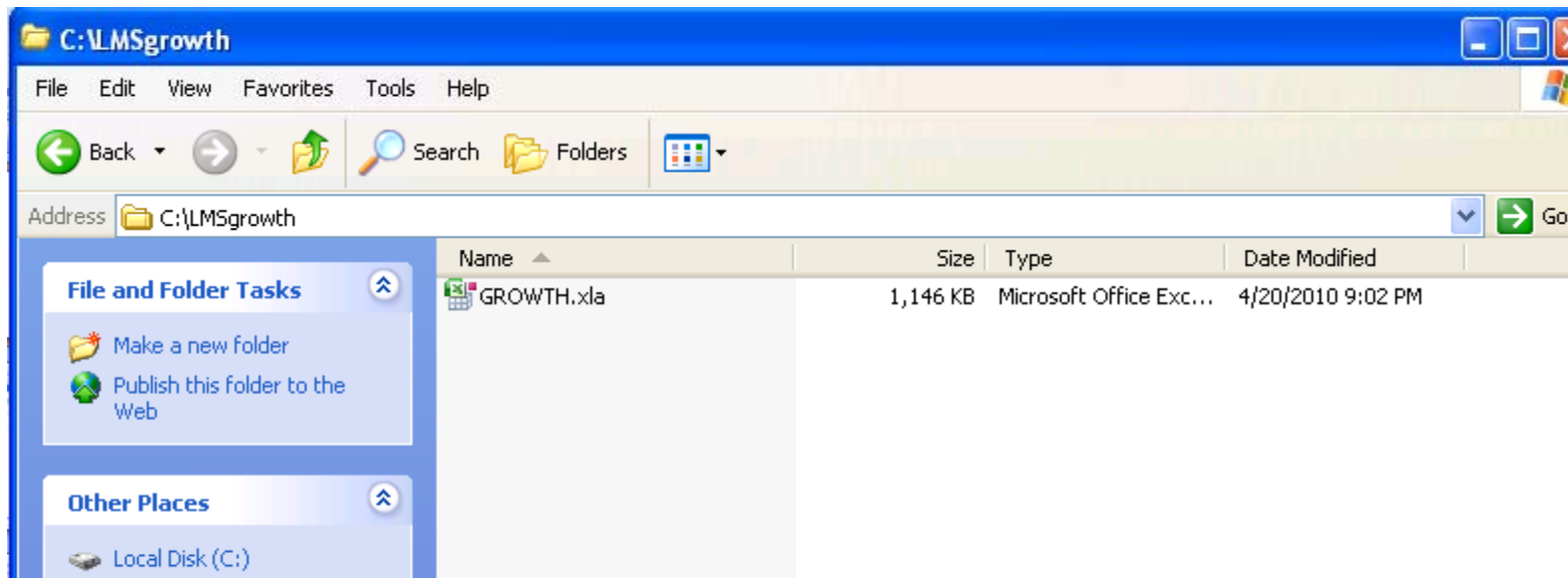


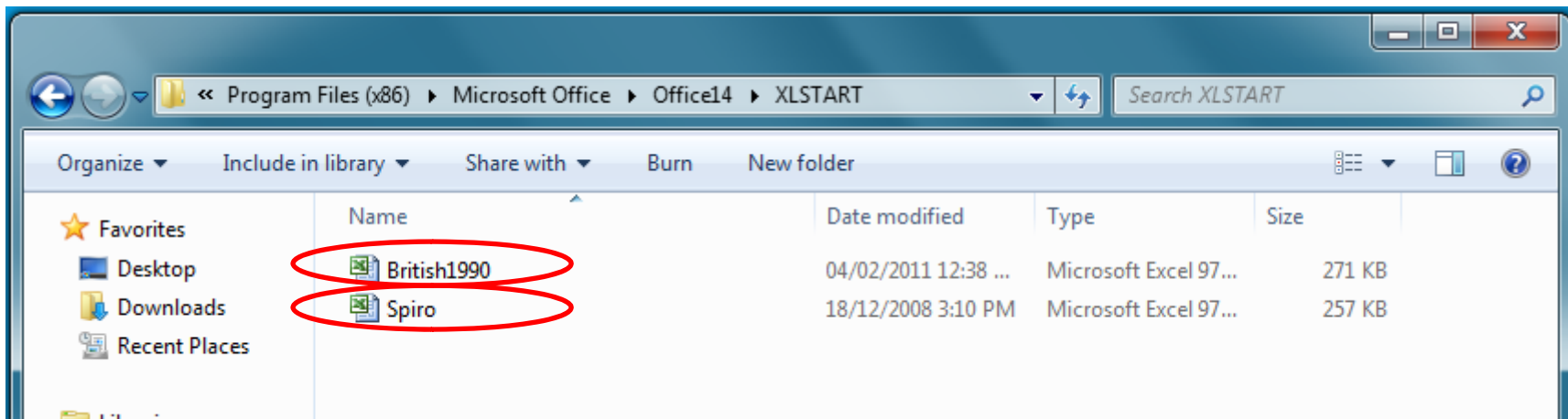
# Growth.xla

1. Create a new folder on your C Drive called “LMSgrowth”
2. Copy the “Growth.xla” file to this folder



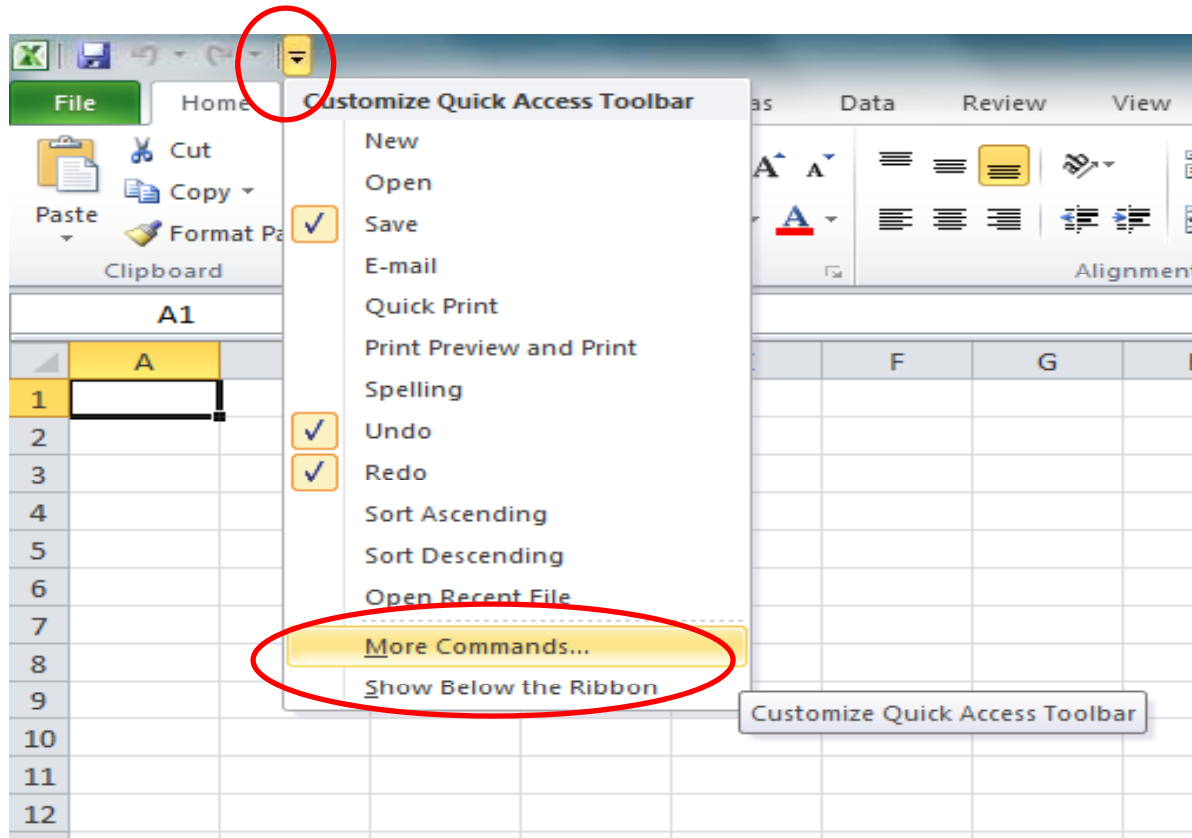
# XLSTART

1. Find the XLSTART folder on your computer
2. Copy “British1990.xls” AND “Spiro.xls” to this folder
3. You may also wish to copy the other reference tables available (i.e. WHO growth charts)



