

## **What is the best way to measure and set individual and team goals?**

**Group goal setting** is **cooperative** rather than competitive. Goals are set by teams by adding up what each team member feels or estimates is a reasonable challenge for them personally.

**Team goals for physical activity are typically set between 480 and 960 miles.**

- The 480 miles level is considered a minimum for a six-person adult team. 480 miles translates to 30 minutes of moderate-intensity activity, five days a week for each of 6 team members during the 8-week program.
  - At this level, each person would need to contribute an average of 80 miles over the 8 weeks (10 miles per week).
  - If a team has only five members, then a Team Goal could be set by subtracting 80 from 480. Each team will be different.
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- If a team wants to strive for doing an hour of moderately intense physical activity at least 5 days a week (20 miles per team member each week), then the Team Goal would be set at 960 miles.
  - Teams can also set their goal for team miles at some level between 480 and 960.
- 
- If a team has one or more children participating, it is appropriate to encourage the child to do 60 minutes, five days a week since this is the current recommendation for children.

**The suggested team goal for fruits and vegetables is about 1600 for the 8-week program period for a team of six adults.**

- Per team member, this equates to 280 cups over the 8 weeks, or 5 cups a day, every day.
- If there are only five members on a team, subtract 280 from 1600 to arrive at a Team Goal for fruits and veggies.

- |  |
|--|
| <ul style="list-style-type: none"><li>● Five cups a day is recommended as a goal for adults based on the Dietary Guidelines.</li></ul>   |
| <ul style="list-style-type: none"><li>● For teams of children aged 5-11 a more appropriate level would be about 196 cups per team member for the 8-week period (or 3.5 cups per day for each child).</li></ul> |

## **What is Fitbit Access Token?**

Access tokens are used in token-based authentication to allow the FitEx system to access Fitbit API. The Fitbit API will enable developers to interact with Fitbit data in their applications, products, and services. We use Fitbit API to retrieve Fitbit user data collected by the Fitbit trackers & smartwatches, Aria & Aria 2 scales, and manually entered log data.

## **How to get my Fitbit Access Token?**

1. Register or log into your Fitbit account on <https://dev.fitbit.com/apps> and click “Manage My Apps”
2. Click “**Register a new app**” next to the page title.
3. Enter the information that is **exactly the same** as shown in the below image:
  - OAuth 2.0 Application Type: **Personal**
  - URL: <https://fittextest.herokuapp.com>
  - Redirect URL: <http://localhost>
  - Default Access Type: **Read & Write**

## Register an application

Application Name \*

FitEx

Description \*

Anything

Application Website URL \*

https://fitextest.herokuapp.com

Organization \*

Virginia Tech

Organization Website URL \*

https://fitextest.herokuapp.com

Terms of Service URL \*

https://fitextest.herokuapp.com

Privacy Policy URL \*

https://fitextest.herokuapp.com

OAuth 2.0 Application Type \*

☐ Server

☐ Client

☒ Personal

Redirect URL \*

http://localhost

Default Access Type \*

☒ Read & Write

☐ Read Only

+ Add a subscriber

☒ I have read and agree to the [terms of service](#)

Register

Cancel

4. Click “[OAuth 2.0 tutorial page](#)”

5. Choose “**Implicit Grant Flow**” as the Flow Type. Clicked on all scopes and enter **604800** as the expiration time. Your settings should be like this:

## OAuth 2.0 tutorial page

For a detailed explanation of OAuth 2.0, see the Fitbit API [documentation](#).

### 1: Authorize

- First, choose the type of flow your application will use. Implicit grant flow is for use in client-side applications that cannot keep a secret because they distribute their source code to the client (web apps, mobile apps). The authorization code flow is for server-side applications that can keep a secret. If possible, use the authorization code flow, because while both flows are secure, it provides additional security.

Flow type: ☒ Implicit Grant Flow ☐ Authorization Code Flow

- Enter all of your application's relevant data below. You can find this data at [dev.fitbit.com](#).

Fitbit URL:

Fitbit API URL:

OAuth 2.0 Client ID:

Client Secret:

Redirect URI:

- Choose below what user data you'd like to have access to.

