage error and measurement error. Where figures do not sum to 100, this is due to the effects of rounding. The precision of Ipsos online polls is measured using a credibility interval. In this case, the poll has a credibility interval of plus or minus 2.5 percentage points for all respondents (see link below for more info on Ipsos online polling "Credibility Intervals"). Ipsos calculates a design effect (DEFF) for each study based on the variation of the weights, following the formula of Kish (1965). This study had a credibility interval adjusted for design effect of the following (n=2,008, DEFF=1.5, adjusted Confidence Interval=4.0).

1. When you are doing each of the following activities, how focused are you on that activity?

   Please select one response for each item

	Very focused	Somewhat focused	Not very focused	Not at all focused
Watching TV	24%	57%	17%	3%
Driving a car	82%	14%	1%	3%
Walking along a street	42%	47%	9%	2%
Walking around your home	21%	46%	27%	5%
Using a knife in the kitchen	75%	22%	2%	1%

2. How would you rate your ability to multi-task successfully?

   Please select one response

I'm very good at doing multiple things at once	48%
I'm pretty good, but sometimes have difficulty	45%
I don't do multiple things at once very well	7%

3. How serious of an issue do you think each of the following are:

   Please select one response for each item

	Very serious	Somewhat serious	Not very serious	Not at all serious
Distracted driving (doing something else / not paying full attention while driving)	83%	12%	2%	2%
Impaired driving (alcohol, prescription medications, drugs, sleep deprivation)	86%	9%	2%	3%
Distracted walking (doing something else / not paying full attention while walking)	35%	44%	18%	3%

4. Of the following list, please indicate which of the following describe distracted driving and distracted walking:

   Please select all that apply for each activity

	Distracted driving	Distracted walking
Annoying	46%	39%
Funny	4%	22%
Dangerous	85%	46%
Preventable	77%	64%
Likely to lead to serious injury	80%	43%
Common/frequent	48%	46%
Something I'm likely to do	9%	31%
Embarrassing (in a silly way)	9%	46%
Risky	79%	52%
None of these	5%	6%

5. Which ONE is more of a serious problem?

   Please select one response

Distracted driving	74%
Distracted walking	2%
Both are equally serious problems	22%
Neither are serious problems	2%

6. When you walk along a street, would you say you:

Please select one

Are highly engaged with your surroundings	41%
Mostly pay attention, but are occasionally distracted	56%
Are usually distracted by things and not paying a lot of attention as you walk	4%

7. And as you see **others** walking along a street, would you say **they**:

   Please select one

Are highly engaged with their surroundings	12%
Mostly pay attention, but are occasionally distracted	59%
Are usually distracted by things and not paying a lot of attention as they walk	28%

8. As you are walking down a street, how often do you:

   Please select one response for each item

	Usually/almost always	Sometimes	Not very often	Not at all
Use your smartphone to read e-mails/websites, text, play games, or take selfies	7%	21%	23%	49%
Talk on the phone	7%	29%	35%	28%
Listen to music with headphones/earbuds	14%	20%	17%	49%
Have active conversations with others you are walking with	23%	52%	17%	8%
Daydream / “zone out”	6%	32%	35%	27%

9. As you are walking down a street, how often do you see **others**:

   Please select one response for each item

	Usually/almost always	Sometimes	Not very often	Not at all
Using their smartphone to read e-mails/websites, text, play games, or take selfies	40%	44%	9%	6%
Talking on the phone	46%	44%	6%	4%
Listening to music with headphones/earbuds	43%	46%	7%	5%

Having active conversations with others they are walking with	35%	53%	9%	3%
Daydreaming / "zoned out"	14%	50%	27%	9%

10. **Distracted walking incidents** can range from bumping into someone or something, to tripping/falling, or being hit by a moving vehicle while walking. These incidents happen as a result of being distracted by something you were doing while walking or as a result of someone else causing an incident because they were distracted while walking.

	Yes	**No**
Have you ever been in a distracted walking incident yourself?	26%	74%
Has someone in your family been involved in a distracted walking incident?	20%	80%
Do you know someone outside of your family who has been in a distracted walking incident?	27%	73%
Have you witnessed a distracted walking incident that you were not part of?	38%	62%

11. Thinking about your own distracted walking incident, what injuries resulted from that incident? If you've had more than one distracted walking incident, please think about the most recent distracted walking incident when responding.

    Please select all that apply

    Asked of those that have been in a distracted walking accident at Q10, n=523

I just tripped or bumped into something, without injury	68%
I fell down to the ground, without injury	18%
I had scrapes and/or minor cuts	14%
I had significant cuts	3%
I had a painful, but minor injury, like a stubbed toe or twisted ankle	9%
I broke one or more bones	3%

12. Thinking about the actions from the previous questions that may result in distracted walking (texting, talking on a smartphone, etc.)…

    Please select one response for each item

	Usually/ almost always	**Sometimes**	**Not very often**	**Not at all**
How frequently would you say **you personally** do what might be considered distracted walking?	7%	22%	49%	22%
How frequently would you say **others** you see do what might be considered distracted walking?	19%	55%	20%	6%

13. What are the main reasons you personally do what you would consider distracted walking?

    Please select all that apply

    Asked of those that personally usually/almost always or sometimes engage in distracted walking themselves at Q12, n=1,568)

I just don't think about it	48%
I can walk and do other things without any problems	28%
I am busy and need to use my time while walking to be productive	22%
I don't think it's a problem	16%
I want to stay connected, and use time while walking to stay in touch	10%
Some other reason	14%

How to Calculate Bayesian Credibility Intervals

The calculation of credibility intervals assumes that Y has a binomial distribution conditioned on the parameter θ\, i.e., Y|θ~Bin(n,θ), where n is the size of our sample. In this setting, Y counts the number of "yes", or "1", observed in the sample, so that the sample mean ($\bar{y}$) is a natural estimate of the true population proportion θ. This model is often called the likelihood function, and it is a standard concept in both the Bayesian and the Classical framework. The Bayesian [1] statistics combines both the prior distribution and the likelihood function to create a posterior distribution. The posterior distribution represents our opinion about which are the plausible values for θ adjusted after observing the sample data. In reality, the posterior distribution is one's knowledge base updated using the latest survey information. For the prior and likelihood functions specified here, the posterior distribution is also a beta distribution (π(θ/y)~β(y+a,n-y+b)), but with updated hyper-parameters.

Our credibility interval for ϑ is based on this posterior distribution. As mentioned above, these intervals represent our belief about which are the most plausible values for ϑ given our updated knowledge base. There are different ways to calculate these intervals based on π(θ/y). Since we want only one measure of precision for all variables in the survey, analogous to what is done within the Classical framework, we will compute the largest possible credibility interval for any observed sample. The worst case occurs when we assume that a=1 and b=1 and y=$n/2$. Using a simple approximation of the posterior by the normal distribution, the 95% credibility interval is given by, approximately:

$$\bar{y} \mp \frac{1}{\sqrt{n}}$$

For this poll, the Bayesian Credibility Interval was adjusted using standard weighting design effect 1+L=1.3 to account for complex weighting[2]

Examples of credibility intervals for different base sizes are below. Ipsos does not publish data for base sizes (sample sizes) below 100.

Sample size	Credibility intervals
2,000	2.5
1,500	2.9
1,000	3.5
750	4.1
500	5.0
350	6.0
200	7.9
100	11.2