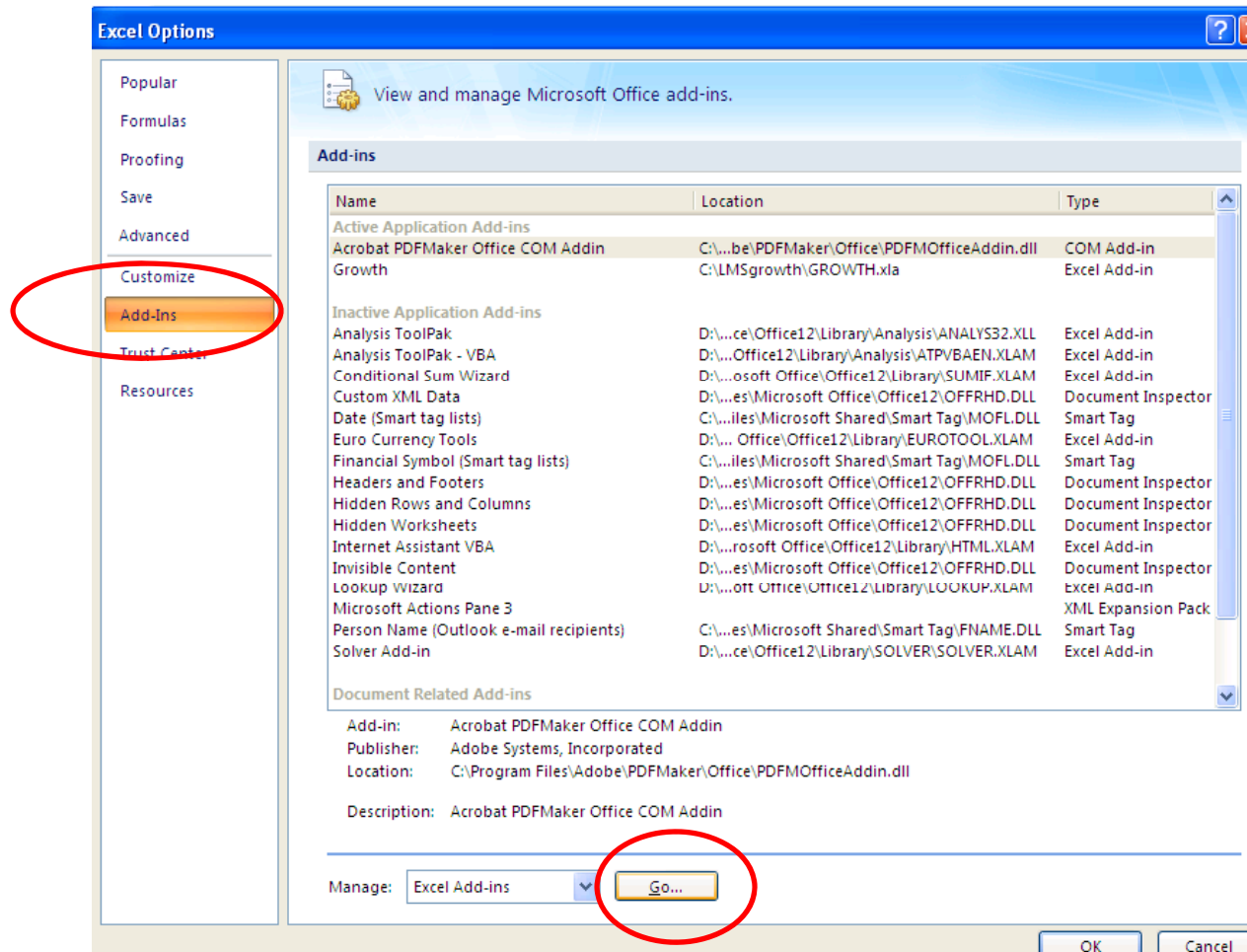
# Install the Excel Addin

1. Open Excel and open a blank worksheet
2. Click on the arrow and More Commands



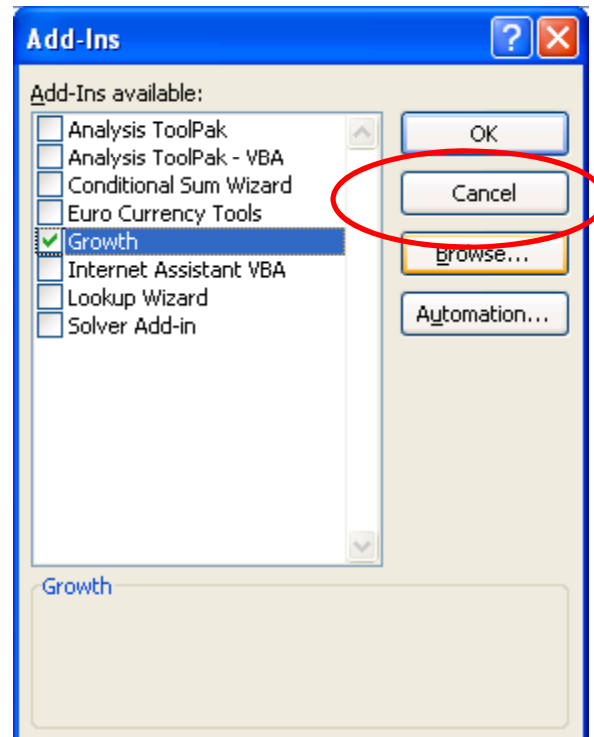
# Install the Excel Add-in

1. Click on Add-Ins
2. Click on Manage Excel Add-ins



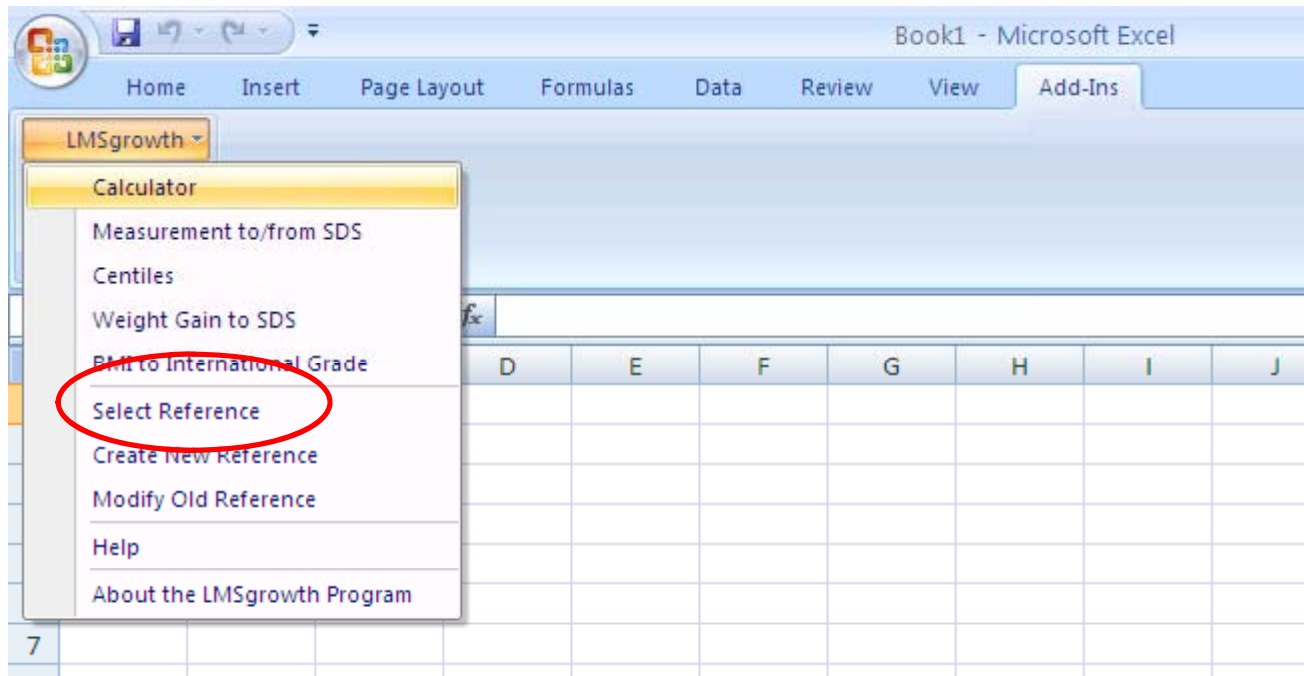
# Search for Growth.xla

1. Click on Browse
2. Go to C:/LMSgrowth/
3. Select Growth.xla
4. Click OK and **Quit/Exit Excel**



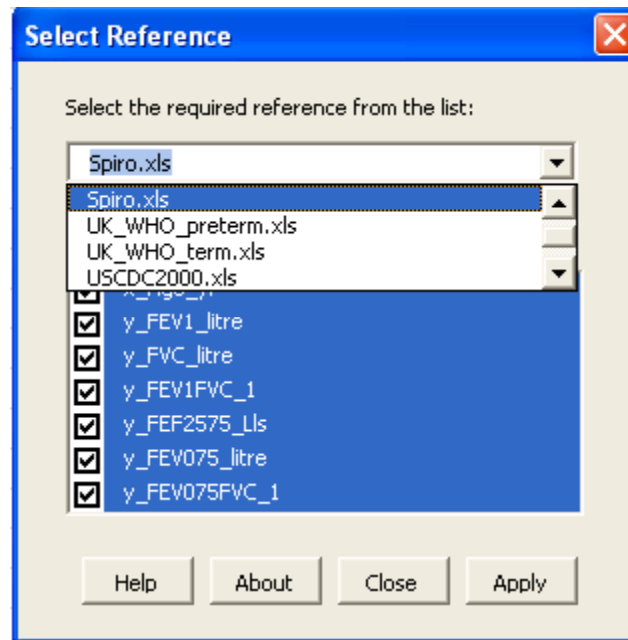
# Instal Spiro.xls

1. Open a new blank Worksheet
2. On the right hand side click “Add-Ins”
3. Select LMSgrowth
4. Select Reference



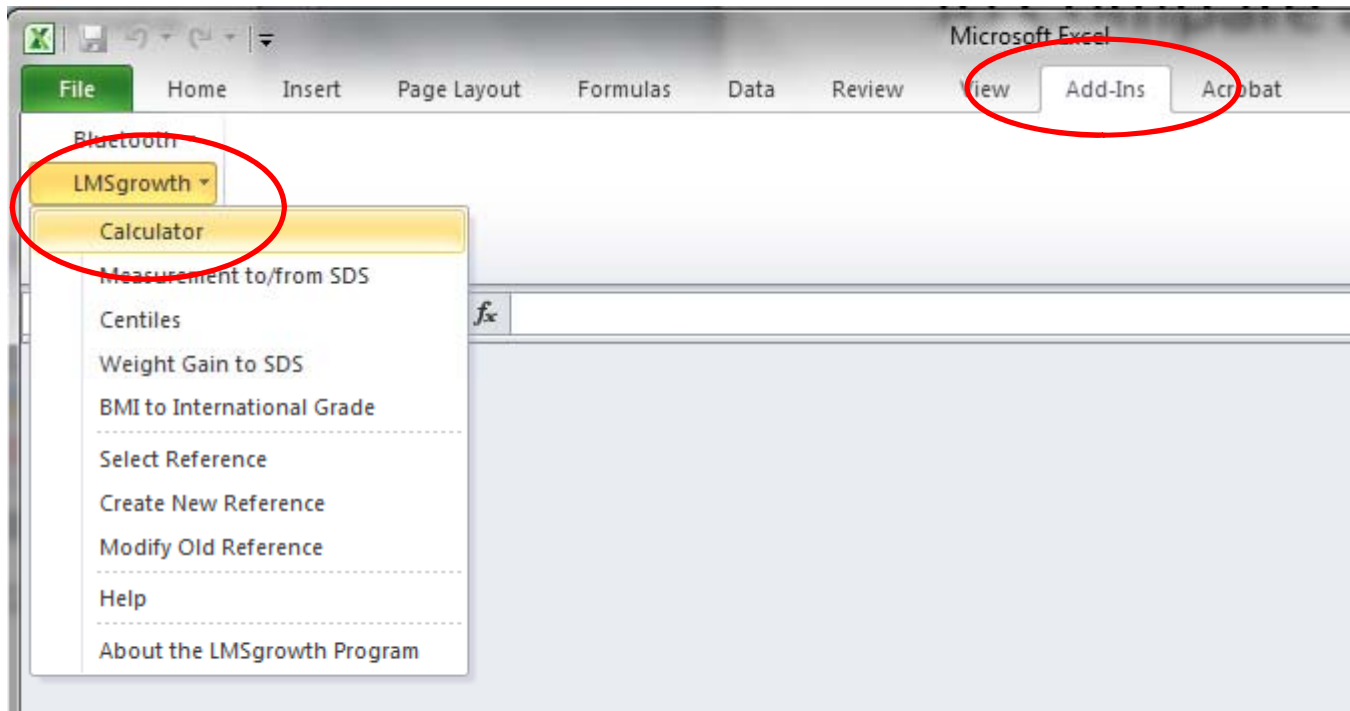
# Instal Spiro.xls

1. Select “Spiro.xls”
2. Ensure all the outcomes you want are checked



# To Compare an Individual Result

- Go to Add-ins
- Click LMSgrowth
- Click Calculator



# The Calculator

Calculator with Spiro

Male  Female  Adjust for gestation

Age

Dates

Age

years months weeks days years

Covariates

Height cm