#### Select Scopes

<input checked="" type="checkbox"/> activity	<input checked="" type="checkbox"/> heartrate	<input checked="" type="checkbox"/> location	<input checked="" type="checkbox"/> nutrition
<input checked="" type="checkbox"/> profile	<input checked="" type="checkbox"/> settings	<input checked="" type="checkbox"/> sleep	<input checked="" type="checkbox"/> social
<input checked="" type="checkbox"/> weight	<input checked="" type="checkbox"/> spo2	<input checked="" type="checkbox"/> breathingrate	<input checked="" type="checkbox"/> temperature

- The default expiration times are 1 hour for the authorization code flow, and 1 day for the implicit grant flow. The expiration time for the implicit grant flow can be set to certain values; see [the docs](#) for details.

Expires In(ms):

- We've generated the authorization URL for you, all you need to do is just click on link below:

[https://www.fitbit.com/oauth2/authorize?response\\_type=token&client\\_id=238K3X&redirect\\_uri=http%3A%2F%2Flocalhost&scope=activity%20heartrate%20location%20nutrition%20profile%20settings%20sleep%20social%20weight%20oxygen\\_saturation%20respiratory\\_rate%20temperature&expires\\_in=604800](https://www.fitbit.com/oauth2/authorize?response_type=token&client_id=238K3X&redirect_uri=http%3A%2F%2Flocalhost&scope=activity%20heartrate%20location%20nutrition%20profile%20settings%20sleep%20social%20weight%20oxygen_saturation%20respiratory_rate%20temperature&expires_in=604800)

6. Click the generated authorization URL

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Flow type: ☒ Implicit Grant Flow ☐ Authorization Code Flow

- Enter all of your application's relevant data below. You can find this data at [dev.fitbit.com](#).

Fitbit URL:	<input type="text" value="www.fitbit.com"/>
Fitbit API URL:	<input type="text" value="api.fitbit.com"/>
OAuth 2.0 Client ID:	<input type="text" value="238K3X"/>
Client Secret:	<input type="text" value="b69277e3c7296838913c9df76dcfa"/>
Redirect URI:	<input type="text" value="http://localhost"/>

- Choose below what user data you'd like to have access to.

#### Select Scopes

<input checked="" type="checkbox"/> activity	<input checked="" type="checkbox"/> heartrate	<input checked="" type="checkbox"/> location	<input checked="" type="checkbox"/> nutrition
<input checked="" type="checkbox"/> profile	<input checked="" type="checkbox"/> settings	<input checked="" type="checkbox"/> sleep	<input checked="" type="checkbox"/> social
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7. On the permission page, please choose 1 year for a lasting time and allow all data to be retrieved.



FitEx by Virginia Tech would like the ability to access and write the following data in your Fitbit account. for 1 year

Warning! This app is not using HTTPS to securely obtain your permission.

☒ Allow All

- ☒ sleep
- ☒ oxygen saturation (SpO2)
- ☒ location and GPS
- ☒ temperature
- ☒ activity and exercise
- ☒ food and water logs ⓘ
- ☒ profile ⓘ
- ☒ weight ⓘ
- ☒ friends ⓘ
- ☒ heart rate
- ☒ breathing rate
- ☒ Fitbit devices and settings

Please Choose  
1year for here

If you allow only some of this data, FitEx may not function as intended. Learn more about these permissions [here](#).

Deny

Allow

The data you share with FitEx will be governed by Virginia Tech's [Privacy Policy](#) and [Terms of Service](#). You can revoke this consent at any time in your Fitbit [account settings](#).

8. After you click Allow, you will be redirected to an empty page, which means you have successfully authorized. Please copy and paste the URL on that blank webpage. Intercept the access token in that URL (should be between “#access\_token=” and “&user\_id=”). Sample below:

```
URL:
http://localhost/#access_token=eyJhbGciOiJIUzI1NiJ9.eyJhdWQiOiIyMzhLM1giLCJzZWUiOiJCnFRaSFciLCJpc3MiOiJGaXRiaXQiLCJ0eXAiOiJhY2Nlc3NfdG9rZW4iLCJzY29wZXMiOiJ3aHIgd251dCB3cHJvIHdzbGUgd3NvYyB3YWN0IHdveHkgd3RlbSB3d2VpIHdzZXQgd3Jlc3B3bG9jIiwiaXhwIjozNjYzMDA4MzI4LCJpYXQiOiJl0MDM1Mjh9.myxbeu5v3nJK7PXuCpCRwf94ilhVMRG4cLVyxCaxkYE&user_id=B4TZHW&scope=oxygen_saturation+respiratory_rate+activity+social+weight+settings+location+sleep+nutrition+heartrate+profile+temperature&token_type=Bearer&expires_in=604800

Access Token:
eyJhbGciOiJIUzI1NiJ9.eyJhdWQiOiIyMzhLM1giLCJzZWUiOiJCnFRaSFciLCJpc3MiOiJGaXRiaXQiLCJ0eXAiOiJhY2Nlc3NfdG9rZW4iLCJzY29wZXMiOiJ3aHIgd251dCB3cHJvIHdzbGUgd3NvYyB3YWN0IHdveHkgd3RlbSB3d2VpIHdzZXQgd3Jlc3B3bG9jIiwiaXhwIjozNjYzMDA4MzI4LCJpYXQiOiJl0MDM1Mjh9.myxbeu5v3nJK7PXuCpCRwf94ilhVMRG4cLVyxCaxkYE
```

## My Fitbit Sync Page shows 401 Error, what should I do?

The most reason for this case is that your Fitbit Access Token has expired. To update your Fitbit Access Token, you have to follow the instruction below:

1. Log into <https://dev.fitbit.com/apps> and click “Manage My Apps”
2. Open your registered applications
3. Click “**OAuth 2.0 tutorial page**”

**Applications I registered** [+ Register a new app](#)

**Application FitEx**  
FitEx New generation design

[Edit Application Settings](#) [Delete Application](#)

[Reset Client Secret](#) [Revoke Client Access Tokens](#)

**OAuth 2.0 Client ID**  
238K3X

**Client Secret**  
b69277e3c7296838913c9df76dcfa0b1

**Redirect URL**  
http://localhost

**OAuth 2.0: Authorization URI**  
https://www.fitbit.com/oauth2/authorize

**OAuth 2.0: Access/Refresh Token Request URI**  
https://api.fitbit.com/oauth2/token

[OAuth 2.0 tutorial page](#)

**Subscribers endpoint stats.**

Subscriber ID	Verified at / Verification code	Stats
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[← View all applications](#)



#### 4. Click the generated authorization URL

## OAuth 2.0 tutorial page

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Please Choose  
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6. After you click Allow, you will be redirected to an empty page, which means you have successfully authorized. Please copy and paste the URL on that blank webpage. Intercept the access token in that URL and upload it to your FitEx System. Sample below:

```
URL :
http://localhost/#access_token=eyJhbGciOiJIUzI1NiJ9.eyJhdWQiOiIyMzhLM1giLCJzdWIiOiJCnFRaSFciLCJpc3MiOiJGaXRiaXQiLCJ0eXAiOiJhY2Nlc3NfdG9rZW4iLCJzY29wZXMiOiJ3aHIgd251dCB3cHJvIHdzbGUgd3NvYyB3YWN0IHdveHkgd3RlbSB3d2VpIHdzZXQgd3Jlc3B3bG9jIiwiaXhwIjoxNjYzMDA4MzI4LCJpYXQiOiJlMjI0MDM1Mjh9.myxbeu5v3nJK7PXuCpCRwf94ilhVMRG4cLVyxCaxkYE&user_id=B4TZHW&scope=oxygen_saturation+respiratory_rate+activity+social+weight+settings+location+sleep+nutrition+heartrate+profile+temperature&token_type=Bearer&expires_in=604800

Access Token:
eyJhbGciOiJIUzI1NiJ9.eyJhdWQiOiIyMzhLM1giLCJzdWIiOiJCnFRaSFciLCJpc3MiOiJGaXRiaXQiLCJ0eXAiOiJhY2Nlc3NfdG9rZW4iLCJzY29wZXMiOiJ3aHIgd251dCB3cHJvIHdzbGUgd3NvYyB3YWN0IHdveHkgd3RlbSB3d2VpIHdzZXQgd3Jlc3B3bG9jIiwiaXhwIjoxNjYzMDA4MzI4LCJpYXQiOiJlMjI0MDM1Mjh9.myxbeu5v3nJK7PXuCpCRwf94ilhVMRG4cLVyxCaxkYE
```