Measurements

	FEV1 litre	FVC litre	FEV1/FVC 1	FEF2575 Lls	-	-
Value						
SDS						
Centile						

Help Reset Close

Note: Age can be entered as 14.3 in the years box

Note: FEV<sub>1</sub>/FVC is a ratio NOT a percentage

**In this program SDS and z-score are interchangeable terms**

# The Calculator: An Example

- Enter

Sex (F)

Age (6.30 yrs)

Height (118 cm)

FEV<sub>1</sub> (1.45 L)

FVC (1.60 L)

Calculator with Spiro

Male  Female  Adjust for gestation

Age

Dates

Age

years months weeks days

6.3 6.30

Covariates

Height cm 118

Measurements

	FEV1 litre	FVC litre	FEV1/FVC 1	FEF2575 L/s	FEV075 litre	FEV075/FVC 1
Value	1.45	1.6	0.91	2.1		
SDS	1.10	1.20	-0.33	0.93		
%Predicted	115.3	117.2	98.0	124.1		

Help Reset Close

Click on the pink text to toggle between:

- **SDS**
- **Centile**
- **Predicted**
- **% Predicted**
- *% CV*
- *Skewness*

Calculator with Spiro

Male  Female  Adjust for gestation

Age

Dates

years months weeks days **years**

Age

Covariates

Height cm

Measurements

	FEV1 litre	FVC litre	FEV1/FVC 1	FEF2575 L/s	FEV075 litre	FEV075/FVC 1
Value	<input type="text" value="1.45"/>	<input type="text" value="1.6"/>	<input type="text" value="0.91"/>	<input type="text" value="2.1"/>	<input type="text"/>	<input type="text"/>
<b>SDS</b>	<input type="text" value="1.10"/>	<input type="text" value="1.20"/>	<input type="text" value="-0.33"/>	<input type="text" value="0.93"/>	<input type="text"/>	<input type="text"/>
<b>%Predicted</b>	<input type="text" value="115.3"/>	<input type="text" value="117.2"/>	<input type="text" value="98.0"/>	<input type="text" value="124.1"/>	<input type="text"/>	<input type="text"/>

Help Reset Close

# Conversion to SDS for an Entire Dataset (must be in Excel format)

Type in the column letters relating to:  
Sex (1=M, 2=F), Age (years), Height (cm), FEV<sub>1</sub> (L) etc.

Click on the pink label to change SDS to % predicted

The output is entered in the first free column or you can select an output column

The screenshot shows an Excel spreadsheet with a dialog box titled "Measurement -> SDS with Spiro". The spreadsheet has columns labeled A through K. Column A is "Subject Demographics", B is "Centre ID", C is "Study ID", D is "Collaboration ID", E is "Test Occasion", F is "Date of Birth (MM/DD/YY)", G is "Date of Test (MM/DD/YY)", H is "Age", I is "Sex (1=M 2=F)", J is "Weight (kg)", K is "Weight Z score", and L is "Height (cm)".

The dialog box has the following settings:

- Sex: Male
- Gestation (weeks): Ignore
- Specify Rows: From 1 to 154, With Header
- Specify Age Columns: Age (years) selected, with column letter G
- Specify Covariate Columns: Height cm selected, with column letter K
- Specify Measurement Columns: FEV1 (litre) selected, with column letter M and SDS selected, with column letter AF

Arrows from the text annotations point to the "years" label in the Age section, the "AF" dropdown in the Measurement section, and the first free column (L) in the spreadsheet.